



MAGYAR NEMZETI BANK

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

The Magyar Nemzeti Bank's fundamental interest and joint responsibility with other government institutions is to maintain and promote the stability of the domestic financial system. The role of the Magyar Nemzeti Bank in the maintenance of financial stability is defined by the Central Bank Act and a Memorandum of Understanding on co-operation between the Hungarian Financial Supervisory Authority, the Ministry of Finance and the Magyar Nemzeti Bank.

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 on 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 Stability and Risk Management Directorate, the Economics and Monetary Policy Directorate and the Payment System and Currency Issue Directorate. The project was managed by Balázs ZSÁMBOKI, Principal economist of Financial Stability, together with Judit ANTAL, Principal economist of Financial analysis. The Report was approved for publication by Dr. Tamás KÁLMÁN, Director.

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The Report incorporates the Monetary Council's valuable comments and suggestions following its meetings on 20 March and 10 April. However, the Report reflects the views of the contributing organizational units and do not necessarily reflect those of the Monetary Council or the MNB.

Contents

Overview of main risks and issues	7
1. Macroeconomic risks	11
1.1. Critical state of equilibrium	14
1. 2. Deterioration in the market assessment of Hungarian fundamentals	18
1. 3. Favourable external environment – increasing uncertainty	19
1. 4. Alternative scenarios	22
1. 4. 1. Correction triggered by the market	22
1. 4. 2. Credible budget deficit reduction	24
2. Financial institutions	29
2.1. Risks of the banking sector	33
2. 1. 1. Credit risk	33
2.1.2. Market risk	45
2.1.3. Liquidity risk	46
2.1.4. Financial conditions in the banking sector	48
2.2. Risks of the non-bank financial intermediary system	56
3. Financial infrastructure	65
3.1. Regulatory challenges	67
3.2. Operation and risks of the payment system	71
Appendix	77

Overview of main risks and issues

At present the Hungarian economy is on a path which cannot be maintained in the long run

The government debt ratio and Hungary's net external debt as a percentage of GDP both have continued to increase, suggesting that the Hungarian economy has been on a path which is unsustainable in the long run. Although the country's external financing requirement fell as a per cent of GDP and non-debt inflow increased in 2005, the external imbalance remained very high, increasing the vulnerability of the economy to adverse financial shocks. The method and timing of a return to the equilibrium path is difficult to forecast reliably; however, the probability of the economy progressing along the current path is highly unlikely looking further into the future.

Global environment has been favourable so far, and despite equilibrium problems the risk premium did not increase significantly

The global financial environment was very favourable until February 2006, which allowed the forint market to be characterised by relative stability, despite equilibrium problems. The global risk appetite, observable at international level, and the resulting low risk premia have contributed so far to the fact that despite the marked external and internal imbalances, the risk premium expected of investments in Hungary by the market has not increased significantly.

Numerous warnings by market developments

Despite favourable external conditions, market developments serve with a number of warnings. The different behaviour of forint yields and of the exchange rate compared to other countries in the region, the downgrade of the Hungarian debt and the change of its outlook to negative and foreign participants' low forint risk taking clearly indicate that the risks perceived by the market with regard to the Hungarian economy have increased.

The necessity of a credible fiscal adjustment is increasing

Consequently, the necessity of a credible fiscal consolidation is increasing. However, without a credible fiscal adjustment there is an increased probability that the correction of considerable imbalances will be enforced by the market, through the increase in the required risk premium of forint investments, i.e. through the depreciation of the exchange rate and the increase in interest rates.

A fundamental condition of the stability of the financial intermediary system is the return of the economy to an equilibrium path

A correction triggered by the market may result in extreme exchange rate and yield movements and increased fluctuations in assets prices, with an adverse impact on the operation of the financial system. A lasting decline in the confidence in the forint affects real economy developments as well, and a market correction may lead to a fall in domestic demand, and permanently reduce households' disposable income and corporate profitability. All this fundamentally influences the development of the system of financial institutions and the magnitude of possible losses stemming from the risks taken. Therefore, a fundamental prerequisite for the stability of the financial intermediary system to be maintained is for the economy to return to an equilibrium path, in order to avoid a significant market correction characterised by interest rate and exchange rate changes.

The primary source of risks is economic agents' rapidly rising indebtedness in foreign exchange

We believe that, from the point of view of the financial intermediary system, the primary source of risks is economic agents' rapidly rising indebtedness in foreign exchange. Foreign exchange plays an increasingly important role

both in loans to households and to corporations. In the event that a credible fiscal adjustment is not undertaken, lending in foreign currency may cause considerable losses to customers and banks as well through the exchange rate and yield correction triggered by the market.

A notable movement of the exchange rate may result in a significant increase in the repayment burden of those who have unhedged debts in foreign currency

As banks pass on the exchange rate risk to their customers, a pronounced movement of the exchange rate may result in a significant increase in the repayment burden of parties with unhedged debts in foreign currency. On the one hand, via a deterioration in clients' creditworthiness this may result in an increase in banks' credit losses, and on the other hand, via the decline in credit demand and a possible loss of confidence in banks it may limit the efficiency and future development opportunities of financial intermediation. However, if macroeconomic imbalances lessen as a result of a voluntary fiscal adjustment, the rapid development of the financial system observed in the past years may continue in the long run.

Financial deepening and significant portfolio restructuring

In addition to the build-up of risks involved in foreign currency lending, financial deepening and significant restructuring of the portfolio must be emphasised. The driving force behind the increase in the balance sheet total is currently the dynamic expansion of credits to the private sector. Within the corporate segment, small and medium-sized enterprises (SMEs) are gaining ground, and lending to households is also rapidly increasing. However, as banks increasingly finance these market segments not only directly, but through other, non-bank financial institutions as well, the share of the non-bank private sector is continuously growing in their balance sheet.

The increase in the market segments that allow the attainment of a higher interest margin and the sometimes weak price competition add to the banking sector's profitability

The increase in lending to the private sector significantly rearranges banks' portfolios in the direction of market segments that allow the attainment of a higher interest margin, and where price competition may also be weaker sometimes. Consequently, the banking sector's profitability is very high in international comparison. However, due to the short credit histories we do not have adequate information on the creditworthiness of new customers in the portfolio and their ability to resist shocks, therefore it is also difficult to assess the risks related to such customers. Considering, however, that these market participants' income position is more sensitive to developments in domestic demand and thus to the negative effects of a market correction as well, and also that both in the SME sector and in the household sector unhedged Swiss franc loans have become dominant in the past years, exploring and making known the related risks are considered to be extremely important from the aspect of stability.

Considerable credit risks of financial enterprises

Non-bank financial intermediaries are playing an increasing role within financial intermediation, and thus their potential effect on financial stability is growing. Financial enterprises are especially active in lending to households, particularly in car purchase financing, which is characterised by a high proportion of foreign currency loans and more lenient lending conditions, thus the related risks are also considered to be high.

The weight of institutional investors is increasing, but their resource allocation role across economic sectors still remains limited

Institutional investors' role in collecting savings continues to increase, although these types of institutions typically hold their portfolio in government securities and bank deposits, therefore their resource allocation role within the household and corporate sectors and across sectors is limited for

the time being. This is partly attributable to the high financing requirement of the general government, the risk-averse behaviour by institutional investors and their customers and the low level of financial culture. A decline in macroeconomic imbalances could favourably influence the development of these types of institutions as well, and through the lower risk premium it would stimulate the holding of alternative investment portfolio in addition to government securities, also contributing to further financial deepening.

Savings cooperatives' stability would be enhanced, if a stricter capital requirement for non-integrated institutions came into force

The stability of the savings cooperatives sector is important because of its role in collecting savings from households. The sector's stability would increase, if a stricter capital requirement for non-integrated savings cooperatives came into force and regulatory expectations with regard to integration were determined in legislative instruments.

Providing for neutrality in competition and promoting the sound operation of financial markets is important in financial regulation

In the coming years, a number of EU directives will be adopted in the field of financial regulation. In terms of the development of the financial system and the efficiency of monetary transmission, it is very important for the central bank to provide for neutrality in competition, to eliminate the possibility of regulatory arbitrage and to facilitate the sound operation of the financial markets. Accordingly, the MNB considers it to be an important task to actively participate in the preparations of the implementation in Hungary of the directive on markets in financial instruments (MiFID), as the provisions of regulation may be an important market-forming factor in the coming years. In addition to this, the expected European reform of regulating large exposures is also a task, the successful performance of which may significantly contribute to the strengthening of financial stability.

The Hungarian payment and securities settlement system operates in a stable manner, but competition in banks' pricing is weak

The Hungarian payment and securities settlement system is robust and works in a stable manner. This is confirmed by the fact that while the turnover is increasing, liquidity risk is declining, and amongst continuous developments the system performs its duties with high availability and operational reliability. However, it is an unfavourable phenomenon that while the MNB has been reducing the VIBER fees for banks for years, the latter usually do not follow the example and leave their fees – which are often several times higher than the central bank fee – unchanged, keeping this service at an artificially high price level. Similar behaviour can be observed in case of cross-border small-amount euro transfers as well.

1. Macroeconomic risks





In Hungary, the GDP proportionate debt of the general government and consequently the GDP proportionate debt of the whole country vis-à-vis the rest of the world is growing at a fast pace. Although the country's external financing requirement fell as a per cent of GDP and non-debt inflow increased in 2005, the external imbalance remained very high, increasing the vulnerability of the economy to adverse financial shocks. This process cannot continue for a long period of time. However, it cannot be reliably predicted how and when a return to the equilibrium path will take place. Therefore, the conditionality of the macroeconomic path, which presumes a practically unchanged fiscal policy, presented in the November 2005 *Quarterly Report on Inflation* and its February 2006 update, is very significant, and as time goes by, the probability that the Hungarian economy could follow this path is decreasing.

While the steadily high level of the general government deficit and the external financing requirement, as well as the sustained growth in the general government debt and the external debt are causes for concern, the global financial environment was quite favourable until February 2006. Despite the significant external and internal imbalances, the low level of global risk premia contributed to the fact

that the risk premium expected by the market did not rise considerably.

Despite the favourable external conditions, market developments imply several warnings as well. The different behaviour of forint yields and of the exchange rate as compared with the other countries in the region, the downgrading of the Hungarian debt and the prospect of further downgrade and foreign participants' low forint risk-taking clearly indicate an increase in risks perceived by the market with regard to the Hungarian economy.

We believe that there is a growing need for a credible fiscal consolidation. Without a credible reduction of the budget deficit there is an increasing probability that the correction of the marked imbalance will be enforced by the market through an increase in the extra yield expected of forint investments, i.e. through a weakening of the exchange rate and a rise in interest rates.

Our analysis examines two basic issues. On the one hand, we try to find the underlying reason which allowed the continuance of the situation in the recent period, and on the other hand, we analyse the possible scenarios of returning to the equilibrium path.

1.1. Critical state of equilibrium

With regard to last year's trends, the equilibrium problems of the Hungarian economy practically did not lessen. Although households' net financial savings increased considerably, as a result of the continuing expansive fiscal policy the twin deficit remained, and both the government debt ratio and net external debt ratio continued to increase (see box texts). If fiscal policy remains unchanged the imbalance is expected to grow, and thus there is a declining probability that the economy will develop alongside the current path.

The uncertainty of statistics measuring the external balance has increased. While in 2005, the financial account statistics showed that external financing requirement declined significantly to 6.5 per cent of GDP, according to the financial accounts this index is 8.5 per cent. Despite the considerable uncertainty, the statistics still indicate a very high level by international standards.

In 2005, the changes in the financial capacities of domestic sectors would have given reasons for an about 1 percentage point decrease in GDP proportionate external financing requirement. The financing requirement of the

general government in the broader sense¹ increased to 9.3 per cent of GDP, which corresponds to 0.8 percentage point growth compared to 2004. In parallel with this, the financing capacity of the private sector increased significantly. Households' net financial savings increased markedly, to approximately 4 per cent of GDP annually. However, year-end one-off income-increasing items also played a significant role in this. The increasing investment expenditure of the corporate sector suggests growth in the financial requirement of the sector.

According to balance of payments statistics, the external financing requirement declined significantly in the meantime, by 1.8 per cent of GDP compared to 2004. However, the spectacular decline in the external financing requirement with the low level of imports seems to contradict other available economic data, rendering the assessment of the improvement in the external equilibrium uncertain.² We believe that the low level of imports shown in the statistics may be ascribed to the fact that foreign trade data were based on customs border recording before EU accession, while since May 2004 they have been based on questionnaires, i.e. on self-assessment.

Box 1-1: Uncertainty related to indices gauging external balance

An underestimation of imports is indicated by the fact that last year imports calculated on the basis of the estimated import requirement of consumption, accumulation and exports exceeded by approximately 2 per cent of GDP the imports shown by the statistics, i.e. domestic real economy developments suggest a higher import level and external financing requirement. The developments in the 'changes in inventories and other, non-specified items' line of GDP statistics also suggest higher underlying imports compared to what is shown in the statistics. If the improvement in net exports according to GDP is the result of only the smaller reported imports, then, for the sake of harmony with the data of the production side, the jump in net exports must be offset by the lower values of the change in the above item which also includes a statistical difference. In 2005, the GDP-proportionate 'inventories and other, non-specified items' declined to a level not observed

earlier, which may indicate a higher trade deficit than shown in the statistics.

Looking at financing developments, a similar contradiction can be perceived: external equilibrium could only improve, if the corporate sector's GDP-proportionate net financing requirement declined during the past one year. The spectacular decline in the sector's financing requirement could have materialised only in the case if, in conjunction with accelerating export sales – as opposed to earlier experience – the corporate sector had reduced its accumulation expenditure.

In accordance with the above, the contradictory character of the balance of payments statistics also strengthened at an annual level: the 'errors and omissions' line in the statistics increased to around 2.5 per cent of GDP. Overall, the real economy and financing developments indicate that in 2005 the actual external financing requirement – in accordance with the financial accounts – could have been as much as 2 percentage points of GDP higher than the value in the official statistics.

¹ In addition to the scope of general government, general government in a wider sense also comprises the state-owned institutions performing quasi-fiscal tasks (Hungarian State Railways, Budapest Transport Limited), the MNB and the institutions which carry out investment initiated and overseen by the government, but formally known as PPP projects.

² See more details in: August 2005 *Quarterly Report on Inflation*, 4-5 box: Questions concerning developments in imports and the external balance.

Table 1-1**Projection of key macroeconomic indicators on the basis of the current issue of the *Quarterly Report on Inflation***

	Actual	Actual/Estimate	Projection	
	2004	2005	2006	2007
Consumer price index, per cent (annual average)	6.8	3.6	1.3	2.8
Growth in external demand, per cent	2.4	1.9	2.1	2
GDP growth, per cent	4.6 (4.4)*	4.1 (4.3)*	4.6	4.3
External financing requirement – balance of payments statistics (as percentage of GDP)	8.3**	6.5**	8**	7.2**
External financing requirement – financial accounts (as percentage of GDP)	9.9	8.5	–	–

Note:

* Data adjusted for the leap day are given in brackets.

** Due to the uncertainty in measuring foreign trade statistics, starting from 2004 the current account deficit which actually materialised or will actually materialise and the external financing requirement can be higher than the official figures or our projections based on such.

Source: MNB.

With stable money market developments due to the favourable external environment, real GDP growth in 2005 exceeded 4 per cent again, while inflation declined steadily. Growth was driven by exports increasing due to buoyant external demand and by accelerating fixed capital formation resulting primarily from an increase in public infrastructure investment.

In 2006 and 2007, developments in external economic activity may be favourable, and there may be an upswing in domestic economic activity as well, if the external environment and the favourable market sentiment remain unchanged. As a result of an increase in minimum wages and a reduction in VAT, households' real income growth may rise as much as 5 per cent, which could lead to a faster increase in consumption demand. At the same time, expenditure related to fixed capital formation is expected to grow at a slower pace: with declining infrastructure investment by the general government a lasting slowdown in households' investment spending is also expected.

Despite the favourable prospects for economic activity, fiscal expansion may result in a further increase in external and internal indebtedness. In 2006 and 2007, if the fiscal policy remains unchanged, the financing requirement of the general government may continue to increase, while as a consequence of a low level of income proportionate consumption, households' net financial savings can only moderately grow. Consequently, an unchanged fiscal policy may again result in an increase in external and internal imbalances.

In 2006, the planned tightening of expenditure on wages and material expenditure will at best offset the effect of earlier announced easing measures (for example VAT cut, increase in family allowance). Settlement of expenditures related to the planned motorway construction outside the scope of ESA and to the acquisition of the Gripen aircraft, which amounts to 0.35 per cent of GDP and is without a demand effect, are expected to have the overall result that the total financing requirement of the general government may grow to a level of around 10 per cent of GDP. The already adopted measures forecast a further increase in deficit in 2007.

Box 1-2: Government debt developments³

In 2004 and 2005, the debt ratio without the effect of the pension system reform exceeded the 60 per cent reference value laid down in the

Maastricht debt criterion again. The year 2006 budget deficit, which can mostly be considered determined, is expected to be higher than the value specified in the December 2005 Convergence Programme; according to our calculations the debt ratio will continue to increase, and by the end of the year it will exceed 64 per cent.

³ This box is based on the MNB study titled 'Dynamics of the Hungarian government debt: analysis and simulations' by Tamás Czeti and Mihály Hoffmann (Czeti Tamás–Hoffmann Mihály [2006]: A magyar államadósság dinamikája: elemzés és szimulációk, MNB-tanulmányok 50).

Table 1-2**Gross public debt as a percentage of GDP**

In the percentage of GDP	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Gross public debt	87.1	73.6	63.9	61.6	60.9	55.0	53.0	56.6	58.9	60.2	62.3
Gross public debt corrected with pension system reform	87.1	73.6	63.9	61.4	60.3	54.1	51.7	54.9	56.7	57.1	58.3

Source: MNB.

For the period of 2007-2008, the impact on the debt ratio of three different fiscal scenarios was examined: (1) in 2007 and 2008 the primary cash-based balance (excluding debt assumption) will remain at the 2006 level; (2) from 2007 there will only be a modest, 0.5 percentage point annual primary deficit reduction; (3) in 2007 the primary deficit will fall by 3.5 percentage points to zero, and stabilise at that level.

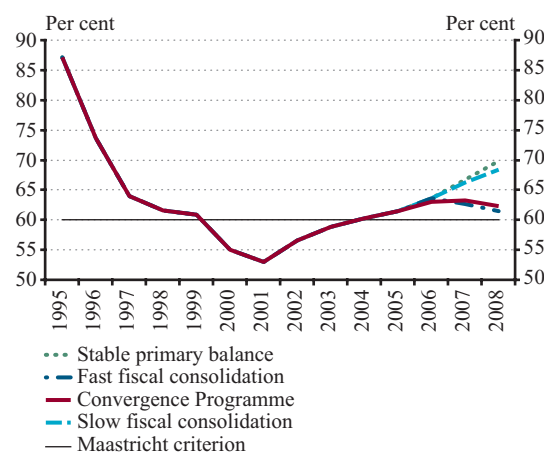
Even the scenario which assumes the unchanged level does not reckon with the effect of the already known determinations. It means, we assume that the budget will counterbalance the determinations towards a higher deficit with adequate measures, while it will not take any other deficit reducing steps. In this case, the debt ratio may increase to nearly 70 per cent by end-2008. With the scenario that assumes an annual 0.5 percentage point primary balance improvement, the debt ratio may grow to 68.5 per cent by end-2008. Of the examined scenarios only the third one ensures that the increase in the debt-to-GDP ratio is arrested. If a balanced position is attained at primary balance level, the debt ratio will decline from 2007 on, and may fall to 61.5 per cent by end-2008. This also means that even if the deficit was reduced substantially, Hungary could only meet the Maastricht debt criterion through the decreasing dynamics of the debt ratio and not with its level.

With regard to the debt, an additional risk is involved in the financing of certain companies pursuing quasi-fiscal activities. The debt of the Hungarian State Railways (MÁV) and of the Budapest Transport Limited (BKV) may reach 1.8 per cent of GDP by end-2006, which

may necessitate an assumption of debt by the government. There is also methodological uncertainty in the statistical recording of the motorways built as PPP projects: if Eurostat's future attitude does not allow the activity of the State Motorway Management Co. Ltd. (ÁAK) to remain outside the scope of the general government in the statistics, this may result in a further debt increase exceeding 2 per cent of GDP.

Chart 1-1**Expected debt ratio developments in case of various scenarios**

(without quasi-fiscal debt items)



Source: Czeti-Hoffmann (2006).

Vulnerability is further increased by the growing share of foreign exchange denominated flows within debt-generating inflows as domestic agents increase their exposure to currency risk. As a result of significant borrowing in foreign exchange, households' exchange rate risk increased by EUR 3.3 billion in 2005.

Overall, at the general government level consolidated with the central bank, the growing ratio of funds obtained from

abroad by the general government does not add to exchange rate exposure, although it increases the interest rate risk of the government. The underlying reason is that the foreign exchange funds obtained by the general government are changed at the central bank, and thus the increase in foreign exchange debt adds to the central bank's foreign exchange reserves. The forints received after the change is spent by the government, and thus in parallel with an increase in the foreign exchange reserves the volume of

two-week deposits with the central bank also increases.⁴ With regard to general government consolidated with the central bank it means that indebtedness in foreign exchange does not result in an increase in exchange rate exposure, and the government's forint exposure does not decline either, as the decline in the issue of government securities is offset by the increase in two-week deposits. Consequently,

as a result of indebtedness in foreign exchange, within the government's liabilities the share of very short, two-week repricing liabilities increases, i.e. the interest rate risk exposure grows. With the current structure, a 1 percentage point yield increase raises the consolidated government's interest expenditure by 0.4 percentage points as a proportion of GDP already in the first year.⁵

Box 1-3: Developments in the net external debt ratio⁶

Following the dynamic decline in net external debt experienced in the mid-1990s, the external debt ratio practically stabilised between 1999 and 2002, then started to increase again in 2002. Examining the developments in the external debt ratio it can be ascertained that between 1996 and 2004 the developments in the country's debt ratio were mainly determined by the combined financing position of the household and general government sectors and by privatisation revenues.

Stopping the increase in the debt ratio would require a 3.5 per cent GDP-proportionate reduction of the combined financing requirement of households and the general government sector. However, in the current situation, examining the various scenarios reveals that a further increase in the debt ratio can be expected in the medium run.

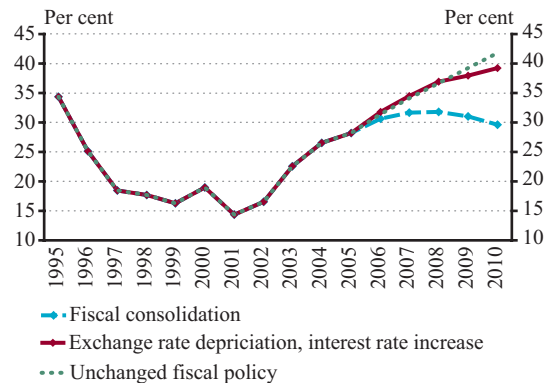
With an unchanged budget deficit and households' willingness to save which was typical in 2005, the net external debt ratio may continue to grow and in 2007 reach a level around 35 per cent, which was typical of end-1995. Increasing indebtedness indicates an increase in risks related to long-term unsustainability of economic processes. As time goes by, the necessity of fiscal consolidation grows, as without such consolidation there is an increased probability that a balance of payments correction will be triggered by the market.

In the event of credible fiscal consolidation, the debt ratio may follow a declining path in the longer run. In our first simulation we assumed that the general government's financing requirement will decline to the level necessary for meeting the Maastricht criterion by 2008, which requires an approximately 4 percentage point reduction compared to 2006. Even in the event that a favourable scenario from the aspect of debt dynamics materialises, as a consequence of the high combined

financing requirement of the household and general government sectors, the debt ratio may temporarily continue to grow in the medium run, before declining to below 30 per cent of GDP by 2010.

Chart 1-2

Net external debt ratio development in case of three various scenarios



Source: Antal (2006).

With an unchanged fiscal path there is an increased chance that a balance of payments correction will be enforced by the market. We examined what impact a one-off 10 per cent exchange rate depreciation and a parallel 2 percentage point real yield increase would have on the debt ratio. In the years following the shock the external debt ratio could continue to grow as a result of the exchange rate depreciation, the higher real yield level and slower real growth. However, in the longer run, with declining consumption and accumulation expenses the external financing requirement would decrease considerably, and thus the increase in debt ratio could slow down.

⁴ The following study provides an overview of the factors that affect commercial banks' two-week deposits with the central bank: 'Liquidity Management Operations at the National Bank of Hungary' by Judit Antal, Gyula Barabás, Tamás Czeti and Klára Major (2001), NBH Occasional Papers 9.

⁵ See: 'Dynamics of the Hungarian government debt: analysis and simulations' by Tamás Czeti and Mihály Hoffmann (2006).

⁶ The box is based on the MNB study titled 'External debt dynamics' by Judit Antal (2006).

1. 2. Deterioration in the market assessment of Hungarian fundamentals

The unfavourable development of Hungarian fiscal and external balances has had an impact on the forint market as well. The price movements of forint-denominated assets clearly diverged from the trends characterising other Central European markets. *The price changes observed in the financial markets indicate an increase in country-specific risks.*

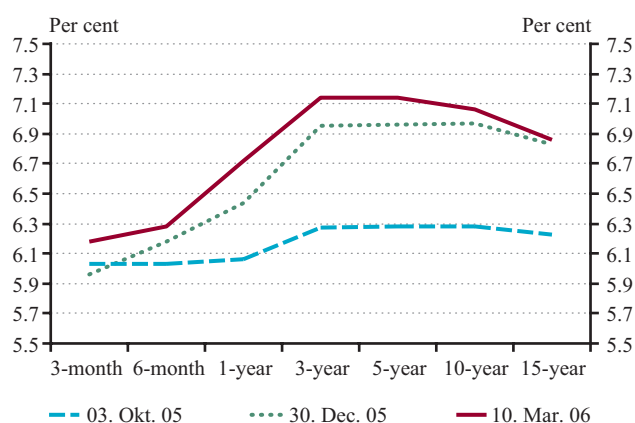
Until February 2006 the very favourable global investment climate prevented the increase of the expected premium of forint-denominated instruments from appearing in the exchange rate or in the level of short-term interest rates. However, an increase in future risks is indicated by the fact that long-term forward spreads over euro and other regional forward yields increased to record heights. The EUR/HUF exchange rate remained relatively stable until February 2006, while other regional currencies significantly appreciated. The deterioration in the assessment of Hungarian fundamentals was also reflected in the downgrade of the Hungarian debt (Fitch, JCA) and in the change of its outlook to negative (S&P, Moody's). Developments in the foreign exchange market also fore-

warn regarding the assessment of market developments. While in the last half year foreign investors' demand for the region's currencies was high, in the case of Hungary, as opposed to the intense inflows experienced in previous years, foreign investors' total forint risk exposure remained broadly unchanged in 2005, i.e. with the household sector's significant foreign exchange supply the equilibrium of the foreign exchange market was attained without foreign investors' demand for forint.

In addition to the risks indicated by market trends different from those of the region, it was pointed out several times in credit rating and investment banking analyses that a failure to present a credible deficit reduction programme in a short time may cause a significant loss of confidence. Without the necessary changes in the course of fiscal policy a downgrade of the country's foreign exchange debt from its current A level can be expected, the cost of both local and foreign denominated debt financing may increase significantly, and the risk of money market turbulence also rises.

Chart 1-3

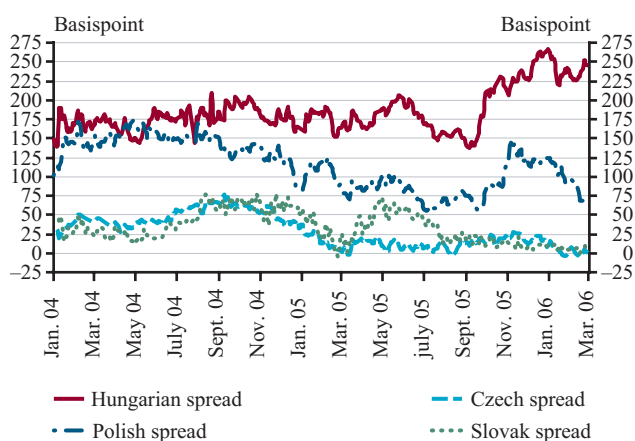
Yield curve at various points in time



Sources: Government Debt Management Agency Ltd. (ÁKK), MNB.

Chart 1-4

Forward premia in the region compared to the euro



Note: 5 year implied forward spread over euro forward rate 5 year ahead, based on Reuters yield curve, 3 day moving average.

Sources: Reuters, MNB.

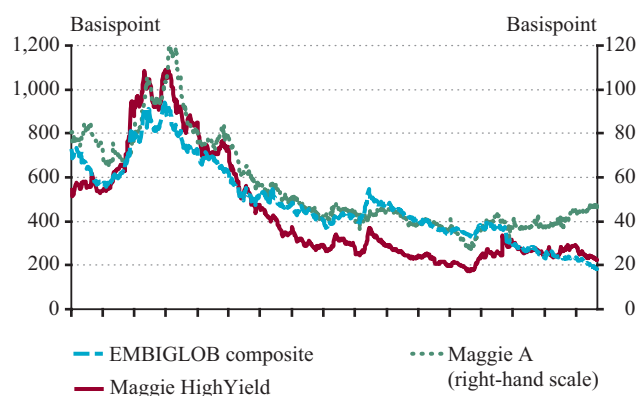
1. 3. Favourable external environment – increasing uncertainty

Despite the Hungarian economy's apparent equilibrium problems, the required premium of forint investments did not increase significantly in 2004 and 2005, which can be attributed to the very favourable external environment.

The continuing tightening of monetary conditions in major financial markets has not so far eroded investors' global risk appetite. Despite a continued decline in risk premia, demand for risky assets remained high until 2006 February.

Chart 1-5

Global risk indicators

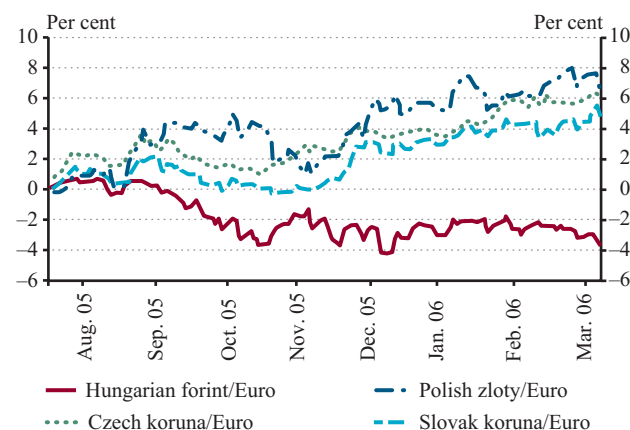


Sources: J. P. Morgan-Chase, Thomson Financial Datastream.

In addition to capital reallocation from developed countries' (G10) low-yield instruments, fundamental factors also contributed to the decline in emerging market premia. In analysts' opinion the growth of emerging countries may exceed that of developed countries in a sustained manner in the coming years, while the external debt position of these countries also improved significantly, thus the risk of exchange rate crises and financial market contagion has decreased. Many emerging countries have improved their debt structure, as the low yield environment, the improvement in ratings and investors' high risk appetite allowed an increase in the maturity of debt and a shift towards local currency financing. However, technical factors and capital flows based on the current favourable investment environment also contributed to the demand for emerging market assets. These momentum factors cannot be considered permanent, as they may turn in a short time, depending on changes in market sentiment.

Chart 1-6

Exchange rate developments in the region



Sources: Thomson Financial Datastream, MNB.

In the Central European region, due to the combined effect of favourable global investment environment and good growth prospects capital inflows continued, which led to a further appreciation of the currencies. By March, the Polish zloty appreciated to a peak of three and a half years, while the Czech and Slovak korunas appreciated to their historically highest levels against the euro. The Polish central bank cut interest rates and the Czech central banks used verbal intervention in an attempt to slow appreciation. However, in Slovakia, which joined ERM II, the increase in inflationary risks resulted in a rate hike. Despite political risks related to parliamentary elections, the decline in the required premium continued in the region, with the exception of the Hungarian market.

Risks in the external environment

In addition to the further deterioration of market sentiment with regard to Hungarian fundamentals, the probable change in the currently very favourable global investment sentiment poses a significant risk to forint foreign exchange and fixed income market prices. Moreover, exchange rate and yield reactions can be substantial, as market participants, due to their backward-looking pricing behaviour, may underestimate the risk. Consequently, in the event of a greater correction, the shift in asset prices can be significant.

The positive international investment atmosphere can be disturbed by numerous unforeseeable events: of the currently visible developments – as we already indicated in October's *Report on Financial Stability* – one of the greatest risks is a possible correction of the global imbalance. The adjustment of the high current account deficit of the United States through depreciation of the dollar and the increase in dollar yields due to favourable cyclical prospects and inflationary fears may cause significant changes in the global allocation of investment resources, and may result in an increase in risk premia (see box text on the correction of global imbalances). The European

monetary tightening cycle which started in December 2005 may also contribute to this.

Global investment sentiment may not be permanently influenced, but the balanced market environment could be adversely affected by the fact that in markets' opinion the US tightening cycle is coming to an end soon, and thus the uncertainty surrounding the future path of monetary policy may increase. Markets' sensitivity to macroeconomic data may increase, and the view on the behaviour of the Federal Reserve might change, due to the new chairman. This in turn may cause higher volatility in long-term yields.

Box 1-4: Global imbalances and the channels of possible adjustment

What is considered a global imbalance?

First of all, global imbalances refer to the high – historically atypical for a developed country – current account deficit (external financing requirement) of the USA, against the current account surpluses of a number of emerging and some developed countries.

When discussing global imbalances one cannot avoid elaborating on the role of various economic policy steps and processes. The relevant literature mentions several economic policy factors which could contribute to the formation and sustained existence of imbalances.

One of these factors is the fiscal policy of the United States, which became increasingly loose following the turn of the millennium, thus together with the growing indebtedness of households it can be held responsible for the decline in the savings ratio. According to several opinions, the ample liquidity appearing as a consequence of the Fed's loose interest rate policy and the potentially related asset price dynamics (equity market and then the real estate market), which had also wealth effects can also be held responsible for the deterioration in American households' savings position.

The exchange rate policy followed by Japan, China and other Southeast Asian countries also plays a role in the evolution and continuance of imbalances. These countries supported their export sectors by limiting the appreciation of their currencies, causing undervaluations of their real exchange rates against the dollar, and accumulation of substantial foreign exchange reserves. The undervalued real exchange rate leads to an increase in the US trade deficit, while central bank dollar reserves accumulated through foreign exchange market intervention strengthen the global demand for low-risk dollar

assets. The restrained domestic demand, which is attributable to the lack of structural reforms in certain European countries and Japan, may also have contributed to the deepening of global imbalances, although this impact can be considered relatively limited.

What main factors can an adjustment process comprise?

There is a broad consensus in the relevant theoretical and empirical literature, that global imbalances – assuming that the current trends remain unchanged – cannot be sustained over the longer run. However, there is significant uncertainty in terms of the timing, duration and the extent of the impact of a possible correction on individual regions of the world economy.

Should a correction occur, it can be assumed, that the US savings-investment gap will close as a result of an increase in the historically low domestic savings. This increase in national economy savings requires an improvement in households' net savings position, which may be facilitated by an increase in real interest rates and a possible real estate market correction. Tightening of fiscal policy may also contribute to the improvement in the national economy savings position.

The experiences of major balance of payments correction episodes of the last two decades show that narrowing of the savings-investment gap typically involves (real) exchange rate depreciation and output loss (see Freund and Warnock 2005)⁷, although their magnitude and duration can be influenced by several other factors as well (e.g. the size and capital structure of net and gross external positions, the currency composition of economic agents' balance sheets, the structure of the financial system, etc.).

In case of the USA, simulations carried out with calibrated models (e.g. Obstfeld and Rogoff 2005⁸ and Blanchard and his co-authors

⁷ Caroline Freund, Frank Warnock (2005): The Bigger They Are, The Harder They Fall?; G7 Current Account Imbalances: Sustainability and Adjustment, NBER Conference.

⁸ Maurice Obstfeld, Kenneth S. Rogoff (2005): Global Current Account Imbalances and Exchange Rate Adjustments, Brookings Papers on Economic Activity, 1:2005.

2005⁹) indicate that an equilibrium of the current account requires a significant (33 per cent in Obstfeld-Rogoff's main scenario) depreciation of the real effective exchange rate of the dollar, which implies a nominal effective exchange rate depreciation of a similar extent. However, Gourinchas and Rey (2005)¹⁰ and Lane and Milesi Ferretti (2004)¹¹ show that in the case of a major dollar depreciation the revaluation effects affecting the external assets and outstanding debt may facilitate a temporal smoothing of the adjustment process.

Should the dollar lose its primary reserve currency status as a result of significant real depreciation or changes in economic policy preferences (see Roubini and Setser 2004)¹², a substantial increase in long dollar yields must also be taken into consideration. According to certain studies (e.g. Warnock and Warnock 2005)¹³, without foreign central banks' dollar reserve accumulation the US 10-year yields would be approximately 100-150 basis points higher than their average level recorded in 2004.

In the course of a possible adjustment process a decline in the US domestic demand, a significant depreciation of the real and nominal effective exchange rates of the dollar, a possible jump in long yields and any combinations of the above mentioned must be reckoned with. The duration of the adjustment process may depend greatly on whether the correction of imbalances materialises with or without international economic policy co-ordination.

Through what channels might a possible adjustment affect the Hungarian economy?

A possible correction of global imbalances may affect the Hungarian economy through both cyclical and financial channels.

Since the contribution of net exports to the USA is significant in the growth of the Hungarian economy's major European trading partners, a correction of the US current account may also negatively affect Hungarian exports, which are integrated into the value added chain of European export products. This negative external demand shock may be dampened, if in the case of European countries the decline in exports is offset by a strengthening of domestic demand. If during the correction the very probable real effective dollar exchange rate depreciation takes place mainly against the euro, then because of the deteriorating price competitiveness on the US markets a stronger decline in euro area exports can be expected. This latter impact will be less significant, if the depreciation of the real effective exchange rate of the dollar takes place against the major Asian currencies as well.

A possible rapid and substantial increase in long dollar yields may result in a change of investors' preferences vis-à-vis emerging market instruments. The current strong global risk appetite may diminish, which will lead to an increase in the required risk premia on emerging markets. In case of Hungary this may lead to an increase of the financing costs of the current account deficit. If the fall in global risk appetite results in a significant withdrawal of capital from emerging market instruments, then a significant weakening of the EUR/HUF exchange rate can be expected as well.

⁹ Olivier Blanchard, Francesco Giavazzi, Filipa Sa (2005): The US Current Account and the Dollar, Massachusetts Institute of Technology, Department of Economics, Working Paper Series (Working Paper 05-02).

¹⁰ Pierre-Olivier Gourinchas, Hélène Rey (2005): International Financial Adjustment, CEPR and NBER February 2005.

¹¹ Philip R. Lane, Gian Maria Milesi-Ferretti (2004): Financial Globalization and Exchange Rates, IMF Working Paper.

¹² Nouriel Roubini, Brad Setser (2004): The US as a Net Debtor: The Sustainability of the US External Imbalances, University College, Oxford (November 2004).

¹³ Francis E. Warnock, Veronica Cacadac Warnock (2005): International Capital Flows and U.S. Interest Rates, Board of Governors of the Federal Reserve System; International Finance Discussion Papers, Number 840 (September 2005).

1. 4. Alternative scenarios

The risk of unsustainable external and internal imbalances and of a lasting change in the market environment means that the need for a credible fiscal adjustment grows as time goes by, whereas if such adjustment is not accomplished, there is an increasing probability that the premium expected of forint investments by the market will increase, the exchange rate will depreciate and the yield will grow. International experience shows that a successful budget deficit reduction has a favourable impact on growth in the medium and long run, while in the short run adjustment costs are far less than the growth sacrifice of a balance of payments correction triggered by the market. Moreover, market correction alone can only temporarily mitigate external imbalance problems, and in the longer run a precondition of returning to the equilibrium path is a lasting reduction of fiscal imbalance.

When presenting the impacts of the above two alternative paths on the economy we cannot rely on past Hungarian experience. In terms of short-term real economy effects, the fiscal consolidation in 1995 was closer to market correction, as the devaluation of the exchange rate and the related surprise inflation allowing a considerable reduction in real expenditure while keeping nominal expenditure at the same level constituted a fundamental element of the package. The notable depreciation of the exchange rate and increase in yields and inflation resulted in a significant fall in consumption and real growth in the short run. In 1995-96, the households' consumption expenditures declined by more than 9 percent, while the real growth rate of GDP decreased to 1.5 percent year-on-year after a level of 3 percent before the consolidation. In the current situation, a credible fiscal consolidation comprising structural reforms would require much lesser growth sacrifices, due to the different structure of deficit reduction, market participants' expected reactions and different external conditions.

Voluntary fiscal consolidation and market correction requiring the adjustment of the private sector represent the extreme scenarios of moving to a sustainable path. Besides the extreme scenarios there is a high probability that the necessary change in the direction of fiscal policy will be triggered by exchange rate depreciation reflecting the market's loss of confidence. However, in this case the initial conditions of fiscal consolidation may be less

favourable, while its short-term real costs may be higher compared to the case when deficit reduction takes place when the external environment is favourable. Moreover, a stop-gap fiscal reaction may potentially result in a failure to implement structural reforms, which are a pre-condition for a credible and lasting deficit reduction, although they require greater sacrifices in the short run.

1. 4. 1. CORRECTION TRIGGERED BY THE MARKET

If a credible budget adjustment does not occur, there will be an increased chance that – either due to a change in the favourable international market environment or in the perceived risks surrounding the Hungarian fundamentals – the premium expected of forint investments will increase, the exchange rate will depreciate, and yields will rise. International experience shows that, due to an increase in uncertainty and lasting yield increases, a correction triggered by the market results in substantial additional costs compared to the case when a shift towards equilibrium takes place under the control of economic policy.¹⁴ Moreover, a market correction does not repair the real cause of imbalance, i.e. the high level of general government deficit. It is only able to temporarily mitigate the symptoms (high external financing demand), with significant real economy costs imposed on the private sector. The precondition of a sustained improvement of the balance is a credible budget adjustment.

According to international experience and our assessment of developments in Hungary, a sudden and significant increase in the expected premium may mainly elicit the adjustment of demand. Beside the exchange rate regime, the impact of exchange rate depreciation on inflation depends on the reaction of monetary policy and the expectations related to it, and also to what extent the exchange rate change affects domestic agents. In the case of Hungary, which is characterised by an inflation targeting system, sustained strict monetary policy following the exchange rate depreciation in 2003 and the private sector's significant foreign exchange exposure, we expect that an increase in the premium expected of forint investments may imply a strong decline in demand, which may mitigate the inflationary effect. The underlying reason is that in the event of substantial exchange rate depreciation the lasting

¹⁴ See 'Consequences of significant external imbalances – international comparison' by Barnabás Máté Tóth (Tóth Máté Barnabás: Jelentős külső egyensúlytalanságok következményei – nemzetközi összehasonlítás).

rise in yields and the increase in the repayment burden of foreign exchange loans may reduce both consumption and fixed capital formation demands. The slow wage

adjustment typical of the labour market may result in a decline in real income, which may also contribute to the fall in consumption expenditure.

Box 1-5: Experiences of market corrections

This box presents international experiences of significant *nominal* exchange rate depreciations in times of external imbalances, mainly concentrating on the growth effects. The episodes are surveyed starting from 1990. This relatively late starting date is justified by the fact that in the period under review the global financial system went through a fundamental change as a result of the liberalisation of capital flows and financial innovation; therefore, the relevance of preceding correction episodes is limited. Moreover, it is important to mention that the corrections of the countries examined and the developments that led to those corrections cannot always be compared in all dimensions with the current situation in Hungary.

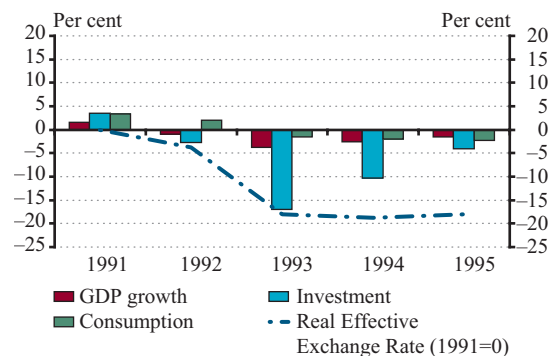
In presenting international experience, we have analysed past episodes of exchange rate adjustment of two country groups. An important lesson of the ERM crises of 1992-93 is that exchange rate crises associated with real economic sacrifices may develop even with sound financial institutional systems and small macroeconomic imbalances. Institutional weaknesses, in addition to substantial macroeconomic problems, also have played an important role in the development of third-generation crises. In Hungary, borrowing by the government with short repricing periods and the increasing foreign currency exposure of the private sector are developments which have also been observed prior to third-generation crises; however, the extent of balance sheet weaknesses in Hungary is currently below the level in the countries analysed. But, similarly to the case of countries discussed above, a further increase in exposure to exchange rate and interest rate risks may lead to a deepening of the crisis, were the exchange rate to depreciate on a sustained basis. Taken together, the experiences of none of the country groups may be reconciled with the Hungarian situation, due to the different domestic and external environments. Nevertheless, because of the similarities in certain areas, they may provide useful information about the possible effects of an exchange rate adjustment on the real economy.

A common feature of the examined correction episodes is that they took place in parallel with significant real exchange rate depreciations and declines in real growth rates. Following the corrections, the real exchange rate stabilised at the more depreciated level. In addition, in each episode a significant fall in whole economy investment can be observed, which was coupled with a smaller decline in consumption volume. However, the considerable difference experienced in the volume change covers a similar-size (negative) growth contribution in terms of consumption and investment.

In some of the countries that suffered from market correction (Finland, Spain, Sweden – in the specialised literature these episodes are classified as second-generation crises), in addition to relatively smaller macroeconomic imbalances, the factor that led to the correction was the inconsistency of individual elements of their economic policies identified by market participants and stimulating the taking of speculative positions. The moderate imbalances alone would not necessarily have justified a major exchange rate depreciation or a current account balance correction, although they limited the scope of action of economic policy responses to speculative market movements.

Chart 1-7

Average effect of corrections triggered by the market* on the levels of GDP, whole-economy consumption and fixed capital formation, experiences of ERM-crises



Note: *Finland, Italy, Spain, Sweden. GDP, consumption and gross capital formation indicates the percentage deviation of the level of volumes from the HP trend.

Source: IFS, World Bank (WDI), Thomson Financial Datastream, MNB.

In another group of market corrections (Argentina 2002, Brazil 2002, Indonesia 1998, Korea 1997, Malaysia 1998, Mexico 1995, Turkey 2001), which may be classified as third-generation crises, vulnerability factors of macroeconomic nature (high current account deficit, overheating, lending boom, unfavourable debt dynamics, lack of credibly fixed exchange rate regimes) and institutional weaknesses could also be observed. They included, inter alia, the poorly regulated or supervised financial system, the implicit government bail-out guarantees, the weak balance sheets in the private and public sectors and the unstable system of political institutions. The aforementioned institutional weaknesses greatly amplified the contraction effect of the exchange rate depreciation through financial accounts.

The episodes examined suggest that the countries characterised by significant external imbalances and the weakness of the financial system showed the most significant growth sacrifice. It is also important to mention that although a number of the countries examined had fiscal imbalances as well, undermined market confidence in the government's solvency played a direct triggering role in the correction only in two countries (Argentina, Turkey).

Certain elements of the external equilibrium position of Hungary are similar to the developments that preceded second- and third-generation crisis episodes, although important differences can also be pointed out. The significant external financing requirement and the state's and the country's increasing indebtedness can be considered as similarities. Short-repricing liabilities, which plays an increasing role in financing the consolidated general government and the increasing for-

ign exchange exposure in the private sector's balance sheets are also trends which were observable in most of the above countries preceding the crisis, but sectors' exchange rate and interest rate risk exposures in Hungary are far below the levels observed in the aforementioned countries. In addition, important differences are the lack of a narrowly pegged exchange rate regime and the fact that the system of financial, political and economic institutions is stable.

Overall, it can be established that there are several vulnerability factors in the Hungarian economy which considerably increased the costs of real economy adjustment in the course of previous market correction episodes. However, the lack of other vulnerability factors which played an important role in the episodes presented indicates that there is very little likelihood of the earlier scenarios' repetition in the same form.

Yield increases, uncertain environment and rapid rises of the price level of investment goods due to exchange rate depreciation result in a significant decline in output and accumulation expenditure. While theoretically the income of companies manufacturing goods for exports and naturally exposed to the exchange rate may increase as a result of exchange rate depreciation, practically these companies are indebted in foreign exchange, thus the exchange rate risk taken by them is minimal. However, in the recent period outstanding foreign exchange debt of small and medium-sized enterprises which do not have foreign exchange income has grown dynamically. A depreciation of the exchange rate would affect these companies very unfavourably – similarly to households.

The developments in the general government financing requirement depend on the reaction of fiscal policy. If the sector can maintain the level of its nominal expenditures while inflation is increasing, its primary deficit may slightly decline. However, as a result of yield increases, net interest expenditures may grow considerably. On the whole we expect that an exchange rate appreciation reflecting the loss of confidence of market participants in forint investments can trigger the adjustment of fiscal policy. Nevertheless, the unfavourable financial environment may narrow the prospects of fiscal consolidation and increase its real costs.

As the corporate sector is expected to reduce its real wage expenditures, and the general government may freeze

nominal transfers, households' real disposable income may fall considerably. As a result of exchange rate depreciation, the instalments of foreign exchange credits will increase, and demand for foreign currency loans may decline. At the same time, the yield increase will result in a loss of assets in case of yield-sensitive financial instruments. As a consequence of decreasing income, falling net financial assets and smaller demand for foreign currency loans, the sector may reduce its consumption expenditures significantly.

Even if the level of exports remains unchanged, the decline in consumption and accumulation expenditures will result in a deficit reduction of the real economy balance, thus external imbalance may temporarily slacken – due to the drop in the private sector's consumption and investment expenditures. However, without a reduction of the budget deficit, external imbalance will lessen only in the short run; a precondition of return to the sustainable path is a credible adjustment.

1. 4. 2. CREDIBLE BUDGET DEFICIT REDUCTION¹⁵

Fiscal adjustment affects economic developments through several channels. As tightening measures are taken, the direct, primary effects are of a demand-reducing character, but the measures can change the behaviour of other economic agents as well. They may strengthen confidence in the stability of the economy, enhance investment,

¹⁵ In this chapter we relied on the statements of the following study: Horváth, Á., Jakab, M. Z., Kiss, P. G., Párkányi, B.: "Macroeconomic effects of fiscal adjustments in Hungary", NBH Publications (under publication). It was assumed in the analysis that consolidation will take place on the government's own initiative, i.e. with the condition of a stable exchange rate level.

increase labour supply, etc. These secondary effects may partly, then to an increasing extent offset primary effects. The outcomes of these effect mechanisms and their duration are very hard to predict, as they are influenced by a number of factors. They depend on the timing, magnitude and durability of deficit reduction, the composition of the package of measures, the preceding imbalance (the level of the debt-to-GDP ratio) and also the reactions of the international environment and of the monetary policy.

International experience shows that the total effect is negative in the short run (in the first year), but the decline in growth is much less than what would be – *ceteris paribus* – justified by the fall in demand due to the tightening package, while in the longer run a successful and lasting adjustment programme may even put the economy on a higher growth path.

International experience also reveals that in addition to the composition of the applied deficit reducing measures, timing and monetary policy play a decisive role. In a favourable international financial and real economy environment, the real economy costs may be lower. The real economy costs and inflationary effect of a credible adjustment can, in most cases, be reduced by monetary policy as well.

In addition to the fact that timing and the interest rate policy may mitigate real economy sacrifices, international experience shows that there are several channels which

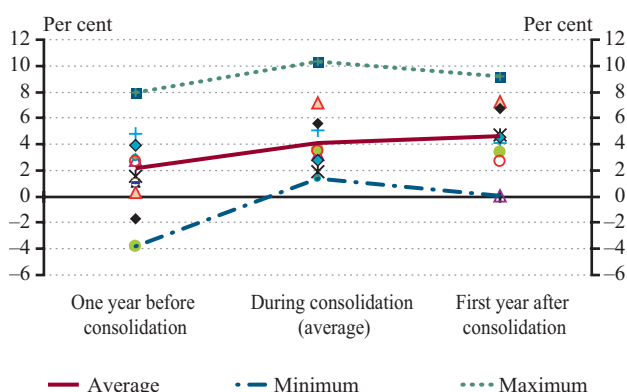
imply faster economic growth even in the short run (non-Keynesian effects). Expectations play a decisive role in the effectiveness of the above channels. If market participants expect a lasting deficit reduction, the decline in yields and the slackening of uncertainty will have a favourable effect on the willingness to invest and consume. It also adds to consumption willingness, if households expect faster growth in their disposable income due to a future reduction in their tax burdens. It may have an additional positive growth effect, if deficit reduction is accompanied by a decline in wages and a stimulation of labour supply at the same time. In this case, the decline in companies' labour costs has an output increasing effect.

In the following, we attempt to examine which primary and indirect channels of a fiscal adjustment may be significant for the Hungarian economy. In assessing primary effects, we can rely on model simulations, while in terms of secondary channels we can formulate assumptions at best. However, both in terms of primary and secondary effects there is a difference in what types of measures are taken, and it is even probable that there is a switch-over between the two effects; measures that seem to be more painful in the short run can elicit a much stronger positive effect through the indirect channels. International experience also confirms that the so-called nose heavy programmes are usually more successful.¹⁶

If the possible impact of measures taken through various channels is examined on the basis of *standard – Keynesian theory based* – model simulations applied to the Hungarian economy, we see that in the short run those measures involve the biggest growth sacrifice which have a direct impact on the commodity market¹⁷ (Table 3). A decline in government consumption and investment expenditure directly reduces the growth rate of GDP. In terms of *standard* effects, measures which affect the labour market (reduction of the number of government employees, freezing of wages) and reduce households' disposable income (tax increase and limitation of money grants) can also involve significant growth sacrifice.

In terms of impact on the price level, raising regulated prices and labour costs (contributions) may imply a significant inflationary effect. The various deficit reduction channels have different effects on individual sectors' income positions, as well as the dynamics of consumption and investment. Analysing the direct effects, it turns out that the strongest decline in income and slowdown in consumption of households is triggered by the dismissal of civil ser-

Chart 1-8
Real growth rates during fiscal consolidation, international experiences*



Note: *Austria (1996-98), Belgium (1993-98), Cyprus (2000), Denmark (1983-86), Estonia (2000-2001), Finland (1993-98), Hungary (1995-96), Ireland (1997-99), Lithuania (2000-2001), Slovenia (2002), Sweden (1995-98).
Source: IFS, MNB.

¹⁶ Gábor P. Kiss-Péter Karádi-Judit Krekó (2005): Structural challenges towards the euro: fiscal policy (MNB, BS 2005/1).

¹⁷ The model calculations were prepared with the central bank's estimated quarterly new-Keynesian model called NEM.

Table 1-3**Standard effects of deficit reduction through various channels equal to 1 per cent of GDP in the first two years, at unchanged yield level***(percentage deviation from the annual real growth rate of the main path)*

Type of shock	Growth of GDP		Household consumption (2 year)
	Year 1	Year 2	
1. Reduction in government employment*	-0.2	-0.5	1.5-2.0 percent reduction in household consumption
2. Reduction in financial transfers or increasing personal income taxes	-0.4	-0.5	
3. Regulated price increases	-0.1	-0.2	0.7-1.0 percent reduction in household consumption
4. Indirect tax increases	-0.2	-0.2	
5. Reduction in government purchases of goods	-0.8	0.0	0.0-0.3 percent reduction in household consumption
6. Increasing social security contribution of the corporate sector	0.0	-0.1	
7. Reduction in government investment	-0.5	-0.1	

Note: The effects presented in the table can be reduced by monetary policy actions and other non-standard type of channels' growth-sacrifice reducing effects.

**The simulation is carried out using the assumption, that the dismissed employee cannot find new job.*

Source: MNB, NEM-model simulations.

vants, reduction of money grants and tax increases. The impact on corporate investment is insignificant, irrespective of the method of deficit reduction.

The model simulations show that, with unchanged monetary conditions, depending on the channels applied, deficit reduction is accompanied by real economy sacrifice in the short run and medium run. In Hungary, the structure of general government revenues and expenditures strongly determines the possible means of budget deficit reduction. According to our *Report on Convergence* of November 2005, no significant saving can be attained on the general government's consumption and investment expenditures – partly because of the low level of expenditures and partly due to future commitments. Sustained deficit reduction is primarily possible through a reduction in wage costs, increase in service fees and increase in net transfer and tax revenues.

Although it is hard to predict the short-term growth effects of deficit reduction through the aforementioned channels, it is likely that with a well-formulated, credible consolidation – in accordance with international experience – several mechanisms may reduce short-term real costs. It is a precondition for credible fiscal consolidation that the financing need of the broad government sector is reduced by a long-lasting, not a temporary, increase in budget revenues and decrease in expenditures, and by improving the efficiency of public administration. The extent of credible deficit reduction is also questionable. Stopping the increase in government debt requires a 3.5 percentage point reduc-

tion in net expenditures. However, for Hungary to be able to meet the 3 per cent general government deficit criterion specified in the Maastricht Treaty in a sustained manner, i.e. not only in the reference year, the magnitude of the deficit reduction also taking account of the already adopted measures should be around 5.5-7 per cent of GDP.¹⁸

A decline in general government wage costs and social cash benefits and an increase in tax revenues significantly reduce households' disposable income in the short run. A decline in income and an increase in fees for government services together means that slower growth in household consumption expenditure is likely. However, the extent of the decline in households' disposable income and consumption also depends on the consolidation package applied. If net transfers and tax revenues are increased in parallel with the introduction of contribution, allowance and tax systems which stimulate the labour market, the employment reducing effect of the lay-offs, which are unavoidable in the government sector, with the flexible adjustment of the labour market, can be more subdued.

As for the corporate sector, the standard effects of deficit reduction are much less significant, and the investment path in the case of most channels does not change perceptibly. However, indirect effects can be very strong, and may result in faster growth of accumulation expenditure even in the short run. Through the decline in forint yields and appreciation of the exchange rate, the expected premium, which declines as a result of the credible adjustment, and the lessening uncertainty surrounding the fun-

¹⁸ See details in the publication titled *Report on Convergence*, November 2005.

Table 1-4**Channels of credible fiscal consolidation generating positive growth effects and their relevance for Hungary**

Channels	Conditions and mechanisms		Relevances for Hungary	
Reduction in uncertainty, increase in credibility	Decrease in expected yield premium	Increase in FDI	Increase in investment expenditures	Yield convergence and increase in predictability can have positive effects for Hungary.
		Decrease in yields		
		Stabilizing, appreciation of FX rate		
Decrease in future taxes / Forward looking household behaviour	Soft liquidity boundaries		Increase in consumption	Households' backward looking behaviour and high income-proportional consumption can mitigate these effects.
Work supply and demand inspiring tax and social security contribution system	Flexible job market	Increase in employment	Increase in output	The job market has been inflexible in the past. These measures can improve flexibility.
Social wage settlement	Bargaining job market			In Hungary the coverage and credibility of wage settlements have been low, that's why this mechanism is limited.
More efficient government sector	Structural reforms			Efficient by comprehensive structural reforms

Source: MNB.

damentals may create a more favourable investment environment and may even in the short run imply more rapid growth in accumulation expenditure.

In the case of the Hungarian economy, the non-standard effects triggering positive growth effects are effective through three channels. On the one hand, a decline in yields improves the net interest balance of the general government, and on the other hand, together with the decline in uncertainty, it may be beneficial for fixed capital formation, and within that for direct investment, and, albeit to a limited extent, for consumption as well. Beside decreasing yields and decline in expected premium may be reflected in the stabilization or, limited by the currency band and the credible monetary policy in the appreciation of the exchange rate as well, which can also increase domestic demand.

However, the operation of the other channels that have a favourable growth effect is uncertain and limited. As a consequence of households' retrospective behaviour observed in the past it is unlikely that the sector would react to its future potential increase in disposable income by

increasing its consumption expenditure. In addition, the high income-proportionate debt burden may hinder consumption flattening behaviour, despite the modest liquidity constraints. In a number of developed countries the growth sacrifice of the successful fiscal consolidation was moderated by concluding an efficient wage agreement. Employees reduced their wage demands in the short run, which facilitated corporate adjustment, and had a favourable effect on employment and output. In Hungary, this mechanism is not very likely, because the coverage and credibility of wage bargaining is small. The findings of our analyses were that although the operation of the aforementioned channels is limited, as households' liquidity constraints are easing and the ratio of forward-looking economic agents is increasing, they can have a much more significant effect than in the period of the 1995 budget consolidation.

Overall, we expect that the indirect effects will mitigate the short-term growth sacrifices of a credible adjustment, while the general government, which is cheaper and more efficient as a result of declining yields due to the lower expect-

ed premium, a predictable economic environment and structural reforms will add to potential growth in the longer run. Examining real economy sacrifices it is important to emphasise that while the basis of comparison in analyses is an unchanged, balanced macroeconomic environment,

this assumption is not realistic in most cases. If the budget deficit is not reduced, the probability of an exchange rate crisis increases, and thus the costs caused by market correction constitute the real alternative of the real economy sacrifices of the adjustment.

Table 1-5**Impacts of alternative scenarios on macroeconomic developments**

	Credible decrease in budget deficit	Correction forced by the market
Expected yield premium	Decreasing	Increasing
Foreign exchange rate	–	Decreasing
Volatility of asset prices	Decreasing	Increasing
Real disposable income of households	Decreasing	Decreasing
Wealth effect	Neutral	Wealth loss
Increase in consumption	Slowing	Slowing
Real GDP growth	Temporary slowing, acceleration in the long term, increase in potential GDP	Considerable slowing in the short term, smaller growth rate in the long term
Accumulation of fixed assets	Accelerating	Slowing
External imbalances	Permanent decrease	Temporary decrease
Sustainability of equilibrium	The economy can return to an equilibrium path	Imbalances persist, the return to equilibrium path can be achieved by budget deficit decrease

Source: MNB.

2. Financial institutions





The development of the financial intermediary system and the level of possible losses from the risks assumed are fundamentally influenced by the path on which the Hungarian economy is going to move in the years ahead. In terms of international trends, it is a general phenomenon both in developed and developing countries that financial institutions develop dynamically, and in the short run financial stability risks are usually considered low. However, in Hungary the risks stemming from the macroeconomic environment and the significant imbalances constitute a serious source of danger. The basic condition of the stability of the financial system is the economy's return to a balanced growth path, to avoid a market shock characterised by a significant interest and exchange rate correction.

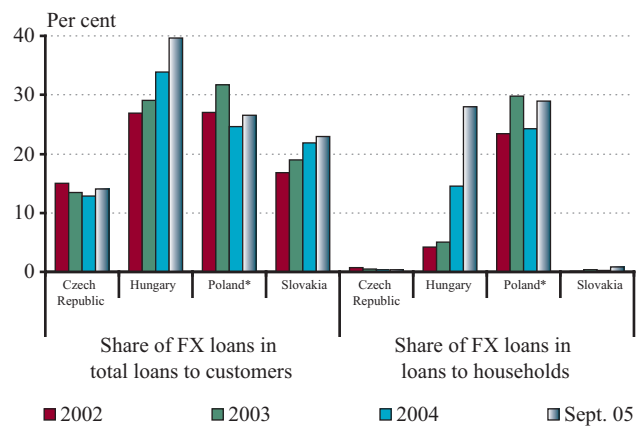
As regards financial institutions, the main risk factor is considered to be the rapidly increasing, foreign currency denominated indebtedness of economic sectors. Nowadays two-thirds of consumer loans and one-quarter of housing loans are denominated in foreign currency, and the share of FX debt exceeds 60% of total corporate debt as well. Among FX loans the role of Swiss franc is becoming more and more dominant. Risks related to foreign currency loans may cause considerable losses to clients, and through that to banks, mainly if credible fiscal adjustment is not carried out and if an exchange rate and yield correction is triggered by market developments. As banks transfer the exchange rate risk to their clients, the repayment burden of those who have unsecured foreign currency debts may grow considerably in the event of major movements in the exchange rate. Through a deterioration in clients' creditworthiness this, on the one hand, may result in an increase in banks' credit losses, and on the other hand, through a drop in credit demand and a possible decline in the trust in banks may limit the efficiency and

future development opportunities of financial intermediation.

Although in the Central and Eastern European region a rapid increase in loans similar to that seen in Hungary is typical of several countries, and an increase in foreign currency loans can also be observed in certain countries, these are usually euro-based credits and the Swiss franc's significant role in retail lending is typical only in a few countries.

Chart 2-2

The share of foreign currency loans in selected CEE countries



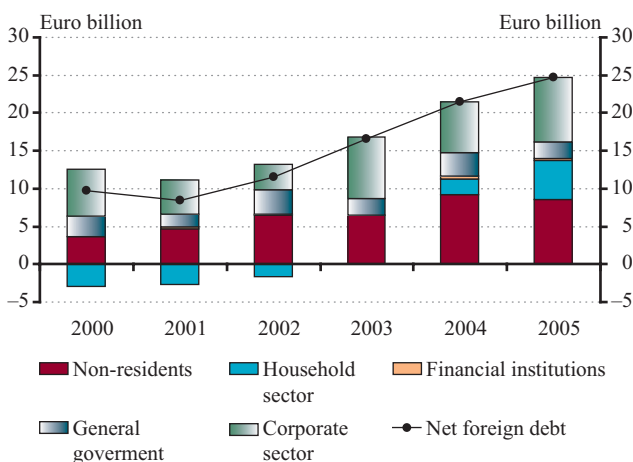
Note: *Poland – Dec. 2005.

Source: National central banks.

If macroeconomic imbalances decrease as a result of credible fiscal adjustment, the rapid development of financial institutions, observed in recent years, may continue. The banking system's average balance sheet total/GDP ratio increased to 75 per cent in 2005, driven by dynamic growth in loans to the private sector. Loans to corporations

Chart 2-1

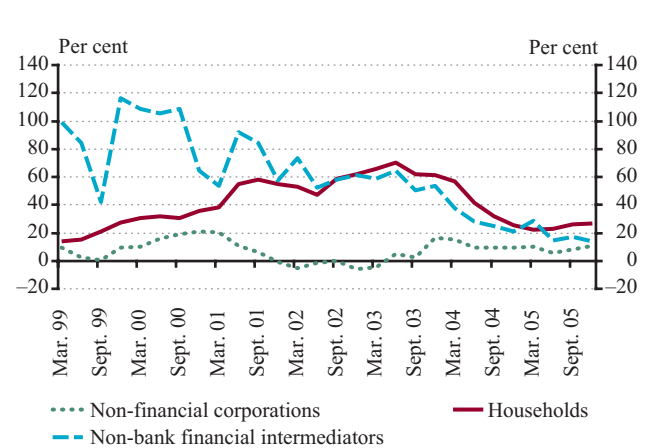
Net FX open position of the economic sectors



Source: MNB.

Chart 2-3

Growth rate of outstanding loans



Source: MNB.

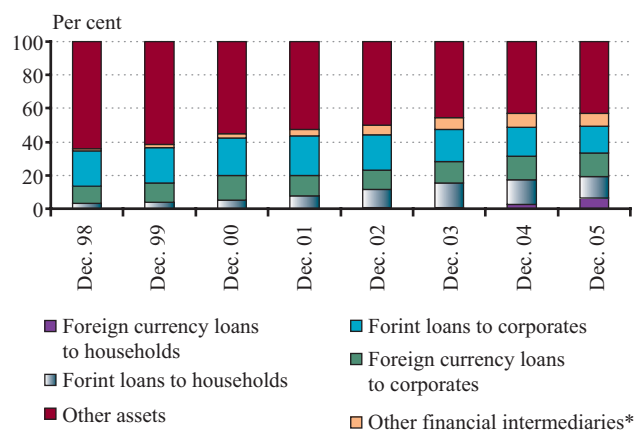
and households contributed to the dynamic growth of loans granted by the banking sector by 14 per cent and 25 per cent increases, respectively.

Within the corporate segment, small and medium-sized enterprises (SMEs) continued to gain ground, which together with dynamic lending to households means a further advancement of the retail segment. Since this significantly rearranges banks' portfolios in the direction of market segments which allow the attainment of a higher margin, the profitability of the banking sector has also changed positively. However, due to the short credit histories we do not have adequate information on the credit-worthiness and shock-resilience of new clients entering the portfolio, and therefore it is hard to assess the related risks as well. Taking into consideration that the retail market segment depends much more on domestic demand and is consequently more exposed to the negative impacts of a market correction, and that the unhedged Swiss franc loans have become dominant in SME and household lending in the past years, we attach great importance to identifying and communicating the related risks.

In addition to identifying risks in the banking sector, we believe that a risk-oriented analysis of non-bank financial institutions is also important, mainly because of their increasing share in financial intermediation. Financial enterprises are particularly active in household lending, especially in car financing, which is characterized by a high share of FX loans and loosening credit standards. In our view, this poses substantial risks to financial stability. Within financial intermediation, and especially in collecting households' savings, the role of institutional investors has continued to strengthen, but considering that these types of institutions usually maintain their portfolios in government securities and bank deposits, their financial intermediating role between and within household and corporate sectors is still limited. This phenomenon is partly explained by the high financing needs of the budget, the risk averse attitude of institutional investors and their clients, as well as the low level of financial literacy. We believe that decreasing macroeconomic imbalances would positively influence the development of these types of institutions as well, and would encourage them to diversify their portfolios from government paper to other alternative assets, contributing to the further deepening of financial intermediation.

Chart 2-4

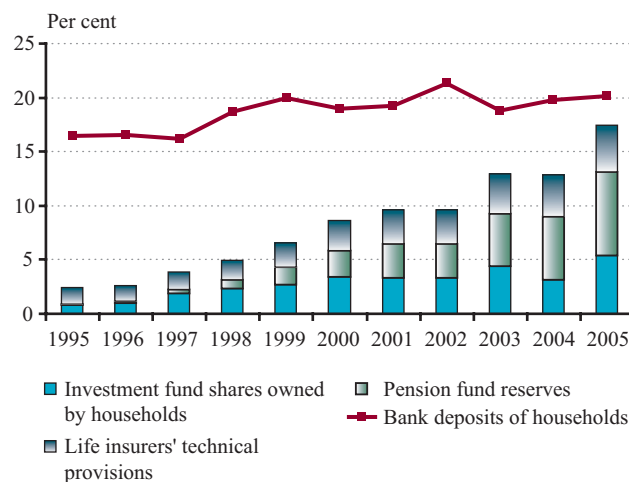
Share of non-bank private sector in the portfolio of the banking system



* Financial and investment companies, financial auxiliary companies, insurers and pension funds.
Source: MNB.

Chart 2-5

The role of financial institutions in collecting household savings (as a per cent of GDP)



Source: MNB.

2.1. Risks of the banking sector

2.1.1. CREDIT RISK

2.1.1.1. Corporate sector

Unsustainable equilibrium conditions represent the greatest risk for the corporate sector

In 2005, the real economy was characterised by accelerating growth, and it was mainly the companies dealing with export sales, tourism and infrastructure development which benefited from this. As a result of a strong increase in exports driven by external real economic activity, manufacturing output grew faster than expected. While manufacturing output increased, the number of employed declined, and inflation in industrial goods prices remained low. As for market services, an unexpected increase in output was observed here as well. At the end of the year, there was an upswing and a structural change in domestic demand, i.e. retail sales grew faster than services consumption. In market services, the number of employed continued to increase, and the inflation of sales prices continued to exceed the average. All of this means that the increase in productivity and thus in the profits of both manufacturing companies and companies providing market

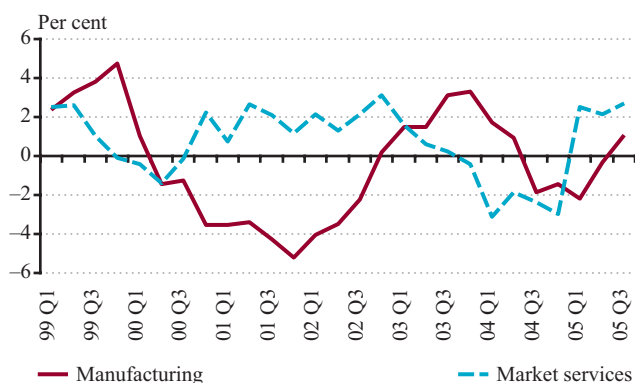
services showed greater-than-expected, positive dynamics last year.

The financial position of small and medium-sized enterprises (SMEs), which are extremely important from the aspect of the banking system's credit risk, has improved in recent years. The profit and loss statement of small and medium-sized enterprises shows that the sector's profitability has stabilised at a high level since 2001.²⁰ However, the relatively high ratio of companies with negative income indicates that there are great differences in profitability across the sector.²¹ Favourable business conditions last year may have continued to strengthen the SME sector's stability, especially that of supplier and retail trade companies. However, due to strong import competition negative trends continue to exist in the food industry. In addition, the magnitude of gridlock, estimated to be around several hundred billion forints, causes significant operational difficulties in certain industries, especially in construction. The deterioration in payment discipline stems from taking advantage of the unequal power relations on the one hand and questioning certain terms of the contract on the other hand.²²

Companies funded the growth rate of investment, which exceeded that of GDP, and inventory purchases underlying strong sales from credits, reinvested income and additional external financing. Outstanding borrowing of non-financial corporations both from abroad and from domestic sources grew considerably last year.²³ However, in terms of denomination it is important to emphasize that since early 2004 forint loans have stagnated at a practically unchanged level, and thus the increase in indebtedness is almost completely the result of the dynamic growth in foreign currency loans. Within indebtedness in foreign currency, the share of loans unsecured against exchange rate risk has been growing, and these loans significantly amplify corporations' sensitivity to market shocks. As we believe that in the case of an unchanged fiscal policy, following the current macroeconomic path there is a growing probability of a correction triggered by the market, we identify foreign currency lending unsecured against exchange rate risk as a prominent risk factor in terms of financial stability.

Chart 2-6

Annual real growth rate of corporate profits in major sectors¹⁹



Sources: CSO, MNB.

Note: The growth rate of profit was approximated with the growth rate of the inverse of the real unit labour cost.

¹⁹ Earlier data have been amended due to revision.

²⁰ Based on panel data of the Tax and Financial Control Administration (APEH) the sector's return on assets (ROA) was stable, around 4 per cent between 2001 and 2004.

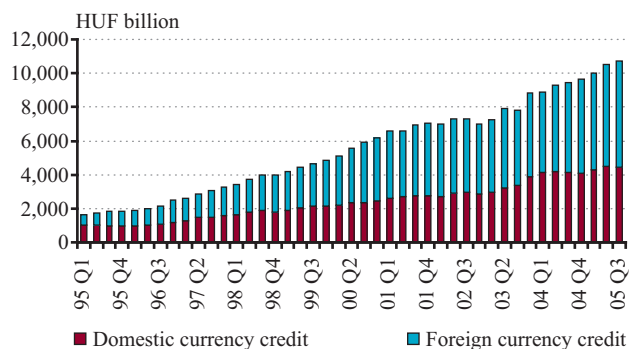
²¹ 42 per cent of SMEs showed negative profit in 2004.

²² In construction, quality complaints can be considered the most frequent phenomenon.

²³ Based on whole-economy financial accounts nearly 60 per cent of non-financial corporations' credits is from domestic and 40 per cent is from foreign financial mediators. Of domestic financial mediators banks play a dominant role (90 per cent), while the share of savings cooperatives (3.5 per cent) and financial enterprises (6.5 per cent) is negligible.

Chart 2-7

Non-financial corporations' forint and foreign currency loans



Source: MNB.

However, it can be considered a favourable trend that – on aggregate level – the increase in outstanding debt did not imply an increase in leverage, as, due to strong foreign direct investment and reinvested earnings, holding of equities and shares increased more dynamically than loans.

According to the macroeconomic path that assumes an unchanged economic policy, in the coming two years GDP growth will continue to be above potential, but while external demand remains strong, domestic demand becomes buoyant, and thus domestic sales become the main driving force behind the expansion of the economy. As a result of an increase in households' real income, global disinflation developments, fierce import competition and low industrial product inflation due to the VAT cut, growth in retail sales is expected to continue. An upswing is expected in services as well, although its magnitude may depend strongly on the favourable inflation developments that started in January and on the extent of the efficiency of the VAT cut.²⁴ However, due to a slowdown in infrastructure investment the strong demand effect of government investment may decline from 2006 on, which may weaken construction activity. Overall, according to the conditional path, an increase in the output of companies dealing with domestic trade and, in parallel with this, an improvement in the income situation greater than last year is expected in the coming years. An improvement in exporting and manufacturing companies' profit similar to that recorded last year is expected. As a result of sustained rapid export growth and ongoing labour market developments the assessment of the manufacturing industry may remain favourable.

However, due to the fiscal imbalance, we believe that the sustainability of growth and external equilibrium, i.e. the conditions of the projection related to the current macroeconomic path is highly questionable. In our opinion, if the macroeconomic path which assumes an unchanged fiscal policy is followed, there will be an increased probability of a correction triggered by the market. One alternative to this would be a voluntary fiscal consolidation, the financial stability effects of which are considered favourable on the whole.

Credible fiscal consolidation in the short run would mainly have an unfavourable effect on the corporate sector, which can be mitigated in the longer run by exchange rate stability and yield convergence. Consolidation attained through wage costs, transfers and taxes would, through the slowdown in household consumption growth and a decline in public investment, temporarily reduce the profitability of mainly those companies which operate in market services and construction sectors. However, positive effects would dominate in the longer run. With a sustainable fiscal balance, exchange rate stability would contribute to the evolution of a predictable economic environment, moderating the banking sector risk of unsecured foreign currency lending. Interest rate convergence accelerating as a result of a decline in the risk interest rate premium, mainly through the fall in the cost of capital, would have a positive effect on corporations' income position and creditworthiness. In addition, a sustainable economic environment could facilitate foreign direct investment inflows.

Should fiscal consolidation fail to occur, the impacts of the exchange rate depreciation and interest rate increase within the framework of the resulting market correction may be more drastic than the effects of the previously described alternative scenario. Taking international experience into account, an exchange rate depreciation would result in losses especially at companies with net foreign exchange exposure, which would unfavourably affect other companies as well through financial relations and as a result of contagion.²⁵ Following from the interest rate shock, domestic consumption and sales would drop, willingness to invest would ebb, debt servicing costs would increase, and credit demand would consequently decline.²⁶ High forint interest rates could even drag the corporate sector,

²⁴ Quarterly Report on Inflation (February 2006) – update.

²⁵ The enclosed box attempts to assess the SME sector's exchange rate sensitivity using a questionnaire-based survey and related calculations.

²⁶ See Chapter I.

which is sensitive to domestic demand, into recession. It is important to stress that in the case of a market-driven correction, compared to a voluntary fiscal consolidation, restoration of the equilibrium would impose considerable

additional costs on the corporate sector. A market correction would not be a remedy for the imbalances, but would significantly increase the negative real economy effect of the necessary fiscal adjustment.

Box 2-1: Examination of exchange rate sensitivity of Hungarian SMEs, survey evidence

Description of the survey

In autumn 2005, a survey²⁷ was conducted among domestic micro, small and medium-sized enterprises (SMEs) in order to examine their indebtedness, exchange rate exposure and FX risk management. The questionnaire was filled in by privately owned non-financial enterprises, having double-entry book-keeping who have raised any kind of debt from either domestic or foreign sources. The sample was developed to represent SMEs according to size and sector, based on value added.

On the basis of the data gathered, SMEs are primary indebted towards domestic banks (74 per cent of the total debt was granted by domestic banks) and almost one-third of the total debt is denominated in foreign currency. The ratio of foreign loans is low and raised by exclusively enterprises which export or import or are owned by foreign enterprises. As far as domestic loans are concerned, those are primarily raised in forint but euro and Swiss franc debt is also present to some extent.

Natural hedging – i.e. when enterprises with FX debt also have FX income – was one of the most important questions examined by the survey. On the basis of the data, it can be stated that this is not prevalent. One-half of total FX debt and two-thirds of domestic FX debt (the latter is granted mainly by banks) is raised by enterprises without positive net FX income. At the same time, half of enterprises indebted in FX do not expect that any potential change in the exchange rate would influence their financial position. This ratio is the same for those who are hedged naturally and those who are not.

We examined to what extent enterprises are ready to handle the effects of a potential exchange rate change. According to the results, two-thirds of enterprises exposed to exchange rate changes do not take into consideration their exposure, think about exposure too little or consider hedging too expensive. The majority (50-75 per cent) of enterprises interviewed do not expect that their profitability or competitive

position is influenced by movements of exchange rate, even if they have exchange rate exposure.

Examination of exchange rate sensitivity of sample enterprises

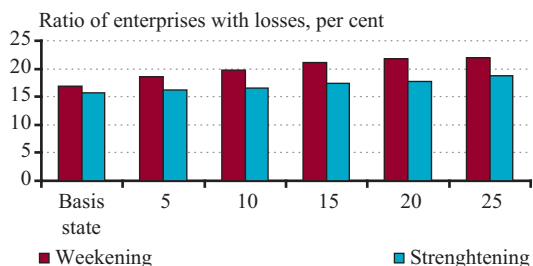
In the questionnaire several pieces of financial data were requested on the basis of which we have attempted to calculate the exchange rate sensitivity of sample enterprises. That is to say, we examine how the financial position of enterprises would be effected by different magnitudes of exchange rate changes (in both directions), although the calculations are based on very strict conditions, and even on setting aside the current exchange rate system. We calculated in what ratio of enterprises exchange rate changes would lead to losses in the sense that gross expenditures surpass gross income.

For the sample enterprises as a whole, net FX income is negative, this is to say, FX expenditures are higher than FX income. This itself indicates that more enterprises would negatively be influenced by a potential weakening of the forint than by its strengthening. This aggregate effect is expected by enterprises and underlined by the calculations.

In the basic state, 15 per cent of enterprises are unprofitable, a ratio which increases both as an effect of strengthening and weakening of the currency, but exchange rate weakening leads to losses in the case of more enterprises than exchange rate strengthening. Variability of effects on individual enterprises is high. As a whole, the profitability effect is negative, although it seems to be low because of the heterogeneity of the sample enterprises. In the case of a 10 per cent weakening, number of unprofitable enterprises would increase by 25 per cent while a 25 per cent weakening would lead to a 50 per cent increase.

Effect of exchange rate change is non-linear: relatively more enterprises become unprofitable in the case of a low (5-10 per cent) movement of exchange rate than in the case of an additional movement. That is to say, number of enterprises with losses as a result of a 5 per cent change is higher than number of those which show negative profit in the case of an additional 5 per cent change.

²⁷ For details see Katalin Bodnár: *Survey evidence on exchange rate exposure of Hungarian SMEs and financial stability risks of their indebtedness in foreign exchange*, manuscript, under publication.

Chart 2-8**Ratio of sample enterprises with losses in the case of different exchange rate changes**

Source: MNB.

Exchange rate sensitivity of enterprises with FX debt

We also examined exchange rate sensitivity of enterprises with FX debt. This sub-group of enterprises was divided into two subgroups: those which have FX income and those without such natural hedging. In the first sub-group, strengthening makes several enterprises

unprofitable, while weakening has almost no effect. This can be explained by the fact that FX debt is only part of FX income, so the effect of exchange rate change on the latter is dominant. On the other hand, in the case of enterprises with unhedged FX debt, weakening would have a negative effect: in an extreme case, the number of enterprises with losses would increase by one-third and aggregate profits would decrease by one-third at the same time. These results confirm that matching denomination of income and loans decreases the effect of exchange rate shocks on FX debt.

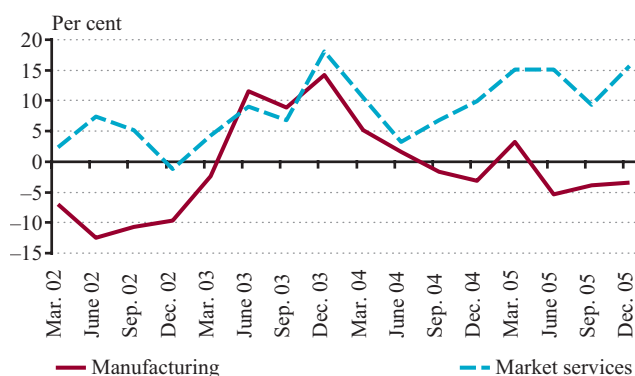
It must be highlighted that the above calculations and statements are very conditional as we disregarded any potential reactions by enterprises, i.e. the possibility that they may exploit their bargaining position or reschedule debt as well as different effect of exchange rate on FX income, expenditures or repayment rate. Because of the above, our calculations overestimate exchange rate sensitivity. Moreover, we disregarded the effect of exchange rate change on the competitive position of enterprises which can modify the above calculations in any direction. Finally, we could not take into consideration the potential effects of an exchange rate change on domestic interest rates which may have a negative effect on enterprises with forint loans. As a whole, exchange rate exposure may differ from the above calculated in any direction.

Improving bank portfolio quality, increasing uncertainty

As a result of favourable business conditions, non-financial corporations' loans granted by the Hungarian banking sector continued to grow dynamically (by 14 per cent) in 2005. Foreign currency lending is still the main driving force behind lending. As a result of the stronger-than-expected growth in exports, the increase in credits unhedged against exchange rate risk and the strong credit supply by banks, total foreign currency loans increased by 22 per cent, while forint loans increased by 7 per cent last year, falling behind the nominal rate of GDP growth. It is important to emphasise that the total increase in foreign currency loans with a maturity of less than one year and 30 per cent of the increase in foreign currency loans with a maturity of over one year was related to loans denominated in Swiss franc.²⁸

Lending to SMEs can still be considered dynamic. However, an increasing part, nearly 35 per cent of new loans is granted in foreign currency, which indicates steady growth in the SME sector's exchange rate expo-

sure. As a result of keener competition and the sector's favourable income situation, conditions of creditworthiness continue to loosen, product development is strengthening, and the process of formulating standardised products and credit assessment and debtor rating systems related to them is continuing.²⁹

Chart 2-9**Annual real growth rate of domestic banks' credit exposure in major economic sectors**

Source: MNB.

Note: GDP deflator was used to calculate real rates.

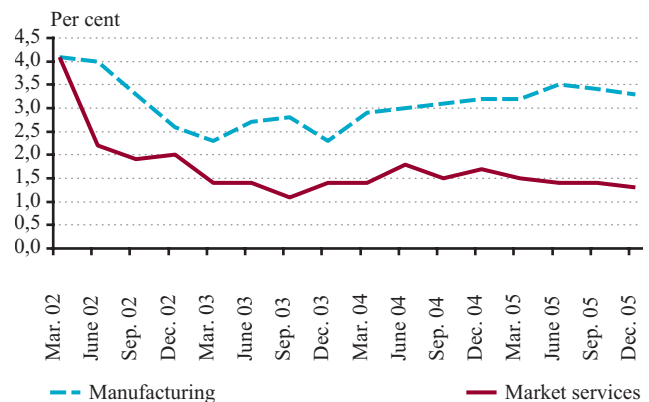
²⁸ The market of Swiss franc based corporate loans can be considered moderately concentrated. The HHI calculated on the basis of market share showed a value of 1,280 at end-2005, which is a lower value than the 1,430 in 2003.

²⁹ Senior Loan Officer Survey on Bank Lending Practices (March 2006).

The analysis of outstanding loan data for the various economic sectors suggests that the credit demand of companies sensitive to external demand and providing services in the hotel, catering and transport sectors and of construction and transportation companies engaged in infrastructure developments remained strong in 2005 as well. Although the credit demand of agriculture was lower than in 2004, which was a record year, it was much higher than in the years preceding 2004. However, the manufacturing industry's credit demand from domestic banks has been weak, due to credits obtainable from abroad and the strong substitution effect of working capital within financing.

In accordance with business conditions, the quality of domestic banks' corporate portfolio improved. On the one hand, this is reflected in the decreasing proportion of non-performing loans to total loans, and on the other hand in the size of loan loss provision to total loans. In 2005, the proportion of non-performing loans declined from 3.9 per cent to 3.4 per cent, which can be considered the lowest value in the last three years. In the case of loan loss provisions, the proportion decreased from 2.1 per cent to 1.9 per cent. Finally, it is important to mention that the proportion of loans with a less than 90-day delay in payment to the loan portfolio declined from 9 per cent to 6.4 per cent, which may indicate corporate clients' improving liquidity positions and a further improvement in portfolio quality. However, it may cast a shadow on this benign picture that within non-performing loans a remarkable shift towards loans with bad rating can be observed, and compared to 2004 a higher amount of loans was sold or written off in 2005.

Taking account of the extent of loan loss provision recorded in various economic sectors, with regard to market services portfolio quality continued to improve. Following the negative trends in 2004, due to strong foreign trade turnover, a modest improvement in portfolio quality was observable in the manufacturing industry in 2005. It is important to highlight that within the manufacturing industry, as a result of fierce import competition, the proportion of credits not paid back continued to increase in the food industry. In addition, portfolio quality also deteriorated in the mechanical engineering industry, although this is mainly attributable to specific factors. Consequently, in terms of the proportion of loan loss provisions the significant difference between manufacturing and market services continued to exist.

Chart 2-10**Domestic banks' loan loss provision to total loans in major economic sectors**

Source: MNB.

In addition to examining portfolio quality, it is also important to examine to what extent banks include risks in lending rates. Recent years' experience suggests that due to the fierce competition interest premia only partly followed the developments in risks. From the 2.2 per cent in 2004 the risk premium of forint loans declined to 1.8 per cent in 2005,³⁰ while the interest premium of domestic banks' euro-denominated loans stagnated at 1.5 per cent. In international comparison, the interest premium level of forint loans can still be considered low. Of the Central and Eastern European countries the premium is above average in the Baltic countries, which have a relatively small banking system, and in Slovakia, while in the larger banking markets of the Czech Republic, Poland, Hungary and Slovenia the premium can be considered low. This is explainable partly with the different degree of competition and lending risks and also with differences in economies of scale.

Looking ahead, it can be established that future developments in portfolio quality and credit risks depend greatly on which of the two alternative paths materialises and when it materialises as a consequence of the unsustainability of the current macroeconomic path. In terms of credit risk assessment, a voluntary fiscal consolidation as early as possible can be considered to be the most favourable scenario. In this case, due to the aforementioned effect mechanism taking place in the corporate sector a short-term deterioration followed by a steady improvement in portfolio quality is expected. In our opinion, the temporary, negative effects of a fiscal adjustment can be offset by the long-term positive effects of the sustainable

³⁰ Composition effect may have played a partial role in the decline. However, it is assumed that underlying the temporary increase in 2004 (mainly in the case of smaller-amount contracts) were the high-value government-subsidised loan agreements, where banks could attain higher premia than market premia.

Chart 2-11

Newly announced interest premium of bank loans denominated in domestic currency above the interbank market rate in 2004



Sources: National central banks.

Note: In each case the 3-month interbank rate was used. In the case of the Baltic countries the bank lending rates are for all newly made loan agreements, while in the case of other countries only the loans with variable rate or with less than one year initial rate fixation are included.

growth path on credit risks. At the same time, a correction triggered by the market would considerably increase credit risks for the banking sector. Due to a possible exchange rate and interest shock on the one hand, and the delay on the other hand, the required fiscal adjustment would impose significant costs on the corporate sector and through that on the banking system.

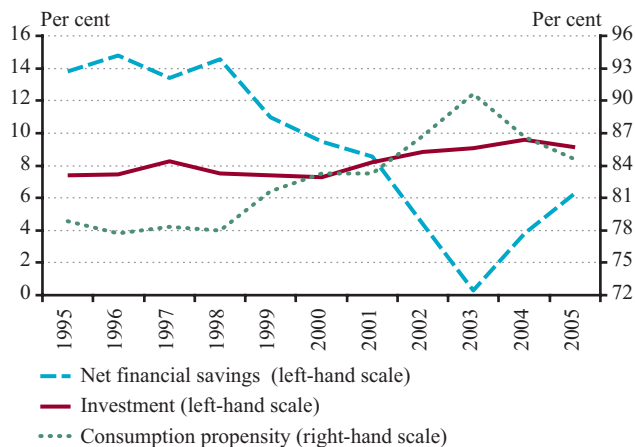
2.1.1.2. Households

Positive income developments turning more uncertain

The consumption and savings behaviour of households is shifting to a direction which is more sustainable in the longer run. After 2004, propensity to consume continued to decline in 2005 as well, and practically returned to the value observed at the turn of the millennium. In 2005, a strengthening of the precautionary motive generated by steadily increasing unemployment since 2004 also played a role in the decline of the consumption rate.³¹ This is also confirmed by households' increased debt burden, which is close to that of the average West European level. Financial savings increased considerably, while investment declined slightly.

Chart 2-12

Consumption and investment expenditure and net financial capacity as a proportion of households' disposable income



Note: 2004-2005 MNB estimate.

Sources: CSO, MNB.

Despite the declining rate, the growth of consumption can be considered dynamic, in which supply side factors played an important role. Increased imports and keener trade competition following EU accession resulted in growing supply in retail trade and only in a modest price increase. This, together with the increasing consumer credit supply, generated a relatively strong demand for these groups of products.

Households' investment showed much less volatility than the developments in consumption or net financial savings. Demographic developments³² and continuous depreciation related to housing stock contributed to this. These make a certain level of housing investment necessary (around 7 per cent of income), which is realised from people's own resources, even if borrowing opportunities and government support are limited. Credit supplies and government subsidies opening up from 2001 significantly increased households' spendings on housing investment. In parallel with this, the sector's income situation also improved considerably, thus the investment rate grew only moderately. The investment rate is expected to decline slightly in the future.

Due to the easing lending conditions and despite households' improving income situation in recent years, household loan losses increased slightly. This increase

³¹ The higher than expected increase in households' other income at the end of the year also reflected the decrease in the consumption rate.

³² In past years the generations that reached the working age were characterised by large numbers of people. In addition, as a result of social changes and ageing population, the ratio of one-person households shows a growing trend.

appeared mainly through portfolio cleaning activities (sales, write-off).

Due to the significant macroeconomic imbalance, the unsustainability of the path outlined above and the magnitude of the required correction are increasing over time. In the event of a successful fiscal consolidation, growth in the household sector's disposable income may come to a sudden stop or even decline temporarily (mainly the part originating from or paid to the government sector), which may result in a temporary increase in loan losses. The magnitude of the decline in disposable income, consumption and investment depends on the composition of the adjustment package.³³ Over the medium term, however, with the attainment of a growth path of sustained equilibrium, credit risk will decrease due to households' improving income and employment situation.

As opposed to the above, in the event of a market-induced correction, loan losses may increase considerably, as a result of a significant fall in household income. Firstly, negative income effects on households may be stronger. As a result of loss of investor confidence, private sector corpo-

rate investment may also decline to a greater extent. Therefore, as opposed to the previous scenario, households' income and employment from the private sector may also decline considerably. Secondly, households' current debt service burden may increase not only due to the fall in income, but, as opposed to fiscal consolidation, due to an increase in the instalment payments as well. According to our calculations an increase in debt service burden due to a possible market shock (forint depreciation and yield growth) would mainly be attributable to foreign currency lending, despite the fact that these loans account for a smaller share within total loans and the debt service burden (see box). It is estimated that three hundred thousand households would be affected by instalment payments rising due to a depreciation. Thirdly, the negative effects of a market correction may last for a long time. A market-driven correction is not a remedy for the real cause of the imbalance, i.e. the high level of general government deficit, and can only and temporarily mitigate symptoms, with significant real economy costs. Credible fiscal adjustment cannot be avoided in this case either. The burdens of fiscal adjustment may add to the consequences of market correction.

Box 2-2: Shock sensitivity of households' debt service burden

Despite the rapid increase in lending to households observed in recent years, the level of Hungarian households' total loans still falls behind the values recorded in most of the more developed loan markets. On average, the indebtedness indicator based on disposable income is more than twice as high in the euro area.

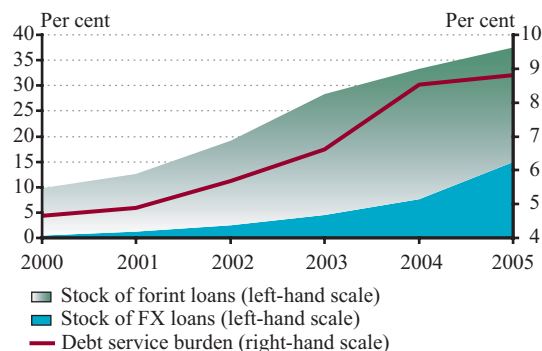
However, due to the composition of indebtedness (a higher share of consumer as housing loans), the higher domestic interest level and characteristics of the credit market (level of competition and risk), according to our calculations households' debt service burden (amount of interest and principal repayment as a proportion of disposable income) is close to the values of developed countries. According to the GfK survey, approximately 60 per cent of borrowers do not have any liquid financial savings which contributes to further increase in risks.

In 2005, due to a slowdown in the increase in outstanding debt the gap between the growth rates of outstanding debt and disposable income narrowed. Based on our calculations, in parallel with a dynamic increase in income, growth of the debt service burden slowed down notably. The main underlying reasons were the new credit market

phenomena that had started in 2004 and became dominant in 2005. In new lendings, foreign currency loans, which had lower credit costs when granted, became a dominant factor. At the same time, there was a marked shift to longer maturity mortgage loans (which involve lower credit cost).

Chart 2-13

Total outstanding household debt and debt service burden as a proportion of disposable income



Note: The debt service burden is an MNB estimate.
Source: MNB.

³³ For example, if fiscal adjustment is carried out in parallel with the introduction of a contribution, allowance and tax system which facilitates job-seeking and employment, the decline in income and consumption may be less significant.

As long as households do not have any negative experience of major exchange rate movements, due to the existence of the interest differential foreign currency lending is expected to continue,³⁴ mortgage lending is expected to increase, while short-term forint loans with high costs are expected to stagnate in the future as well. Based on this, the increase in the debt service burden is predicted to be lower than the growth rate of indebtedness.

However, the growing share of foreign currency lending generates increasing risks in terms of the size of instalments. Primarily, this would have important effects throughout exchange rate risk. At the same time the low level of interest rate volatility of foreign currency loans would only have a moderate effect on the debt service burden over the short term. In the following, the possible short-term consequences of a market correction are examined, assuming different exchange rate and interest shocks (10 and 20 per cent forint depreciation and 2, 4 and 6 percentage point increase in interest rates at all maturities). Our calculations are for loans to be repriced within one year. Of course, the various macroeconomic consequences of a shock of this nature would affect households' financial and income positions through several different channels (inflation, unemployment, asset effect, etc.). However, we have refrained from quantifying them. Although only a quarter of total debt service is related to foreign currency items, based on our calculations a larger part of the increase in the debt service burden due to the shock is related to the foreign exchange items.

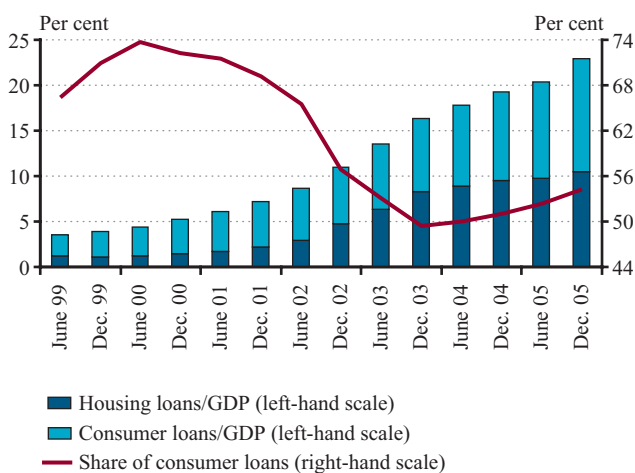
Despite the fact that over the short run only a proportion of loans would be repriced, in the case of 20 per cent forint depreciation and 6 percentage point yield growth, the average debt burden for the total outstanding loans would grow by 10 per cent. Because of uneven distribution of debt service burden increase, many debtors would be more strongly affected by this negative shock. Depending on the type of loan, the monthly instalment could increase by even 30-40 per cent. Therefore in the case of households affected by repricing, the rise in non-payment may become significant.

Due to the high proportion of foreign currency loans, the average extent of instalment increase is the highest in the case of non-bank loans. However, from a risk aspect it is advantageous that the ratio of low-income quintiles among debtors is the lowest here. The magnitude of debt service burden growth of credits to be repriced within a year follows from the following characteristics of the debt structure: on the one hand, most forint housing loans are not repriced within a year, thus they are less affected over the short run. However, the instalment increase of repricing credits may be very significant, it may be even more than 30 per cent. On the other hand, a part of forint consumer credits has a rate fixing period also exceeding one year, and following from their already very high credit cost the interest rate increase would have a relatively smaller impact and would affect only a part of the credits. However, in the case of foreign currency loans, the effect of depreciation appears in the instalment rapidly and completely, because banks calculate the new instalment at the exchange rate prevailing on the day of debt service.

Banks' increasing risk appetite despite riskier prospects

Risk exposure of financial intermediaries vis-à-vis households has been increasing. Within indebtedness, the share of consumer credits has continued to grow. The explosive spread of general purpose foreign currency mortgage loans registered as consumer credits has played a significant part in this. Previously, a part of subsidised housing loans was used for financing current consumption as well. At present, general purpose foreign currency mortgage loans registered as consumer credits are used for housing renovation or enlargement. The underlying reason is that for consumers it is simpler to apply for the latter facility and its credit cost when made available is lower than that of housing loans.

Chart 2-14 Composition of household loans as a proportion of GDP



Sources: CSO, MNB.

³⁴ Of the Swiss franc and euro denominations, households prefer Swiss franc loans, which have one percentage point lower interest burden. From this sensitivity to the magnitude of instalment and the lack of risk awareness follows that they will presumably prefer the foreign currency facility even if the forint/foreign currency interest differential is small.

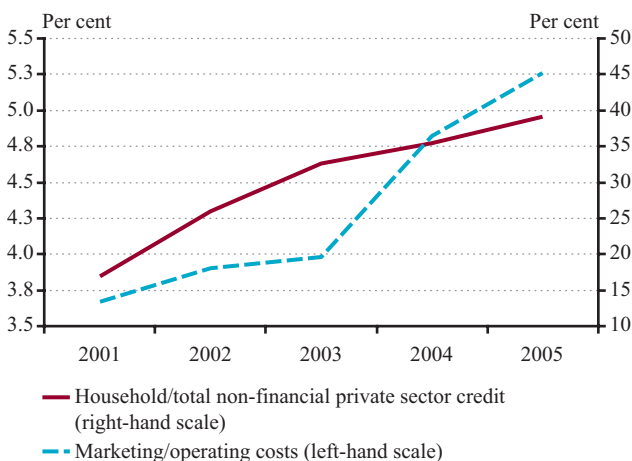
If lending is grouped according to coverage and not according to credit purpose, the increased prevalence of mortgage loans can be observed. The greater part of general purpose mortgage loans is extended by commercial banks, and due to slowing dynamics of vehicle purchase loans banks' direct share in the consumer lending market increased again.

The findings of the Senior Loan Officer Survey on Bank Lending Practices suggest that with the increasing vulnerability of the Hungarian economy, although it is perceived by the banks as well, credit supply pressure (including foreign currency facilities, the risks of which are growing) continues to increase. Marketing tools and different sales channels are playing an increasing role in supply competition. Marketing expenditures are growing fast (amounting to almost HUF 25 billion in 2005). Following an earlier stagnation, the number of branches also increased in 2005. However, bank branches are changing, and a part of the new units are just sales points employing 3–4 people and providing only a limited scope of banking services.

In addition to the above, lending standards and non-price credit supply conditions are also of great importance, and these conditions are steadily becoming less strict, and their further loosening in the near future is also planned by banks. Examining the conditions from a risk aspect, it is worth underlining that in the case of both housing and consumer loans the required minimum downpayment was further reduced, while the maximum duration became longer, from a risk aspect even questionably long in the case of several facilities.

Chart 2-15

Marketing costs of the banking sector



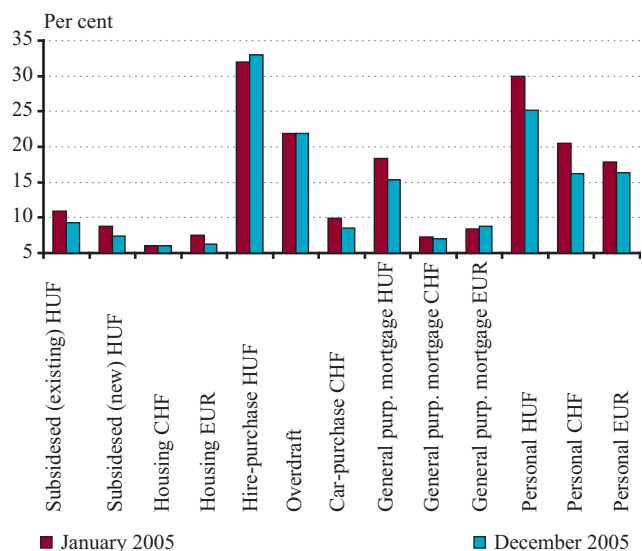
Source: MNB.

Although in lending to households it is mainly non-price credit supply factors and marketing activities that determine the credit supply, in certain segments – personal and vehicle purchase loans – even price competition strengthened somewhat. The relationship between interest premium and competition is not clear. When examining the developments in competition, in addition to the interest premium it is expedient to take account of the cost structure and developments in volume. However, due to a shortage of data our analysis was limited to the interest premium in the case of the majority of products.³⁵

Hire purchase loans and overdrafts did not follow the fall in forint yield at all. However, while hire purchase loans practically stagnated, outstanding overdrafts, which also feature high credit cost and good profitability, increased markedly, which reflects a relative price insensitivity of demand. Consequently, the main underlying reason for the stagnation of hire purchase loans may be the strong supply of overdrafts and more modern credit cards, and not high credit costs.³⁶ In the case of subsidised housing loans, stemming from the peculiarities of the subsidy scheme, banks followed the decline in yield in a delayed manner, although they typically did not narrow their inter-

Chart 2-16

APRCs of individual credit products between January-December 2005



Sources: Banks' announced offers, MNB.

Note: APRC of floating or maximum 1-year fixed-rate loans weighted by new originations. For subsidised housing loans, we used the unweighted average of APRC of banking proposals. New originations are insignificant in some currencies, and are therefore not mentioned.

³⁵ Theoretically, an analysis like this could provide an adequate picture of the competition only at unchanged volumes and costs.

³⁶ We believe that overdrafts, which are usually connected to debit cards, and credit cards mainly finance purchases of small amounts, similarly to hire purchase loans, but they provide a much bigger freedom for the consumer, so they are strong competitors of hire purchase loans.

est rate spread. There was only a significant cut in the case of interest rates on forint personal loans. This was probably elicited by the fierce competition created by foreign currency personal loans and not by the decline in forint yields.

In the case of Swiss franc housing loans, which generate high volumes, the interest rate spread is practically unchanged, while it declined significantly in the case of euro loans. Several banks are trying to reduce the risk of foreign currency lending by reducing the euro interest rate spread thus diverting clients to the relatively less risky euro loans. However, in West European comparison these euro interest rate spreads can still be considered high (twice or three times as high as in Western Europe) because of the different cost structure,³⁷ which we believe is attributable to weak price competition. The interest rate spread of general purpose foreign currency mortgage loans practically stagnated. The interest rate spread of foreign currency

personal and vehicle purchase loans declined significantly, which is probably attributable to the stronger price competition in this area.

The analysis of product profitability and volume was carried out for small-amount consumer credits (mainly hire purchase loans) and vehicle purchase loans using representative banks' data for the last four years. Arising costs³⁸ were deducted from the interest and interest-like income on total loans. Unit credit cost of small-amount credits is declining mainly due to a significant increase in volume, but it is not followed by a decline in unit income. Due to their market power – weak price competition – banks keep the advantage of economies of scale and increase their profitability. However, in the market of vehicle purchase loans competition seems to be much keener. In parallel with a decline in costs (advantages of economies of scale), income also declined to a similar extent, profitability is stagnating, and its level is well below that of small-amount credits.

Box 2-3: Applicable measures to restrain the dynamics of unhedged foreign currency lending

By end-2005 the ratio of foreign currency loans within loans to non-financial corporations stood at 60 per cent, and within loans to households it also reached 40 per cent. In terms of exchange rate risk, a significant portion of these loans – typically loans to the household and small and medium-sized enterprises – are considered unhedged foreign currency loans. The MNB has called the attention to the financial stability consequences of its possible risks on numerous occasions.³⁹

In Hungary, risks related to foreign currency lending may cause considerable losses to clients and also to the banking sector through the increase in credit risk in the event that credible fiscal adjustment is not carried out and an exchange rate and yield correction is triggered by market developments. Therefore, it is fiscal consolidation that would serve the efficient reduction in risks related to foreign currency lending best. If such fails to materialise, the three institutions responsible for financial stability (Magyar Nemzeti Bank, Ministry of Finance, Hungarian Financial Supervisory Authority) may have certain measures at their disposal to restrain the growth rate of foreign currency lending. However, any action should be preceded by preliminary impact studies.

Based on their role in and responsibility for financial stability, agreement between the three institutions is necessary for the introduction of a package of measures serving the restraint of the growth rate of unhedged foreign currency lending, which carries significant risk in terms of stability. It has happened several times in international practice that the authorities responsible for financial stability have introduced packages of measures together, which were usually aimed at stopping the excessive increase of loan portfolio and partly at slowing down the spreading of unhedged foreign currency lending. The experiences of three CEE countries are outlined below.

Starting from 2005 the National Bank of Romania introduced monetary and prudential measures to decelerate the dynamics of foreign currency lending. The reserve requirement for foreign exchange liabilities over 2 years, which has to be met in foreign exchange, was gradually increased to 40 per cent (and the interest paid on it was below market interest rate: USD: 0.95 per cent, EUR: 0.7 per cent), and banks' exposure for unhedged foreign currency credits was maximised as 300 per cent of the capital. If a bank had already exceeded this latter threshold, it had to prepare a plan how it propose to meet the regulatory requirements. Loan classification was also modified and only those foreign currency loans can qualify for the best rating of the five categories where the customer's income is generated in the

³⁷ International comparison is hindered by the differences in certain important cost elements (prepayment option, different levels of collection charges due to differences in legal systems, lending losses, etc.).

³⁸ Operational costs, lending loss and liability cost, and net commission cost. In the case of the above types of credits, commission-like costs (commissions paid to traders) usually exceed commission income from customers.

³⁹ *Report on Financial Stability*, October 2005, *Report on Financial Stability*, April 2005, *Report on Financial Stability*, December 2004, *Report on Financial Stability*, June 2004.

Table 2-1**Possible measures to restrain unhedged foreign currency lending and the responsible institutions⁴⁰**

Administrative measures	Prohibition of loans unhedged from the aspect of exchange rate risk Sector-level limits or limits differentiated by banks for the ratio of unhedged loans or for its growth rate	MoF-HFSA
Prudential regulation	Establishment of a category similar to the country risk provision (to be deducted from the capital) for unhedged foreign currency lending Limitation of foreign exchange maturity transformation and of relying on too short liability Determination of limits for bank open position (on balance sheet, total), position limitation Tighter loan classification and provisioning rules for foreign currency loans Higher and differentiated capital requirements Stricter non-price minimum loan conditions (e.g. loan-to-value ratio limit)	MoF-HFSA
Supervisory measures	Increased risk-management requirements for foreign currency lending Closer supervision (more frequent off/onsite inspections) of banks with dynamic foreign currency lending or banks in a weak financial position. More stringent control of their relationship with financial enterprises. More intense communication of risks.	HFSA-MoF
Financial culture improvement and "moral suasion"	Strengthening of the retail sector's financial culture and of consumer protection "Moral suasion" of the credit institutions	HFSA, MNB, MoF
Fiscal measures	Withdrawal of various government subsidies related to lending in case of unhedged foreign currency lending Taxation on unhedged foreign currency lending activity	MoF, Government
Monetary policy steps	Higher minimum reserve requirements on banks' foreign currency liabilities, lower interest paid on reserves	MNB

currency of the loan. As a result of the measures, the ratio of foreign currency loans in the portfolio started to decline.

In Austria, the growth rate of foreign currency loans (Swiss franc and Japanese yen) was intended to be restrained through intense communication of the potential risks and by supervisory means. The minimum standards mainly aim at tightening banks' risk management procedure. Participants must draw up special written guidelines for foreign currency loans, they have to determine quantitative limits on foreign exchange portfolio and have to lay down a detailed customer classification framework (limits, monitoring system with examining the effects of exchange rate fluctuation, package of measures if the threshold values are exceeded). In addition, they have to continuously assess the value of the foreign currency portfolio taking account of market developments (fluctuations in the exchange rate, interest rates and value of collateral), and have to perform a stress test at least once a year.

In Poland, as early as 2001 regulatory authorities applied prudential and supervisory measures to decelerate foreign currency lending.

However, only a significant depreciation of the exchange rate was able to have a real, but temporary impact on the dynamics of foreign currency lending. As the exchange rate stabilised, the growth rate of foreign currency lending accelerated again. Therefore, slowing foreign currency lending down became a priority issue for regulatory authorities once again. At present, discussions are going on with banks on tightening the capital requirements related to foreign currency lending and on introducing qualitative recommendations (e.g. stress tests, presentation of risks deriving from foreign currency lending to the potential clients, mandatory zloty credit offer preceding the foreign currency loan offer).

Even international practice shows that the application of various measures is efficient in the longer run if, in parallel with their introduction, steps are also taken to solve macroeconomic problems that triggered foreign currency lending. The price advantage, which is the driving force of foreign currency lending, can be terminated by the consistent implementation of fiscal consolidation.

⁴⁰ The grouping is based on the following study: Hilbers et al. (2005): Assessing and Managing Rapid Credit Growth and the Role of Supervisory and Prudential Policies. IMF WP/05/151. The analysis mainly aimed at presenting the means applicable in the management of excessive increase in loans, but they can be suitable for decelerating unhedged foreign currency lending as well.

Housing financing and housing market

With the rapid increase in housing loans and growth in general purpose mortgage loans and housing construction project financing, the banking sector's risk related to its exposure to the housing market is increasing. These types of loans together already constitute approximately one-third of loans to the private sector. Housing market exposure risk mainly appears in the enforceability of coverage. A client's creditworthiness depends directly on the developments in the housing market in the case of housing construction by entrepreneurs, which represents a relatively small share of outstanding bank loans.

Following the restrictions on state subsidies on housing loans in 2003, willingness to build housing also started to decline. In 2004, the number of building permits started to fall, which was also reflected in the decline in the number of dwellings built in 2005. State subsidies made housing construction more dynamic mainly in bigger cities and in Budapest. Still, the decline following the restriction affected the countryside most, although with great differences across the regions. The number of building permits in Budapest continued to increase even in 2005. However, there is no significant oversupply. One of the underlying reasons is that the economic growth (and thus the demand for housing) in the capital is stronger than in most regions in the country. On the other hand, according to the main scenario, only a moderate decrease in households' investment activity is expected, and the number of completed new homes compared to existing ones is not too high.⁴¹ Based on sales transaction figures, the housing market's liquidity has not declined critically either.

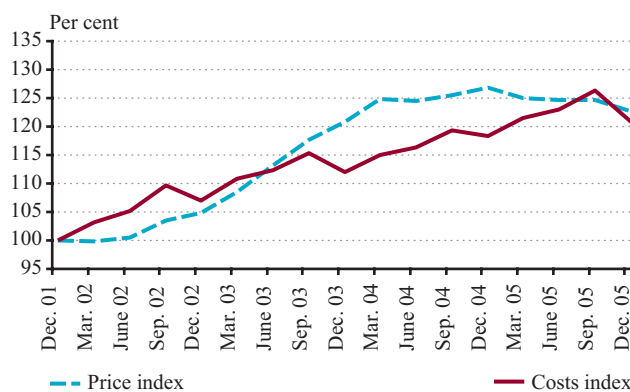
As it was mentioned, housing market developments are important mainly in terms of enforceability of collateral, and there has been no significant change in this regard. A maturing of portfolio can be observed in households' housing loans, especially in subsidised loans. However, due to the fact that the loans are highly secured, loan loss provisions increased only very slightly. The proportion of loans with a loan/collateral value indicator exceeding 70 per cent, which can be considered more risky, to total loans – excluding facilities with state guarantee – is growing, but can still be considered low. The discount of forced sale may be more significant in less liquid markets (in the countryside) and categories (family homes), and this, coupled with a nominal price decrease due to increasing supply,

may lead to more significant losses of banks in the latter category. However, as has already been mentioned, housing loans include a significant interest premium, which provides high income buffer to cover losses.

In the past years there was a notable shift in housing construction from 'do-it-yourself' to professional work done by entrepreneurs; the share of the latter in Budapest reached 90 per cent.⁴² From this aspect a new risk appeared: if investors are too optimistic, the supply of new flats may depart from the actual development in demand. In a situation like this, credit risk vis-à-vis enterprises operating with typically high capital gearing may increase, while in the case of 'do-it-yourself' construction demand creates its own supply, so there cannot be any oversupply.

Chart 2-17

Housing prices in Budapest and housing construction costs



Sources: Origo, CSO.

There are several underlying factors behind the persistently strong housing construction activity in Budapest. Investors here can still offset the longer sales periods and increasing marketing costs with advantages of economies of scale (the share of large projects is increasing) attainable through the increase in project size (number of flats) and more favourable financing opportunities due to strong credit supply (see Senior Loan Officer Survey on Bank Lending Practices). The increase in construction costs and housing prices have not broken away too much from one another. In addition, on the demand side foreign buyers are also mainly present in the capital. Therefore, investors' high profitability has not declined yet. However, only large enterprises with strong capital are able to benefit from the advantages of economies of scale, which results in smaller investor firms' being driven out of the market.

⁴¹ In 2005, the number of dwellings built in the capital compared to the total number of flats was 1.5 per cent, which cannot be considered very high. Since most flats are built as part of bigger projects consisting of several stages, where the next stage is built only after selling a certain number of flats, they have not even started to build a significant part of the many new flats advertised, so there are not many completed and empty new flats.

⁴² As housing construction grew, 'do-it-yourself' construction declined not only as a proportion of all construction, but in absolute terms as well.

2.1.2. MARKET RISK

2.1.2.1. Exchange rate risk

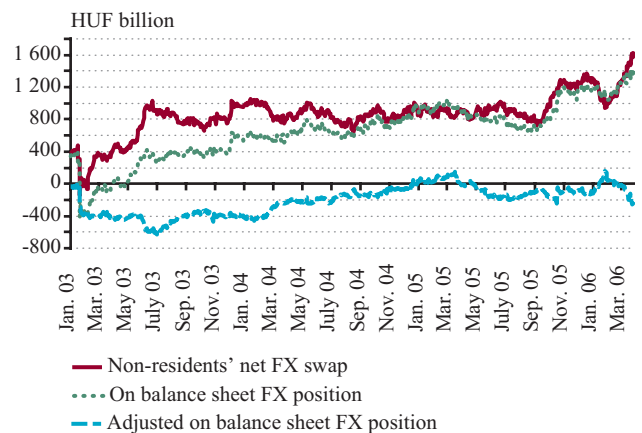
The declining trend of the (unadjusted) on-balance sheet foreign exchange position of the banking sector observable from the beginning of 2005 turned around in mid-September. However, this is mainly attributable to the considerable increase in non-residents' net FX swap holdings. Non-residents' net swap holdings vis-à-vis domestic banks fluctuated within a relatively narrow range between January and September in 2005. However, they rose sharply in the fourth quarter of 2005 and climbed to HUF 1600 billion at the end of March 2006, following a temporary drop at the beginning of the year. Both the opening of short forint positions by synthetic forward (spot+swap) transactions and the buying of forint denominated assets via FX swaps may have played a role in the significant increase of foreign investors' swap holdings.⁴³ In the same period, the banking sector's on-balance sheet foreign currency position moved in tandem with non-residents' swap holdings. Therefore, a more realistic picture of the on-balance sheet foreign exchange position is provided by filtering out banks' net swap holdings (or the spot leg of these transactions) vis-à-vis non-residents. The on-balance sheet position adjusted for swap holdings continued to fluctuate in a relatively narrow range in 2005 and in the first two months of 2006. However, the adjusted on-balance sheet position opened significantly in March 2006. At the same time, domestic companies' short forward FX position vis-à-vis banks rose sharply. The latter was likely motivated by firms' increased hedging needs against foreign exchange risk.

The volatility of the HUF/EUR exchange rate in March 2006 attained a level not seen in the past two years. The direct impact of the considerable depreciation of the forint against the euro is likely to be limited since banks' aggregate total foreign exchange position remained narrow. The long foreign exchange position fluctuated in the range of HUF 25-60 billion in March 2006. Overall, banks' exchange rate risk exposure continued to be low, thus significant exchange rate depreciation is not likely to have a considerable direct negative impact on the banking sector's profit.

Examining the developments by major currencies in the *unadjusted* on-balance sheet foreign exchange position suggests that the reversal of the increasing trend observable up to 2005, is the result of two conflicting processes. The extremely dynamic lending in Swiss franc resulted in

Chart 2-18

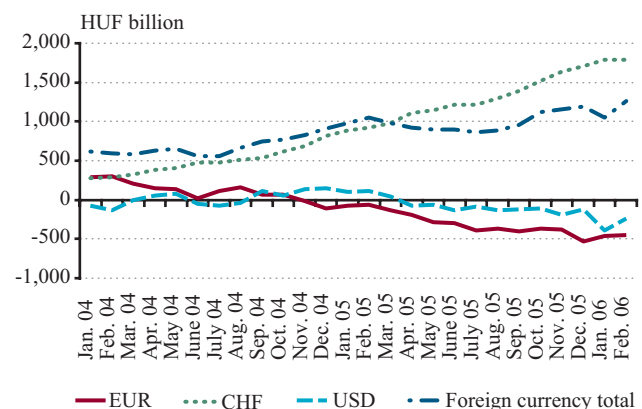
Non-residents' net FX swap holdings and the banking sector's adjusted on balance sheet FX position



the build up of a long CHF position. However, in parallel with this, the short on balance sheet position in euro, and to a lesser extent in USD, increased considerably.

Chart 2-19

The banking sector's on-balance sheet foreign exchange position by major currencies



It is important to stress that despite banks' low direct exchange rate risk, a major exchange rate depreciation triggered by a correction driven by the market and a possible permanently weaker forint exchange rate may have a considerable impact on banks' loan portfolio quality and financial position (see 2.1.1.). In addition, if hedging the positions opening in the balance sheet became more expensive or more difficult following a possible market cor-

⁴³ For a more detailed description of non-residents' strategies followed in the swap market, see Csávás-Kóczán: Development of the Hungarian derivatives market and its effect on financial stability. *Report on Financial Stability*, December 2003.

rection, it would result in an increase in the direct exchange rate risk exposure.

2.1.2.2. Interest rate risk

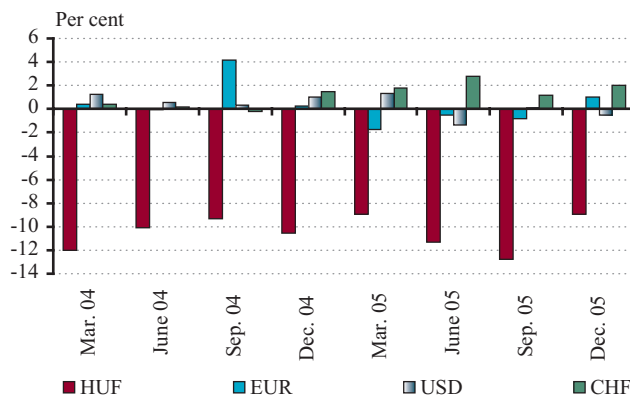
Falling interest rates until September 2005 had a favourable effect on banks' income due to the repricing effect and capital gains on the government securities portfolio. In turn, narrowing of the margin on sight deposits with inflexible pricing and low interest had a negative income effect. From September 2005, the yield curve shifted upwards, and particularly benchmark yields on longer maturities rose considerably.⁴⁴ Following the central bank rate move in September, expectations of a further interest rate cut ceased to exist, and in the end-March zero coupon yield curve even an expectation of a nearly 100 basis point rate rise was priced. However, substantial risk would only be caused by a drastic increase in yields following an eventual correction enforced by the market. Should such a scenario materialise, the *direct effect* of the interest rate increase on banks' income would add together as the result of two conflicting processes. The yield increase may cause significant capital losses on the securities portfolio, and may also have an unfavourable impact on net interest income due to the negative repricing gap. However, this might be counterbalanced by the widening of the net interest margin, due partly to the opening of the margin on sight deposits and partly to the lagged repricing usually observable in the case of household deposits. Based on the positive relationship between the level of interest rates and interest rate margin as well as the experience of the large interest rate increase in 2003, it can be expected that this scenario would not exert a negative impact on banks' income through the direct interest rate risk exposure.

However, it is important to emphasise that the indirect effect of a possible significant yield increase could be very unfavourable, due to the negative demand and income effects and the increase in debt servicing burdens. As for the developments in interest burdens, this scenario's impact would mainly be felt in the corporate sector, as the bulk of corporate forint loans are granted with short repricing periods. In the case of household loans, however, the majority of forint loans have repricing periods longer than one year, since the interest rate fixation of subsidised loans, which constitute the larger part of forint housing loans, is over one year (typically 5 years).

Because of the prevalence of foreign currency lending, it is important to examine banks' exposure to changes in for-

Chart 2-20

The 3-month cumulated repricing gap of the banking sector by currencies (as a percentage of total assets)



Source: MNB.

ign interest rates (Chart 2-20). Overall, based on the repricing gaps, a further increase in foreign interest rates would not have an unfavourable impact on banks. The 3-month cumulated net interest sensitive position is positive in the case of the euro and the Swiss franc, while it is negative only in the case of the dollar, but the latter's extent is the smallest. The indirect effect of interest rate changes can be more relevant in this case as well, since most foreign currency loans have short repricing periods. Households' and small and medium-sized enterprises' foreign interest rate exposure increased particularly in the case of the Swiss franc in the last two years. After the 25 basis point increase in March, interest rates may rise further until the end of the year, according to market expectations. However, the repayment capacity of households and SMEs indebted in Swiss franc is not likely to worsen considerably due to a further modest increase of the interest burden alone. It may however exacerbate the adverse effect of a possible significant forint depreciation.

2.1.3. LIQUIDITY RISK

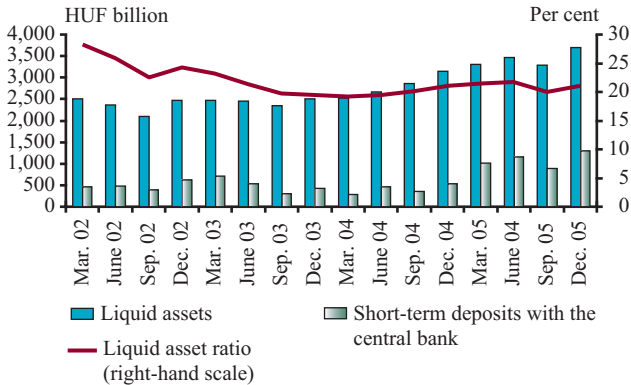
Despite the rapid growth in lending, the banking sector's liquid asset ratio stabilised at the relatively high level of around 20 per cent, following a significant increase in deposits placed with the central bank. The main underlying reason for the latter is the shift in fiscal deficit financing towards foreign exchange debt issues and central bank sterilisation becoming necessary as a result of additional foreign exchange financing because of the above. Due to the conversion of the foreign exchange obtained through bond issues at the central bank, the structural liquidity sur-

⁴⁴ From September 2005 to March 2006, the increase of the 3-year, 5-year and 10-year benchmark yields alike exceeded 150 basis points.

plus increased, which is deposited by banks in the two-week central bank deposits.

Chart 2-21

Liquid assets of the banking sector



Source: MNB.

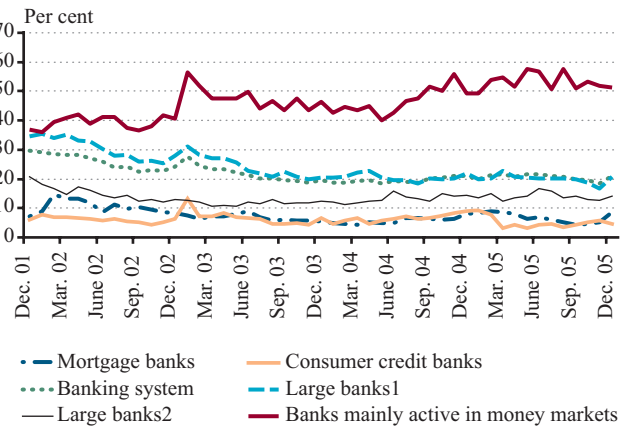
Taking account of the build-up of risks and the increase in financial vulnerability, the increase in banks' liquid reserves can be considered favourable in terms of stability. The banking sector as a whole would have a substantial buffer due to the structural liquidity surplus to withstand a possible liquidity shock. The positive assessment is tinted by the fact that some large banks' liquid asset ratio is much lower (11–13 per cent as an annual average) than that of the banking sector. It should also be noted that in parallel with the stabilisation of the liquid asset ratio, the foreign exchange exposure of the private sector increased markedly.

The investigation of liquid assets according to scopes of activity reveals a markedly high liquid asset ratio of subsidiaries of those foreign banks which are considered to be major players in international financial markets. These banks are typically important participants in the domestic money market, and the FX swap market in particular, which may justify the much higher-than-average holding of liquid assets. It is important to note, however, that this ratio may not be appropriate for assessing these banks' intraday liquidity position. Compared to the large volume of their transactions in the foreign exchange market, these banks' liquidity may already be tighter. It is also worth mentioning that banks specialising in lending to households have a much lower liquid assets ratio compared to the banking sector average. Still, the liquidity risk of this group

of banks cannot be considered significant. Mortgage banks' low liquid assets ratio mainly stems from the nature of their activity. The bigger part of foreign liabilities of banks specialising in consumer lending is provided by parent companies; the role of deposit collection is typically negligible and their liquid asset requirement is low.

Chart 2-22

Liquid asset ratio for some groups of banks⁴⁵



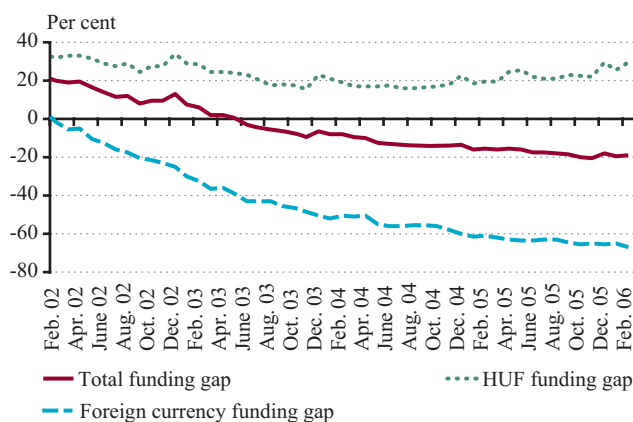
Source: MNB.

Examination of the banking sector's funding liquidity shows that the opening of the funding gap⁴⁶ between customer loans and customer deposits, which became negative during 2003, continued in the second half of 2005 as well. The breakdown of the funding gap into forint and foreign exchange reveals that the increase in the forint deposit surplus (positive gap) could not offset the strong opening of the negative FX funding gap. The latter is mainly attributable to banks' funding the dynamic foreign currency lending primarily from foreign sources. As an alternative funding strategy, some banks obtain the additional funding necessary for foreign currency lending by means of foreign exchange swaps, using their forint liquidity.

Although the opening of the negative funding gap itself does not imply a risk to stability, in the longer run it may unfavourably affect banks' profitability. One of the possible reasons is that credit expansion is increasingly funded from more volatile and more expensive market sources. In addition, the excessive opening of the funding gap may also indicate the limits of financing the increase in lending.

⁴⁵ 'Large banks1' comprises those three large universal banks with the largest market shares in both household lending and deposit taking from households, while the group "large banks2" comprises the rest of the large universal banks.

⁴⁶ The concept of the funding gap used in this Report is similar to that of the loan-to-deposit ratio used earlier, with a slightly different interpretation. Funding gap is defined as the ratio of the difference between deposits from non-MFIs and loans to non-MFIs to loans. A negative funding gap shows the share of loans banks have to finance from market (e.g. capital market, interbank) sources.

Chart 2-23**Funding gap of the banking sector**

Source: MNB.

Following from the underdevelopment of capital markets and the ownership structure of the banking sector, banks in Hungary mainly rely on foreign interbank sources – and significantly on financing within the banking group – in obtaining additional funds necessary for financing the rapid increase in foreign currency lending. From the aspect of the financing side's stability it is encouraging that the maturity of a greater part of funds from abroad exceeds one year, although the ratio of short-term liabilities is also significant (40 per cent on average in 2005). In terms of the sustainability of financing, it is positive that funds from abroad originate mainly from the parent bank or the parent banks' group. With regard to the eight largest banks controlled by foreign strategic investors, approximately half (49 per cent) of their foreign liabilities were from the owners at end-2005. In the case of certain banks, this ratio is much lower, between 10 and 20 per cent. However, even in the case of these banks foreign ownership presumably facilitates the obtaining of funds on international money markets. In addition, the unfavourable profitability effect of the opening of the funding gap was not perceptible in the last two years either, which is partly attributable to the fact that banks were able to realise a relatively high margin on foreign currency loans as well.

Funding the expansion of foreign currency lending from foreign sources involves risks as well. Firstly, the rapid growth in foreign currency lending is coupled with an increase in the maturity mismatch between foreign exchange assets and liabilities. Although the major part of foreign liability inflows is long-term, it still did not keep pace with the very dynamic increase in foreign currency loans

with a maturity over one year. As a result, the difference between long-term foreign exchange assets and long-term foreign exchange liabilities as a proportion of total assets increased from 7.5 per cent to 10.6 per cent in one year. Secondly, a possible further deterioration in the market's opinion of the country (market correction scenario) may lead to foreign financing sources becoming more expensive or drying out. While a significant exchange rate depreciation and yield increase resulting from a possible market correction would directly act as a brake upon lending dynamics by decreasing credit demand, this could further be weakened from the credit supply side by the decline in non-residents' willingness to provide financing.⁴⁷ Thirdly, the rapid increase in foreign liabilities may have partly been enhanced by the ample liquidity in international money markets. Therefore, a possible narrowing of global liquidity may render the financing of lending activity more difficult.

2.1.4. FINANCIAL CONDITIONS IN THE BANKING SECTOR

Similarly to earlier years, the financial conditions in the Hungarian banking sector are favourable, and there is no reason for concern over the short run. Profitability continued to increase, while capital adequacy, although it declined somewhat, is still at a safe level. However, the trends in the first and second parts of 2005 showed differences: in H1 both profitability and the capital position improved, while in H2 profitability lessened, and the capital position deteriorated slightly. Looking ahead, it can be established that over the short run a credible fiscal consolidation may have a moderate effect on the banking sector's financial conditions, but in the event of a market correction profitability may fall considerably, although the current high profit would probably mitigate the effects of the shocks.

2.1.4.1. Profitability

Continued outstanding profitability

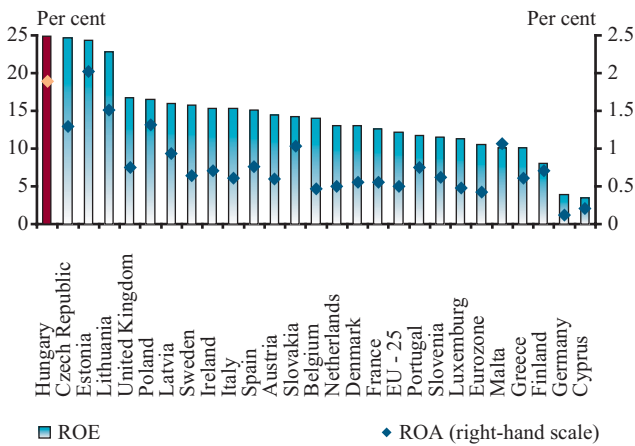
Profitability indicators of the banking sector continued to increase in 2005, but the increase took place in the first half of the year, while profitability declined slightly in the second half. Compared to end-2004, several, mainly small, banks' pre-tax profit fell. In international comparison (Chart 2-24 based on year 2004 data) profitability is still considered extremely high, although due to the saturation of the market, the slowly strengthening price competition and the

⁴⁷ It is to be noted that the findings of empirical studies are contradictory in that respect whether foreign banks' behaviour strengthens or weakens the volatility of lending in times of crises.

effect of the lower inflation the probability of a further increase is low.

Chart 2-24

Profitability indicators in international comparison

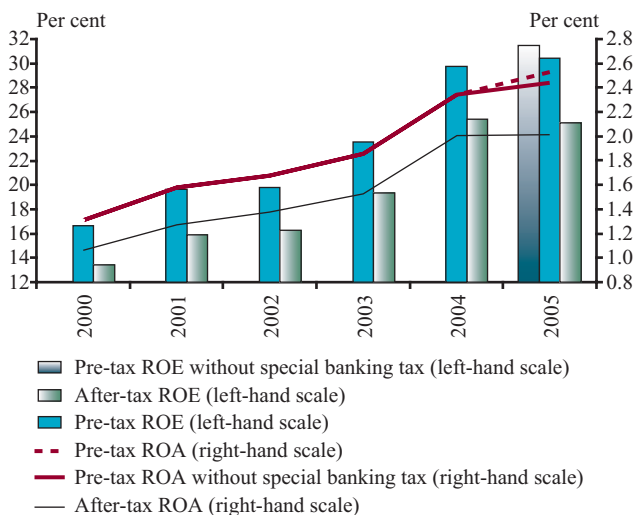


Source: ECB, 2004 consolidated data, calculated from after-tax profit.

In 2005, the special tax imposed on credit institutions and financial enterprises⁴⁸ increased banks' tax burden significantly, but due to the high profit its profitability effect was low (it reduced the banking sector's ROE by 1 percentage point). However, this new tax also played a role in the decline of profitability indicators calculated from the after-tax profit in 2005.

Chart 2-25

Profitability indicators of the banking system (based on pre-tax and after-tax profits)⁴⁹



Source: MNB.

⁴⁸ See Act CII of 2004 on special tax for credit institutions and financial enterprises. Based on this Act the tax to be paid is 6 per cent of the pre-tax profit, and it is shown in the profit and loss statement similarly to the corporate tax. However, banks can choose paying the tax based on interest income. This tax is 8 per cent and is shown as a tax basis reducing item. The banking sector is estimated to have paid more than 27 billion forints as special tax, within which the shares of the burdens paid after the interest income and the pre-tax profit are approximately identical.

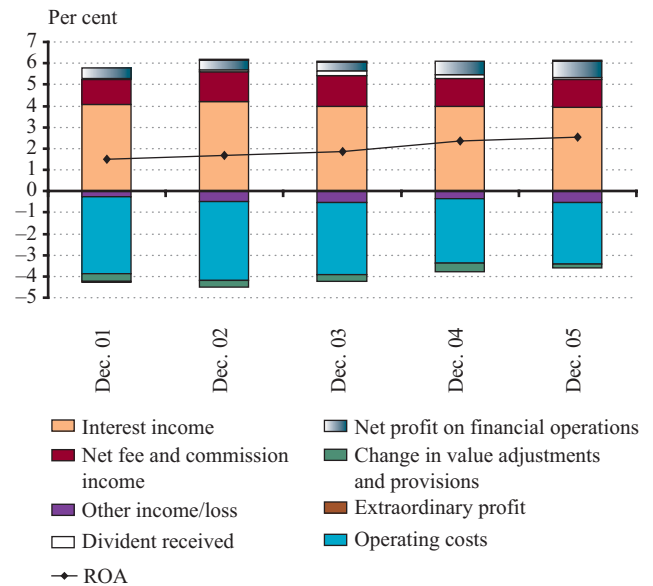
⁴⁹ The calculation of profitability indicators: ROE = pre-tax profit / average (equity – balance sheet profit); ROA = pre-tax profit / average balance sheet total.

Declining, but still high cost level, increasing risk-taking

The increase in profitability can be explained by breaking down the indicators. Breaking the ROA down into factors reveals that, compared to the previous year, its structure did not change significantly; the impact of interest income remained the strongest. Examining the dynamics, it is remarkable that underlying the increase in ROA is mainly the growth in costs and provisions which was lower than the balance sheet total. In the first half of the year, the increase in profit on financial transactions also contributed to the rise of the indicator.

Chart 2-26

Breakdown of pre-tax profit relative to total assets (composition of ROA)

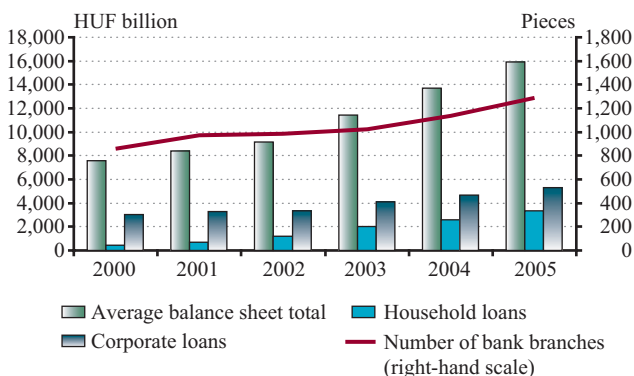


Source: MNB.

The ratio of operating costs to the balance sheet total and operating income declined steadily in the past years. Half of the operating costs is constituted by personnel costs, which increased faster than inflation in 2005, as in earlier years. In terms of the entire banking sector the per capita personnel costs increased slower than previously, i.e. by 8 per cent, although this conceals significant differences. In the last two years, the increase in the number of employees and bank branches somewhat exceeded that of earlier years, despite a slower growth rate of outstanding loans. This may indicate that in the competition between banks, as opposed to price factors, the number and location of branches plays an important role.

Chart 2-27

Increase in balance sheet total, outstanding loans and number of bank branches

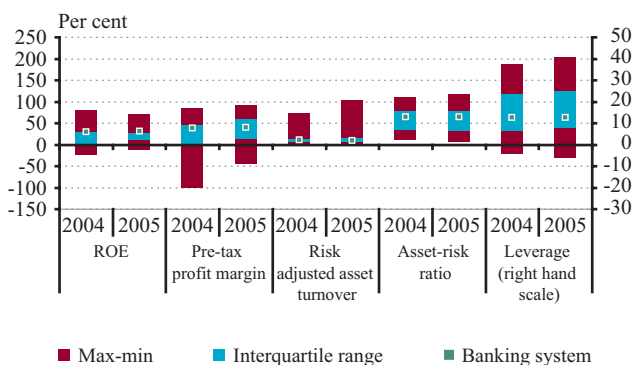


Source: MNB.

In the previous Report⁵⁰ the return on equity (ROE) was decomposed into four factors. In terms of stability, the development of the different factors shows a mixed picture: the increase in the pre-tax profit margin and the risk-adjusted asset turnover is considered positive, while the increase in the asset-risk ratio and leverage is considered negative. Between 2004 and 2005, based on the whole banking sector's data, of the components of ROE the increase in the profit margin, the significant decline in its variance and the decline in leverage may indicate positive, while the fall in the risk-adjusted asset turnover and the higher value of the asset-risk ratio may indicate negative developments. Therefore, the developments in ROE are determined by factors which can differently be assessed from the aspect of stability.

Chart 2-28

Distribution of ROE and its components



Source: MNB.

As it was mentioned before, the application of the asset-risk ratio is limited. While this indicator is relatively stable, the ratio of retail loans (and within that consumer credits and loans to SMEs), foreign currency loans, and in the cor-

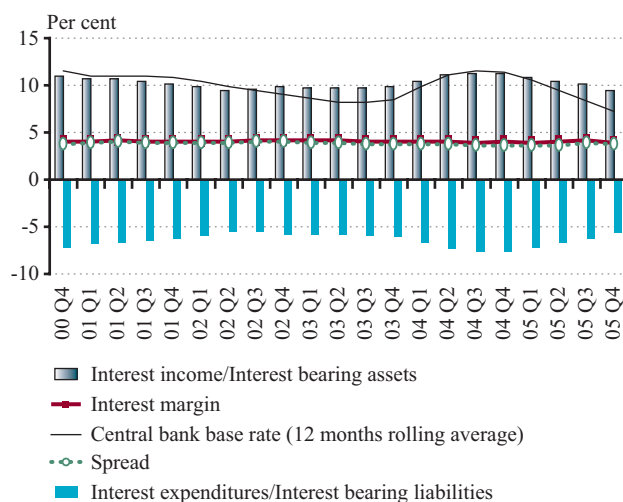
porate sector the ratio of uncovered loans is growing, which reflects increasing risk-taking.

Stable weight of interest and non-interest income

The structure of operational income did not change significantly in 2005, the weight of interest income is 65 per cent, compared to the 35 per cent of non-interest income. In 2005, the interest margin (net interest income/balance sheet total) declined slightly, from 4 per cent to 3.9 per cent, which is still considered high in international comparison. The underlying reasons are outlined in Chapter 2.1.4.2.

Chart 2-29

Interest margin developments



Source: MNB.

Different trends explained the developments in interest income in 2005 H1 and H2: in H1 interest income on securities contributed to its growth, while in H2 interest income on loans played a bigger role, and especially income on loans to households increased. Looking at the year as a whole, the faster increase in interest expenditure compared to that in interest income was reflected again in the increase of the spread.

Within non-interest income, the slow decline in the ratio of commission and fee income – which stands in contrast to international trends – is partly the consequence of competition, as indicated by the findings of the Senior Loan Officer Survey on Bank Lending Practices, according to which several banks reduced the fees for loans a longer time ago and recently with regard to housing loans and corporate loans, respectively. At the same time commission and fee expenditures paid by banks were also much

⁵⁰ See pages 47-48 of the Report on Financial Stability, October 2005.

higher in 2005 than previously. The moderate decline in the interest and fee income was offset by a slow increase in financial operations income. This was due to the realised increase in income on securities held for trading purposes, which was mainly typical of 2005 H1. However, this income component fell in H2. During 2005, within the income on financial operations the income on financial services declined, and in addition to the income on securities held for trading purposes a significant increase in the income on investment services played a role in the growth of profitability.

High uncertainty of profitability prospects

The future profitability of the banking sector mainly depends on the developments in the credit risk and credit demand of the corporate and housing sectors and in the yields and the exchange rate. In the medium and long run, the current macroeconomic path is unsustainable, and a credible fiscal consolidation remedying this would reduce the banking sector's long-term risks. In the short run, consolidation would restrain the private sector's credit demand through its effect on households' income and economic growth. At the same time, credible measures would provide a favourable environment for banks in the long run, which may make its positive effect felt even in the shorter run through the potential non-Keynesian effects.

As opposed to the above, market correction carries serious risks, both due to its impact on foreign currency loans and forint loans and restraining credit demand. In addition to the higher credit risk, the increase in yields would also imply a negative effect, the income reducing effect of which would probably be stronger in the case of institutions that apply fair value accounting and that recorded profit when the interest rate declined. As a result of these events, the profitability of the whole banking sector may fall considerably, and remain at a lower level.

2.1.4.2. Factors explaining the high interest margin⁵¹

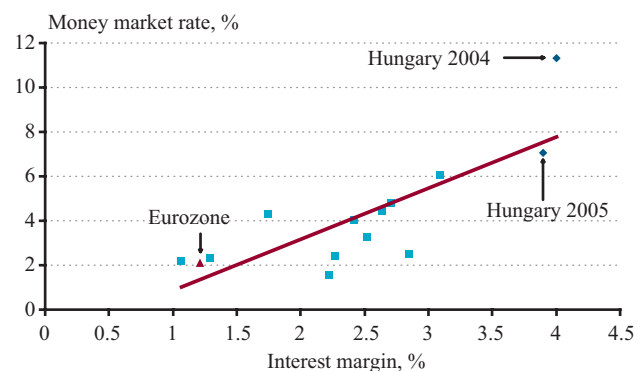
As in the Hungarian banking sector as well, the bigger part of commercial banks' income is generally provided by the interest income. However, the Hungarian banking sector's interest margin has been extremely high even in international comparison and rather stable. This chapter summarises the main underlying reasons on the basis of stylised facts, in international comparison.

Level of and changes in market interest rate

The relationship between the levels of the interest rate and the interest margin is usually positive because of the lower level of interest sensitivity of sight deposits, the higher nominal costs due to the higher inflation and because of potential adverse selection problems, since if the interest rate level is higher, the expected risk premium of loans can also be higher. From a comparison with EU countries, the positive relationship between interest rate level and interest margin can be seen clearly.

Chart 2-30

Relationship between the money market rate and the net interest margin in EU countries



Source: EU countries: IFS and ECB, data refer to 2004; Hungary: MNB.

The change in and volatility of interest rates and interest rate expectations influence the direction and extent of the change in the interest margin. The relationship between the change in interest rates and the interest margin is not unambiguous, since the change in the level of interest rates can have both positive and negative effects on the interest margin.⁵² Due to higher market risk, the magnitude of interest rate volatility exhibits a positive relationship with the interest margin.

It may appear that in recent years in the Hungarian banking sector there was no relationship between the change in the interest rate level and the interest margin. Hungarian banks' interest margin seemed insensitive to both interest rate increases and interest rate declines. However, the variation of interest margin between banks reacted to a small extent to the interest rate change: in 2004 the variance increased, which indicates a difference in interest rate pass-through across banks. The lack of relationship between the banking sector's interest margin and the

⁵¹ Interest margin is interpreted as the ratio of interest income to the balance sheet total. Credit margin or deposit margin is the difference between credits or deposits and market interest rates.

⁵² See page 56 of the Report on Financial Stability, April 2005.

change in interest rates is attributable to the factors outlined below.

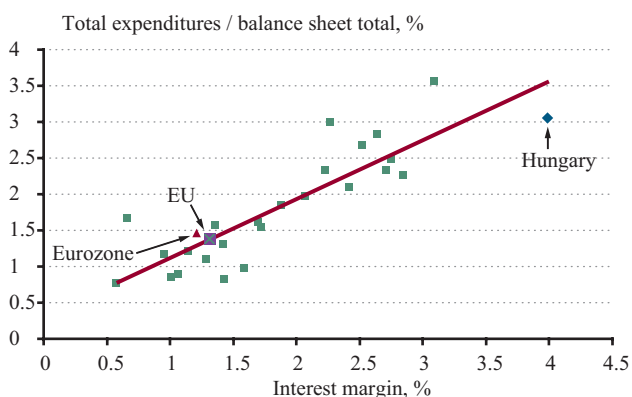
Costs

According to certain empirical studies, *average operating costs* is one of the most significant explanatory factors of interest margin differences between banks.⁵³ The result of high operating costs may be that banks have their less efficient operation paid by debtors and depositors. Banks do not necessarily 'pass on' the decline in operating costs to customers, i.e. the relationship is not clear, and depends strongly on the degree of competition.

Based on 2004 data, the average cost ratio of the Hungarian banking sector is the second largest among EU member states. The strong positive relationship between the average cost and the net interest margin is observable both in comparison of EU-25 countries and among domestic banks. However, it is important to call the attention to the fact that the gap between the Hungarian banking sector's interest margin and average operating costs has opened up significantly in recent years. This development contradicts long-term international experience, and the difference between the net interest margin and average operating costs is the highest in Hungary of all EU member states. This suggests that Hungarian banks do not have or only have to a small extent shared the average cost decline stemming from the improvement in efficiency with their clients, which may indicate insufficient price competition.

Chart 2-31

Relationship between the interest margin and average expenses in EU countries' banking sectors



Source: EU countries: EU Banking Sector Stability, October 2005, European Central Bank; Hungary: MNB; the data refer to 2004.

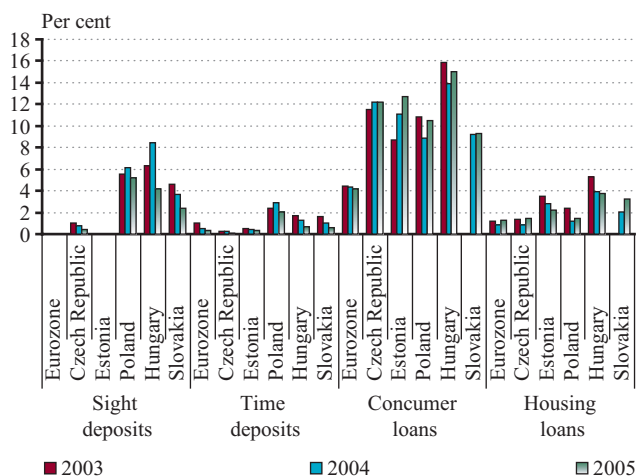
Pricing behaviour in individual market segments

In order to examine the role of competition we compared Hungarian banks' lending and deposit margins with those of CEE countries, which can be considered as a peer group. This reveals that Hungarian banks mainly realise a higher interest rate differential in the household market segments. In addition to the magnitude of margins, the extent and speed of interest rate pass-through may reflect the degree of competition in an indirect manner. According to the findings of the empirical analysis of the Hungarian banking sector⁵⁴ it is the corporate loan market where interest rate adjustment to the changes in market yields is the fastest and most complete. At the same time, the pricing behaviour in other market segments are characterised by incompleteness and/or sluggishness; especially the interest rates of consumer credits and short-term household deposit rates seem to be sticky.

The above observations provide only indirect proof of the low retail market price competition, but this is confirmed by empirical analyses⁵⁵ as well, which deal with the direct measurement of individual market segments' competitive conditions. According to the findings, the consumer credit market is characterised by a relatively low level of price competition, and banks' pricing power in the household deposit market appears to be relatively high. This is partly attributable to the fact that the interest rate elasticity of customers' credit demand and deposit supply is comparatively low.

Chart 2-32

Margin of household loans and deposits in CEE countries and in the euro area



Note: The data were calculated on the basis of interest rates weighted by outstanding loans, and they include only the credits and deposits denominated in domestic currency.

Source: MNB, ECB, Eurostat, national central banks.

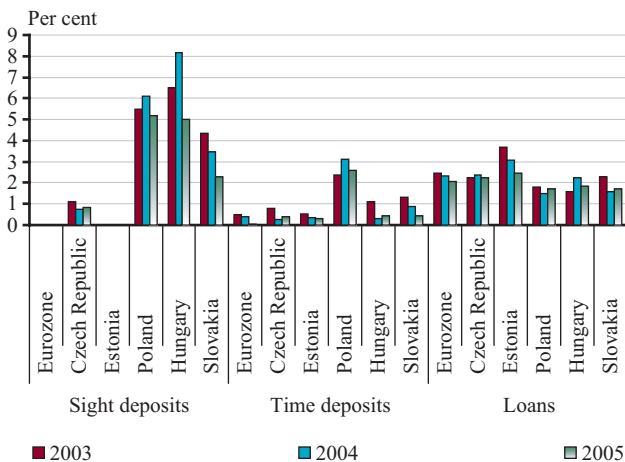
⁵³ See: Maudos-de Guevara: Factors explaining the interest margin in the banking sectors of the European Union., Journal of Banking and Finance, 2004.

⁵⁴ Horváth-Krekó-Naszódi (2004): Interest rate pass-through in Hungary, MNB Working Papers 2004/8.

⁵⁵ Mór-Nagy (2004): Competition in the Hungarian Banking Market, MNB Working Papers 2004/9.

Chart 2-33

Interest margin of corporate loans and deposits in CEE countries and in the euro area



Note: The data were calculated on the basis of interest rates weighted by outstanding loans, and they include only the credits and deposits denominated in domestic currency.

Source: MNB, ECB, national central banks.

Asset structure and risks

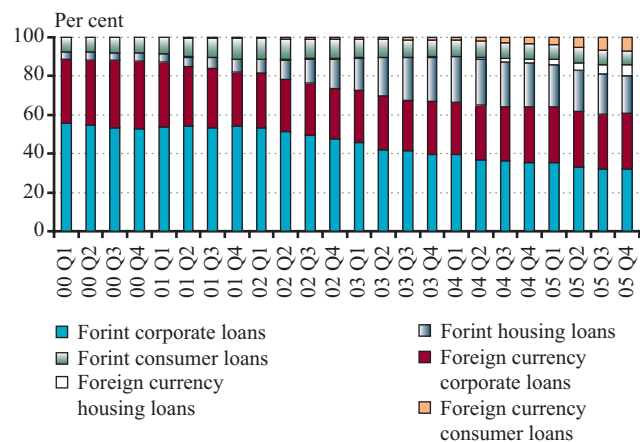
Banks' asset structure influences the interest margin in several aspects. The biggest part of interest income stems from loan interest income, the risk of which is higher than that of other interest-bearing instruments. As a result of the recent rapid credit growth, the loan-to-assets ratio increased significantly, from 46 per cent at end-1999 to 66 per cent at end-2005. Therefore, the considerable shift in the asset structure itself resulted in an increase in the interest margin.

In addition, it is also important to examine how the change in the composition of outstanding loans has influenced the interest margin. On the one hand, the interest margin is related to credit risk, through the risk premium. This is well illustrated among Hungarian banks by the positive relationship between the ratio of non-performing loans to total loans and the interest margin. On the other hand, the structure of loans and its change influence the margin, through the change in interests realised on outstanding loans and interests on new business. In the Hungarian banking sector, lending is moving towards higher-margin products. The weight of high-margin housing and consumer loans is increasing, and within corporate loans lending to SMEs is growing too, and the margin here is higher than in the case of lending to large companies.

In terms of the composition of the loan portfolio the situation of housing loans is special in Hungary because, as

Chart 2-34

Composition of household and corporate loans in the domestic banking system (2000-2005)



Source: MNB.

a consequence of the intervention by the government, banks can realise a margin which significantly exceeds the international level. Housing loans started to run up in 2001, mainly as a result of the introduction of the housing subsidy scheme and also due to improving prospects of households' income and favourable trends in the real estate market. Government intervention reduced the interests on housing loans below market level, and started lending based on mortgage bonds. These facilities provided above-average margin for banks through the state subsidy. However, the significant state subsidy on the interest rate – until the related government decree was tightened at end-2003 – did not allow market mechanisms to work in housing loan pricing. The housing subsidy decree was tightened twice in 2003, and in 2003 H2 the level of both the central bank base rate and market interest rates rose. Consequently, demand for and supply of subsidised housing loans fell, and they were replaced by housing loans denominated in foreign currency.

In the period between 2001 and June 2003, banks are estimated to have realised a 7–9 per cent margin on the housing loans they granted.⁵⁶ In the next six months, housing loans with government interest rate subsidy were granted at a 3.5–5.5 per cent margin, then this continued to decline following the modification in December 2003, but still remained above the international level. On the outstanding housing loans at end-2005 the banking sector realised a 5–6 per cent margin. Disregarding these loans, the net

⁵⁶ Szalay-Tóth (2003): The finance of home purchase and construction, the risks involved and their management in the Hungarian banking system, *Report on Financial Stability*, December 2003.

interest margin in 2005 would be much lower than the actual 3.9 per cent, reaching only 3–3.3 per cent.⁵⁷

The spread of foreign currency loans may also have affected the developments in interest margin, as on foreign exchange denominated consumer and housing loans banks can realise a margin as high as 5–6 per cent.⁵⁸ The underlying reason may be that clients are mainly motivated by the lower instalment of foreign currency loans than that of forint loans. At the same time, the strong demand for foreign currency loans provides a certain amount of pricing power for banks, which may partly explain the relatively high foreign currency loan margin despite the low funding costs. Also, the credit risk of foreign currency loans is higher than that of forint loans, which may also play a role in pricing.

The share of high-margin household loans within the loan portfolio increased significantly in the period under review: from 10 per cent in 2000 to 40 per cent in 2005. However, the riskiness of the portfolio probably did not increase by a similar magnitude, as the credit risk of forint housing loans is low. Therefore, the significant shift in the structure of the loan portfolio played a very important role in the interest margin's remaining at a high level.

Overall, it can be established that there are three main underlying reasons for the high level of the interest margin in the Hungarian banking sector in international comparison. On the one hand, in the household market segments the interest differential is high even compared to countries with a level of development similar to that of Hungary, which may partly be explained by the relatively lower degree of price competition. In the housing loan market the effect of government intervention and the high interest margin realisable on foreign currency loans also contributed to this. On the other hand, in the period under review the Hungarian banking sector was characterised by a high cost level, which involves a higher interest margin, as international experience shows. Finally, in the past years the level of domestic interest rates, which is high compared to that of EU countries, also contributed to the high net interest income.

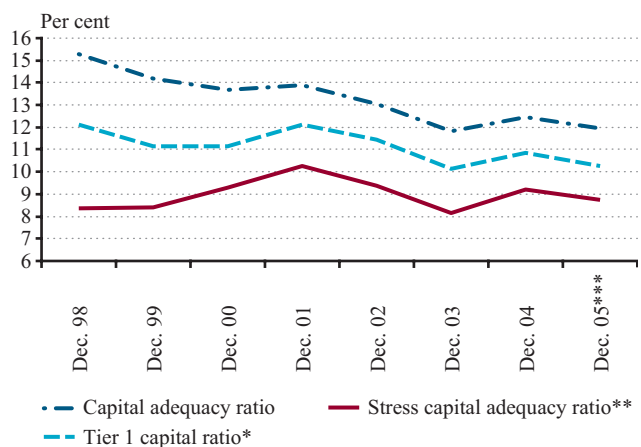
In the period between 2001 and 2005, the *change* in the net interest margin was influenced by factors of contradictory effects. Within the loan portfolio, the shift towards high-margin household credits and foreign currency loans

added to the interest margin, while the ratio of loans to large companies declined. With the exception of subsidised housing loans, the change in the structure of loans also reflects an increase in the riskiness of the portfolio. However, the considerable decline in the interest rate level and average operating costs had a narrowing effect on the interest margin. Therefore, the stabilisation of the interest margin at a high level is mainly explained by the fact that the effect of factors facilitating the decline is offset by the increase in weight of the higher-margin, typically riskier retail lending. It is also important to emphasise that the rapid expansion of lending to households was not coupled with any significant strengthening of price competition. This may partly indicate banks' using their market power, and may also be explained by the distorting effect of the substantial government subsidy on market mechanisms.

2.1.4.3. Capital position

The banking sector's capital adequacy ratio⁵⁹ (CAR), adjusted CAR and stress CAR all declined during 2005, but they are still at a safe level. The market share of banks with a less than 10 per cent CAR declined (based on data adjusted for positive outturn, their share was 23 per cent in

Chart 2-35
Banks' capital adequacy ratios



Source: MNB.

* (Tier 1 capital after reductions – capital requirement for exchange rate, commodity and trading book risks)/risk-adjusted balance sheet total.

** (Tier 1 capital after reductions – capital requirement for exchange rate, commodity and trading book risks – net value of non-performing loans)/(risk-adjusted balance sheet total – net value of non-performing loans).

*** End-2005 data is corrected with expected reinvested earnings.

⁵⁷ It is important to note that this margin is to be interpreted for the banking sector as a whole. In the case of individual banks this maximum margin can be realised only in the case of mortgage bank lending financed directly by mortgage bonds. In the case of mortgage bank refinancing the margin is shared between the mortgage bank and the commercial bank granting the housing loan.

⁵⁸ Calculated with total credit cost.

⁵⁹ Under the relevant statutory provisions, the capital requirement for exchange rate, commodity and trading book risks is excluded from the calculations. Thus, the measures to be taken in the case of non-compliance with the ratio do not apply either; therefore, for the purposes of comparability, we use the capital adequacy ratio with the contents prior to 2002 in order to study compliance with capital requirements for credit and market risks.

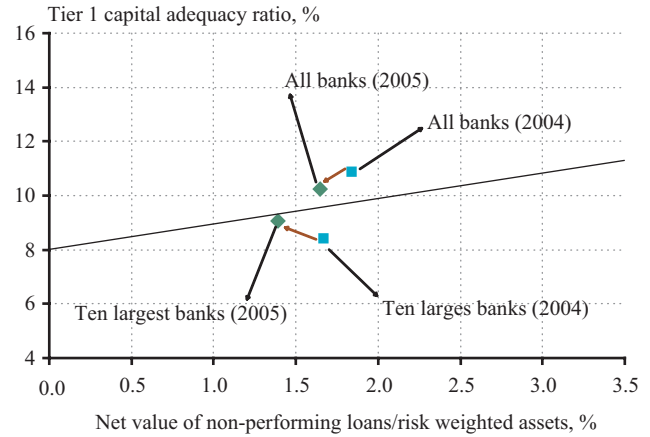
2005), and neither bank's CAR fell below 8 per cent. The decline in capital adequacy ratios compared to 2004 was caused by the greater increase in risk-weighted assets compared to that of the regulatory capital adjusted for the estimated reinvested earnings.

The stock of non-performing loans affecting the value of the stress CAR increased by 7 per cent, i.e. more slowly than total outstanding loans. The increase was caused by the growth in household classified loans. The increase is mostly due to recording reasons, and is probably not a sign of portfolio deterioration.

Despite the decline in the stress CAR indicator of the banking sector as a whole, the increase in the ten largest banks' Tier 1 capital ratio in parallel with the decline in the ratio of non-performing items compared to risk-weighted assets indicates an improvement in stress bearing ability. However, in terms of the whole sector the improvement of the portfolio materialised at the same time with a decline in capital adequacy. It means that mainly small banks' capital adequacy

Chart 2-36

Tier 1 capital adequacy ratio and non-performing assets as a percentage of risk-weighted assets, ten largest banks and banking system



Source: MNB.

declined, where in several cases extremely high capital adequacy ratios declined as the activities expanded.

2.2. Risks of the non-bank financial intermediary system

The impact on financial stability of the non-bank financial intermediary system is worth paying attention to from several aspects: by providing savings and financing alternatives non-bank financial intermediaries have an impact on households' and corporations' financial position; as a result of their increasing weight in financial mediation and their special risks they by themselves can affect the stability of money and capital markets; and through their ownership, financing and other close links their risks may be channelled on to the banking sector. In this chapter the latter two risk factors are presented.

2.2.1. CREDIT RISK

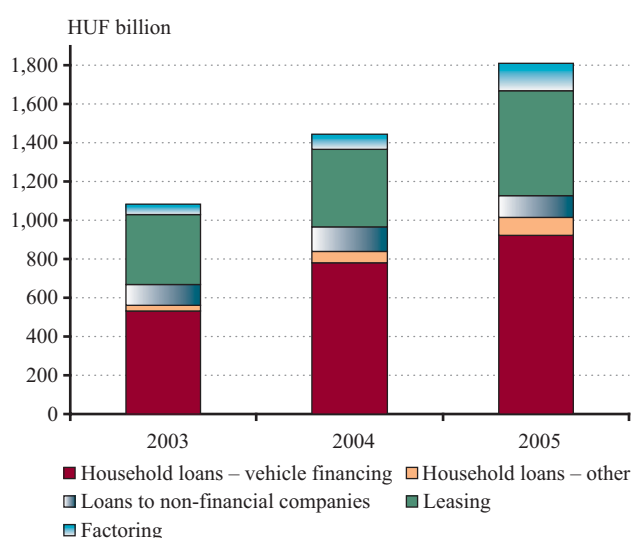
Currently, the most important risk in non-bank financial intermediation is the **credit risk** related to financing provided by financial enterprises.

In the past years, as a result of the Hungarian leasing market's peculiar development, car purchase loans were the driving force behind the strong growth registered by financial enterprises. As a consequence, in contrast to the traditional scope of activity and that of the Western European leasing market (which is basically characterised by serving corporate clients, priority of leasing and factoring products over credits and a nearly equal share of machinery, real estate and vehicle financing), in Hungary lending became the determining product of financial enterprises and a growing share of the household segment was observable

(exceeding already 50 per cent in their portfolio in 2004). At end-2005 car purchase loans granted by financial enterprises constituted more than 90 per cent of their loans to households, but a significant part of non-financial corporations' claims (credit and leasing) also involves car financing.⁶⁰

Chart 2-37

Composition of financial enterprises' claims



Source: MNB.

Since 2003, in the *Reports on Financial Stability* we have been discussing the dangers of the developments observable in the sector. The high ratio of car purchase lending

Table 2-2

The relationship of non-bank financial intermediaries and banks (31.12.2005)

	Financial enterprises	Investment funds	Life insurance companies	Private pension funds	Voluntary pension funds
Number of institutions: bank-owned or with other interest of banks*	43	125	4	4	6
Share of institutions in the sector: bank-owned or with other interest of banks*					
based on number	19%	74%	18%	22%	8%
based on market share**	69%	90%	46%	34% (estimate)	31% (estimate)

* *Bank-owned or with other interest of banks: indirect or direct ownership, founder's interest in case of pension funds, funds managed by bank-owned fund managers in case of investment funds, life insurance companies: interest through ownership or through joint affiliate.*

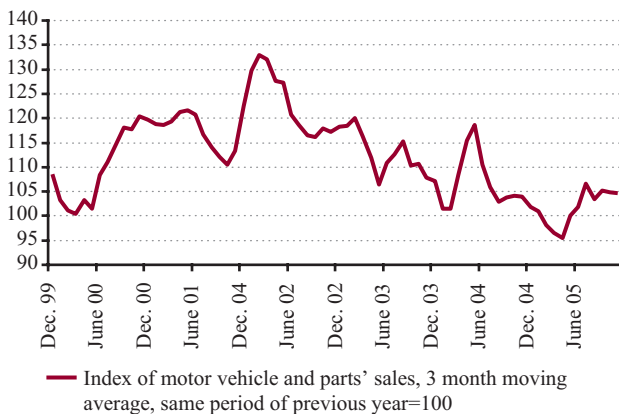
** *Counted based on: financial enterprises: outstanding loans, insurance companies: reserves, investment funds: net assets value, pension funds: managed assets.*

⁶⁰ No precise product distribution is available for corporate claims. According to the data of the Hungarian Leasing Association, nearly 70 per cent of total claims finances cars.

makes the sector vulnerable to vehicle market developments. Moreover, the fierce competition in recent years has led to risky lending practices. In 2005, there was only a restrained growth in car financing, but the risk factors hidden in lending practices have not ceased to exist. In parallel with a decline in the number of new vehicles sold, the ratio of second-hand car financing increased, while the ratio of downpayment continued to fall, and the maturity of loans is becoming longer. Naturally, the loosening of lending conditions results in a growing proportion of less creditworthy and riskier clientele, and as a consequence of low downpayment and long maturity the loan to assets coverage deteriorates in many cases. Indirect credit risk is further increased by foreign exchange based financing, which has become almost exclusive in financing by financial enterprises: at end-2005, 87 per cent of financial enterprises' outstanding loans to households were denominated in foreign currency, while this ratio is 68 per cent for total claims.

Chart 2-38

Motor vehicle sales



Source: CSO.

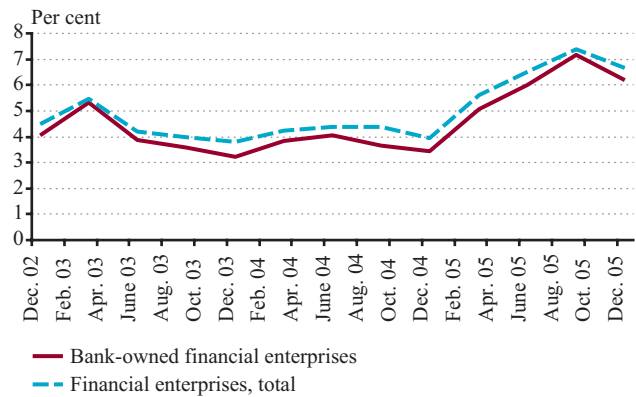
The magnitude of risks that financial enterprises can take is greatly increased by the fact that compared to risk-taking rules for credit institutions, financial enterprises have to meet much more lenient regulations in terms of risk-taking, portfolio classification, and provisioning. There is no capital adequacy requirement for them, they have to classify their outstanding claims only at accounting dates, and there are no exact rules for rating and provisioning. However, in case of bank-owned financial enterprises there is much less opportunity for regulatory arbitrage due to group-level regulations: the owner credit institutions must meet the capital adequacy requirement

at the group level, which requires a group-level risk registration system; and the managing credit institution must provide for the application of the rating and provision accounting practice at all the companies which belong to the group.

In addition, because of prevailing tax regulations financial enterprises are not interested in keeping problematic claims in their portfolios and in accounting for realistic amount of loan loss provisions, as non-realised losses can be deducted from tax base only in a limited manner and scope.

Chart 2-39

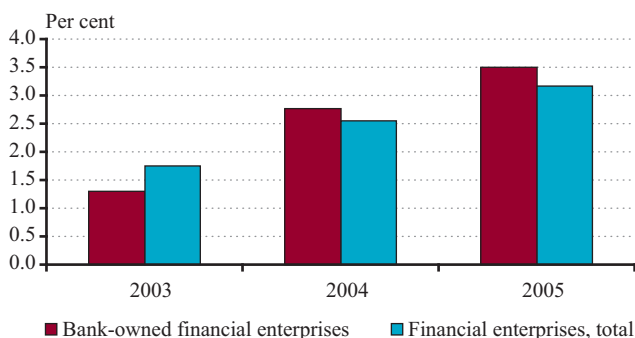
Proportion of overdue loans in the car purchase loan portfolio of bank-owned financial enterprises and of the whole sector



Source: MNB.

As a consequence of the above, the data available on portfolio quality and provisions do not show precisely the actual proportion of non-performance and losses. Therefore, it is all the more a reason for concern that the proportion of overdue loans in the portfolio increased significantly in 2005 according to available data as well.⁶¹ The significant risk in the portfolio is indicated by the high rate of repossessed cars, which, according to market information, exceeded 10 per cent of financed cars in 2005. The amount of net provision accounting increased considerably in 2004 and 2005, which resulted in an increase in the portfolio's loan loss provision coverage, although most probably it is still not in accordance with actually expected losses, and there are significant differences between individual enterprises. At bank-owned enterprises the loan loss coverage ratio is usually higher, but at the same time many enterprises not owned by banks do not account for provisions at all.

⁶¹ The assumable reason for the slight decline in the proportion of overdue loans in the last quarter of the year 2005 is supposed to be that many enterprises realise their losses by selling the problematic loans before the end of the year.

Chart 2-40**Loan loss provision coverage of financial enterprises' portfolio**

Source: MNB.

Market correction according to the alternative macro scenario would probably hinder vehicle sales significantly, which would limit financial enterprises' lending opportunities considerably. This would lead to a declining proportion of new loans in the portfolio, and thus to a further deterioration in portfolio quality. As a result of the high proportion of foreign currency loans, a more significant depreciation of the forint exchange rate may lead to a drastic increase in non-performance in case of financial enterprises as well.

Credit risk exposure to households and the risks hidden in the narrow product structure can only be slightly mitigated and over the longer run reduced by the change in the asset structure experienced in 2005, when the slowdown in vehicle purchase loans was offset by other financing targets coming to the front. Accordingly, the weight of machinery, truck and real estate financing increased in claims. The launching of the housing leasing activity may provide a new alternative to widen the scope of products, but it cannot solve the sector's problems over the short or medium run.

Several large leasing companies have appeared in the market with housing leasing facilities since early 2006. Strong interest in the product has been registered. The target group is those buyers of homes who cannot use government and social benefits and those home owners who have little capital but plan to change to better quality housing. Compared to a bank loan granted in the same currency, this product is available with a 1–2 per cent higher APRC, and the difference is expected to remain in the longer run due to the higher financing risks compared to mortgage loans. The financed amount is typically higher than that of housing loans, and the average maturity is

longer, 20–25 years. According to market estimates, the volume of leasing financing may reach as much as HUF 25–30 billion in 2006.

Credit risk of financial enterprises adds to the banking sector's exposure indirectly, through several channels. At end-2005 the market share of financial enterprises owned by or belonging to the scope of interest of commercial banks reached approximately 70 per cent of the stock of customer claims. These financial enterprises' assets are practically completely funded by the interested banks' resources. The importance of financing from bank loans is increasing in the case of other financial enterprises as well; at end-2005 the total sum of bank loans taken by them reached 85 per cent of their customer claims. The weight of credits granted by financial enterprises in the concerned bank groups' loan portfolio varies, and in case of household loans it may even reach 70 per cent. The largest groups of banks have interests in several financial enterprises with different activities: in addition to car financing, many of these affiliates are dealing with personal loans, leasing and factoring, which allows these banking groups to benefit from the advantages of diversification.

2.2.2. EXCHANGE RATE AND INTEREST RATE RISKS

The asset-liability structure of financial enterprises, and especially of those firms owned by banks are typically managed in a way to provide for harmony both in terms of the type of currencies and repricing, so their exchange rate and interest rate risks are insignificant, and do not add to the risks measurable in the banking sector.

2.2.3. RISKS RELATED TO INVESTMENTS

Institutional investors⁶² performance and developments in their assets are greatly influenced by money and capital market developments. Although the direct **risk of investments** in their portfolio – in case of investment funds, pension funds and unit-linked life insurance – are borne by the investors, i.e. by households (and mutual fund share owner companies) themselves, the inflow and outflow of savings are greatly influenced by the attained yield indicators and market developments, especially in case of investment funds.

Moreover, institutional investors bear the risks of their investments indirectly, mainly through the **yield and capital guarantees** they undertake. In the case of investment

⁶² Institutional investors: pension funds, life insurance companies, investment funds.

funds, the undertaken guarantee must be hedged by a bank guarantee, thus this risk typically appears within the banking group, as the parent bank's risk. While an increasing number of fund managers offer more and more types of guaranteed facilities containing increasingly sophisticated risks, the market share of these funds did not grow significantly in 2005 either; based on the managed assets their share is 5 per cent. The modest interest is partly attributable to regulatory reasons and partly to the unattractive rate of guaranteed yields, and also to the technical difficulties related to providing for the guaranteed facilities' liquidity.⁶³

We believe that guaranteed funds – as a consequence of the realistically determined guaranteed yield level and specialties of the facilities – currently do not add significantly to parent bank risks. Another important aspect is that the amount of capital in guaranteed funds is not decisive compared to the assets managed by the sector.

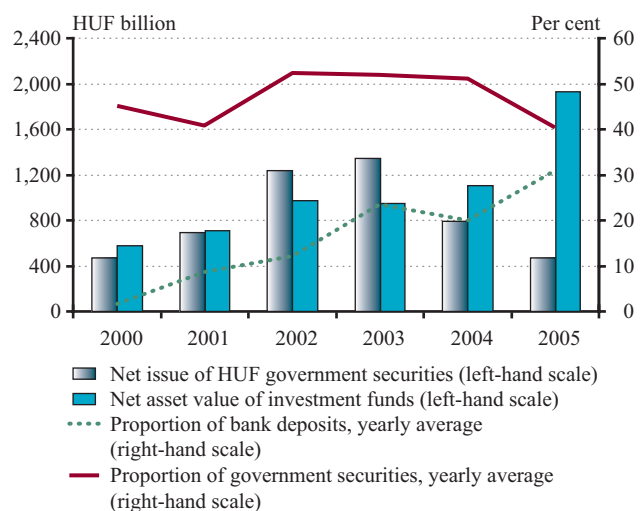
In case of life insurance companies, the yield guarantee (technical interest rate) that they can undertake – excluding unit-linked products – is limited by law.⁶⁴ For new contracts in forint or euro⁶⁵ insurance companies are allowed to grant an annual 4 per cent until 31 March 2006 and an annual 2.9 per cent from 1 April 2006. In case of insurance companies that reported the yields offered to their clients, the average yield for all the valid contracts fluctuated between 3–6 per cent. To produce the yield guarantee in the present interest environment is not a problem for insurance companies (insurance companies recorded an average 7 per cent yield on the investments behind mathematical reserves, which constitute the larger part of the reserve funds). However, considering that in case of several insurance companies the reserves' average time to maturity considerably exceeds the average time to maturity of investments, and that the rate of the yield guarantee cannot be changed during maturity, the risk cannot be neglected. Alternatively, in order to produce the necessary yield it may make insurance companies' strategies move towards riskier investments.

2.2.4. LIQUIDITY EFFECT

As households' savings preferences change, an increasing portion of savings finds its way to products offered by institutional investors, as a result of which banks become deprived of a part of their potential deposits. However, a part of such lost funds is channelled back through deposits by institutional investors, mainly investment funds, belonging to banks' sphere of interest, and thus developments in savings placed with institutional investors and the investment strategy followed by these financial intermediaries may have an influence on credit institutions' liquidity as well.

Chart 2-41

Developments in net forint government securities sales and investment funds' net assets, the proportion of bank deposits and government securities in investment funds' portfolio



Source: MNB.

At the end of December 2005 investment funds' bank deposits amounted to HUF 628 billion, representing approximately 13 per cent additional resources compared to the banking sector's household deposits. Typically, money market and real estate funds deposit their resources with banks.

⁶³ Originally, a guaranteed fund could only be established in a closed-end form, and for secondary market liquidity they have to be introduced to the stock exchange. Act XLVIII of 2004 allowed establishing capital guaranteed or capital and yield guaranteed funds in open-end form as well. However, this rule did not really facilitate the establishment of guaranteed open-end funds, as due to underlying strategies redemption of their shares is difficult. The settlement rules becoming effective as of January 2006 try to solve this problem.

⁶⁴ For unit-linked products there is no limitation on the extent of guarantee that can be undertaken. Several insurance companies have extended the investment opportunities of their unit-linked products to capital and yield guaranteed funds. They typically do not create separate reserves for the yield guarantees, which may show that they do not consider the related risks significant.

⁶⁵ In case of liabilities in other currencies the guarantee may be maximum 60 per cent of the yield of the bond with the longest maturity issued by the government that issues the given currency or the rate specified for the euro and forint denominated liabilities, whichever is smaller.

Within investment funds' portfolio the proportion of bank deposits is fluctuating, but indicates a clearly increasing trend: whereas in 2003 and 2004 some 15–20 per cent of net assets were held in bank deposits, this proportion went up to 30–35 per cent in 2005. The resources 'recollected' this way are concentrated at only a few banks. With regard to these banks, the importance of deposits from investment funds in the liability structure was varying; they ranged from several per cent even up to 150 per cent of deposits from households in certain cases. The largest deposit collecting banks channelled back 50–60 per cent of their investment funds' net assets value, and their funds placed deposits almost exclusively with the parent bank. Based on all this, we believe that certain banks consciously use the investment funds for collecting household resources. At the same time, by offering and marketing alternative investment opportunities, banks create competition for their own deposit collection.

2.2.5. PROFITABILITY EFFECT

Despite significant losses in the car purchase loans business, financial enterprises show relatively favourable, although deteriorating profitability indicators, but there are significant differences across individual lines of business and individual enterprises. In 2005 the sector's pre-tax profit amounted to HUF 43 billion; its increase lagged behind the increase in average assets, thus the return on assets continued to decline on sectoral level.

The margin realised on car purchase loans is reduced by the high level of commission paid to car dealers, which did not decline in 2005, and may reach as much as 10 per cent of the selling price of the financed car. At the same time, the commission type income realised on related services (e.g. in return for mediation of car insurances) allows vehicle purchase lending to provide a low, but positive profitability above a certain level of economies of scale.

The profitability of bank-owned financial enterprises varies, but in 2005 only one banks' group of financial enterprises

had negative aggregated profit. Bank-owned financial enterprises typically account for relatively higher rates of provision, and consequently their consolidated profitability indicators lag behind those of other enterprises.

Risks apparent in the portfolio are expected to result in significant losses at those enterprises concentrating on car purchase lending. With the current default ratios, the expected losses are not believed to jeopardise the stability of the sector and of the banks concerned through owner and lender relationships. A process of consolidation is expected in case of smaller enterprises. However, the sector may be hard hit by a decline in demand and by an increase in non-performance resulting from a market correction described in the alternative macro scenario.

Of the institutional investors, one may talk of income and profitability in the traditional sense only in case of life insurance companies; the yield attained by investment funds and pension funds belongs to the investors. From the banking sector's aspect, they affect profitability mainly through asset management, deposit management and other fees and commissions paid by them to asset managers belonging to banks and groups of banks increase the profit of the banking sector.

In 2005, as a result of attractive retrospective yields capital inflows to investment funds were extremely high, and as a consequence of the joint effect of revaluation and new capital inflows, managed assets grew by 76 per cent. The different investment structure typical to the different types of funds, together with the change in investors' preferences influenced the magnitude of increase in assets, which resulted in real estate funds' gaining ground on the account of bond funds in 2005. In the case of life insurances, which saw a significant 20 per cent increase in reserve funds in 2005, optimistic market expectations are reflected in the growing share of unit-linked insurances. In the case of pension funds, the inflow of savings at the sectoral level is mainly determined by other, non-market fac-

Table 2-2

Financial enterprises' return on assets by business lines⁶⁶

Per cent	2003	2004	2005
Factoring	3.4	4.8	2.8
Purchase of claims	16.3	8.3	5.9
Lending	3.8	3.0	2.9
Leasing	3.4	2.1	0.8

⁶⁶ Enterprises were classified in the groups based on their core activities; those with mixed activities were not included.

tors, but the attained yield indicators might influence the choice between individual funds.

Due to continued dominance of government securities in institutional investors' portfolio, their yield determined the sector's performance in 2005. Last year, as a result of the decline in the interest rate level, together with the 41 per cent strengthening of the domestic stock market index and the slight depreciation of the euro against the forint, investment funds usually achieved favourable yield indicators. However, there are significant differences in profitability across and even within individual types of funds, which is attributable to the different compositions of their investment portfolios.

The profitability of the life insurance activity of insurance companies is stable and good; their average ROE in 2005 was around 23 per cent.⁶⁷

In 2005, pension funds' annual average net real yield at sectoral level stood at 8.8 per cent, which due to the last quarter's unfavourable yield trends is below the performance seen in 2004, which was an outstanding year for pension funds. In case of pension funds with close interest of banks (founders' interest), assets management and also administrative and marketing tasks are typically performed by affiliated companies which belong to the founding group. The annual magnitude and distribution of income transfer within banking groups is summarised in the table below.

An exchange rate depreciation and interest rate increase due to a market correction in the event that fiscal consolidation is not carried out would have the most significant impact on savings in investment funds. While an increased willingness to save is projected, based on households' behaviour typical of their investment decisions (when mutual fund shares become cheap (retrospective yields fall) they sell and vice versa) it would probably have an adverse effect on investment funds. An increase in yields would mainly have an unfavourable effect on bond funds,

which hold a higher proportion of longer-term government securities, as their retrospective yields would fall significantly, investors would withdraw further savings, and thus their loss of market share would continue to accelerate.

In the case of private pension funds due to the compulsory character and in the case of voluntary pension funds due to the decisive proportion of employers' contributions the possible adjustment macro scenarios do not have a direct impact on the development of the volume of savings. In the short run, adjustment steps primarily reduce funds' yields through the price change of government securities, which constitute a determining part of the portfolio, and the extent of the reduction would be much greater in the case of a correction enforced by the market, while long-term effects are uncertain.

2.2.6. REPUTATION RISK AND CONTAGION EFFECT

An increasingly close co-operation of banks and non-bank financial intermediaries is a general phenomenon. The same name and logo, use of one another's sales channels, joint product development are becoming widespread and a planned marketing element of investment funds, insurance companies, financial enterprises and pension funds belonging to the same bank group. As a result, customers identify the companies belonging to the group with the group's leading institution, which may involve not only positive product sales effects, but a reputation risk as well.

As a result of significant risks experienced at financial enterprises and the non-negligible weight of their claims in the owner banking group's portfolio, in the case of the banks concerned, considerable reputation and contagion risks must also be taken into account. The degree of risks differs along banking groups. Several bank-owned financial enterprises have already cleaned up their portfolio and introduced stricter lending rules over last two years.

Table 2-3

Income transfer from bank-founded pension funds in 2005, estimate⁶⁸

HUF billion	Asset management	Administration	Marketing	Total
Private pension funds	2.7	2.1	0.2	5.0
Voluntary pension funds	1.3	0.6	0.1	2.0
Total	4.0	2.7	0.3	7.0

⁶⁷ Calculated based on preliminary data.

⁶⁸ Value calculated from sector-level data based on the share of bank-founded pension funds in the sector's assets.

2.2.7. OTHER CURRENT RISKS AND OPERATIONAL PROBLEMS

Previous Reports on Financial Stability discussed private pension funds' operational problems and their potential negative effects on state budget in detail. There was no noteworthy change in 2005. The primary reasons for oper-

ational problems are weak competition, inadequate form of operation of funds with bank or insurance company background and the low transparency of costs. Efficient operation is hindered by the high government security ratio and simple investment composition of the investment portfolio. These effects limit the yields attainable from the funds, and the expected value of pensions.

Box 2-4: Risks of the savings cooperatives sector

In terms of size, profitability, capital and portfolio quality, savings cooperatives show an extremely heterogeneous picture. Nevertheless, compared to the banking sector, the savings cooperatives sector has different characteristics and risks, as – despite concentration trends – savings cooperatives' operation is typically local, their size is small and their profitability and efficiency indicators are usually lower than those of the banking sector. Their liabilities mainly originate from households, and nearly half of their assets are utilised in government securities and interbank placements.

They have a significant market share in channelling households' funds into the financial intermediary system, compared to their weight in the banking system in which they are active. They are market losers in lending to households, because this sector has practically been left out of the liability side interest subsidised lending for purchase of housing and foreign currency lending to households. In lending to corporations, compared to their weight, their activity is modest, but increasing. At the end of December 2005, approximately 16 per cent of their balance sheet total was placed with corporations.

Chart 2-42

Market share of savings cooperatives sector in household lending, deposits and balance sheet total

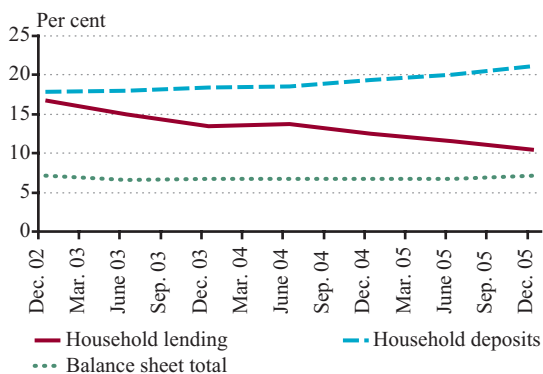
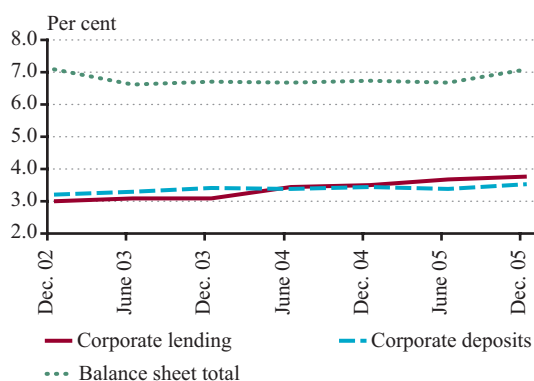


Chart 2-43

Market share of savings cooperatives sector in corporate lending, deposits and balance sheet total



Profitability, capital

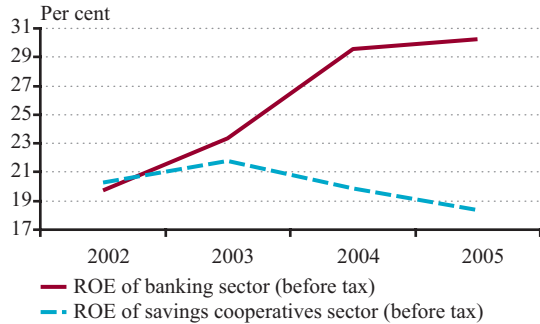
Compared to the banking sector, the profitability and efficiency of the savings cooperatives sector are much weaker, their profitability indicators continued to decline in the last two years.

The operating cost of the savings cooperatives sector significantly exceeds that of the banking sector, and amounted to 4.4 per cent of the balance sheet total at end-2005 (the corresponding figure for the banking sector is 2.7 per cent). In 2005, their pre-tax profit increased by nearly 10 per cent, but was much below that of the banking sector. The source of their profit is almost exclusively the interest rate differential and also commission and fee income, whereas their other profit is negligible.

In the event of a market correction scenario, a possible depreciation of the forint would not directly affect their profit, as the ratio of foreign exchange assets and liabilities on their balance sheet is negligible, but an increase in the interest rate level may considerably reduce their profit through the depreciation of their government securities holdings and the rising cost of household deposits which finance those holdings.

Chart 2-44

ROE



As a consequence of the above and of the fact that the increase in interest income from clients is limited by the aforementioned loss of household lending market share, their profitability and, indirectly, their capital accumulation ability are vulnerable.

Equity concentration shows a notable increase; average equity grew from HUF 406 million in 2004 to HUF 490 million, while the number of savings cooperatives with an equity exceeding HUF 1 billion doubled in the last two years (and reached 12 by end-2005). Due to cooperatives' specific regulations, the almost only source of increase in equity is their profit. An important driving force of mergers is that based on the Act on Credit Institutions, equity must be increased to at least HUF 200 million by the end of December 2006 and to HUF 250 million by end-2007. Many savings cooperatives cannot reach this equity level from their own resources, thus a further decline in their number is expected as a result of mergers and acquisitions.

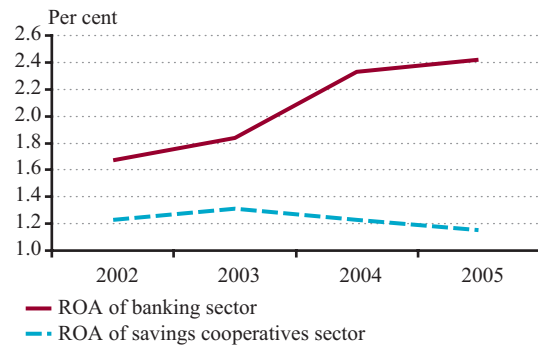
The solvency indicator has been declining in recent years, and stood at 14.25 per cent at end-2005. This indicator, which is higher than that of the banking sector, is mainly attributable to the significant holding of risk-free government securities placements. An eventual increase in lending activity may easily face a capital barrier.

Lending, lending portfolio quality

The proportion of placements to households and corporations within savings cooperatives' portfolio declined slightly, while banks – creating increasing competition – are trying to acquire savings cooperatives' traditional clients (SMEs, households). Due to the squeeze-out effect and because banks are gaining over better clients, savings cooperatives are compelled to open up to serving a riskier clientele. In case

Chart 2-45

ROA

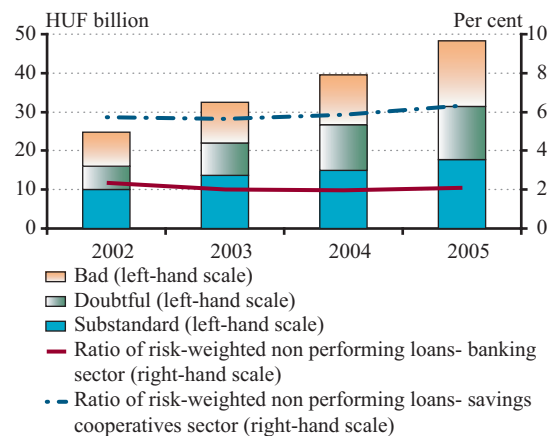


of adequate risk management systems all this would have a favourable effect on income, but due to the fact that the loan portfolio quality is much worse than that of the banking sector – the risk-weighted proportion of classified corporate and household loans adjusted for category to be watched is twice as high as that of the banking sector – there is probably a need to develop these systems.

Bad, doubtful and substandard holdings increased spectacularly. The significant difference between savings cooperatives' and banks' loan portfolio qualities is probably due to the difference in risk management culture and to the riskier clientele.

Chart 2-46

Quality of the corporate and household portfolio



Source: MNB.

Integration, strengthening of financial stability

Possible individual crises of savings cooperatives would not jeopardise the stability of the financial sector directly, but the decline in confidence in the sector would indirectly affect a significant portion of household savings.

Prevailing regulations do not acknowledge integration membership as a risk reducing factor, mandatory membership is not required, and there are no stipulations as for the essential elements of integration. There are the same subscribed capital and equity regulations for integrated and non-integrated savings cooperatives, while effective integration reduces members' risks through the institu-

tion protection fund; in case of a member's crisis situation, among other things, it provides financial assistance from the mutual reserve fund, and it has crisis prevention and crisis management authority.

We believe that the sector's stability would be enhanced if more stringent capital requirements for non-integrated savings cooperatives entered into force, and regulatory requirements relative to integration were determined at the level of acts. The statutes of the integration operated by the National Savings Cooperatives' Institution Protection Fund (OTIVA) can be a good basis for future legislation, although it would have a favourable effect on the stability of the sector if stricter versions of some of the rules therein would be adopted.

3. Financial infrastructure





3.1. Regulatory challenges

Changes and progress in financial regulations very often have a direct effect on financial stability (e.g. capital requirements), but when assessing the changes in the regulatory environment, indirect effects on market structure, competition and efficiency must also be taken into account. From a central bank's perspective neutral competition and the elimination of the possibility of regulatory arbitration are important in the new regulatory-incentive systems.

In terms of the efficiency of monetary transmission, the sound operation of financial markets is of key importance. Consequently, the entry into force of the Directive on markets in financial instruments is expected to be an important market influencing factor. In addition, the expected European reform of large exposure regulations is an issue worth examining from a financial stability aspect.

3.1.1. DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON MARKETS IN FINANCIAL INSTRUMENTS (MIFID)

The deadline for adoption by Hungary of Directive 2004/39/EC on markets in financial instruments (MiFID) is 31 January 2007 (the date of entry into force is 1 November 2007). Its implementation will have a significant impact on the regulation of investment service activities in Hungary, and thus on the operation of the firms of the sector.

The basis for MiFID was the earlier Directive 93/22/EEC on investment services. The Financial Services Action Plan, which is the EU's financial legislation schedule, specified 2005 as the final deadline for the implementation of the single financial market, a key priority of which is the establishment of the single market of investment services. The European Commission intends to attain this target by updating the earlier legislation. The new directive package was formulated within the framework of the Lámfalussy procedure (see pages 95–96 of the MNB's Report on Financial Stability, October 2005); the general requirements of the framework directive are elaborated in detail in a relevant Commission Regulation and Implementation Directive. The Commission Regulation directly enters into force by its legal nature, i.e. there is no need to 'adopt' its contents for application in Hungary. In practice, it means that the data recording rules for customers and transactions specified in the regulation and the pre- and post-trade transparency requirements specified for stock

exchanges and alternative trading systems will be available in their final format in the autumn of 2006. The two directives will be implemented mainly by rewriting the relevant parts of the Act on Capital Markets.

According to the Commission's reasoning, the current directive on investment services cannot meet market requirements any more. Important new services appeared, for which it is justified to extend the effect of the single passport. Since the early 1990s new trading opportunities have appeared with the introduction of new alternative trading systems. The implementation of the earlier directive allowed significant opportunities for national discretion, which resulted in the remaining of several rules that hinder the development of the single EU market. In practice, most conduct of business rules remained under the powers of member states, which did not allow the enforcement of the principle of mutual recognition. The MiFID directive package is a regulatory answer to these challenges. The directive creates the conditions for an efficiently working investment services passport, provides for the principle of equal competition conditions between stock exchanges and alternative trading systems, rewords and significantly tightens the investor protection rules, and increases transparency requirements that affect trading. These will be significant changes for the sector. The rules considered by us the most important are outlined below.

The effect of the Directive, the single passport and the rules of organisation

MiFID widens the scope of investment services activities. As opposed to earlier rules, investment advice (which used to be classified as auxiliary investment services activity) is now considered an investment services activity, and investment advice means personal advice according to the definition. This allows the licensing of investment advice as an exclusive activity. According to the new regulation the alternative trading systems, i.e. the Multilateral Trading Facility (MTF) registered within the EU can provide services anywhere within the Union (single passport), and instead of the earlier OTC character they are classified as stock exchange-like (regulated) markets. Multilateral Trading Facility means those systems that can be operated by investment enterprises as well and within the framework of which professional market participants can pursue trading activity under special rules (specialist or agent type markets). The scope of investment instruments determined by MiFID extends to commodity and credit derivatives as well.

Without any doubt, one of the most important changes affects host state competences. Member states where the service is provided will not be allowed to impose conduct of business rules on investment service providers that offer cross-border services, i.e. these institutions will be able to operate completely according to home rules. Institutions operating in the form of a branch will also be allowed to operate according to the rules of organisation determined by the member state where they are registered, and host member states will have very limited opportunities to impose national conduct of business rules. If a member state intends to introduce rules above and beyond the conduct of business rules specified under MiFID, it has to be reported to the Commission, and the objective necessity and proportionality of their application must be justified in detail. In Hungary, all this may encourage investment enterprises owned directly or indirectly by non-residents to change their organisational form in the period following the adoption of the euro in Hungary. In practice, it may mean that activities beyond the ones that require local presence (sales, perhaps compliance) will be pursued outside Hungary, at lower costs compared to the current situation.

The implementing directive establishes detailed rules of organisation for investment firms. The following of these are important from the sector's aspect because they may have an impact on the market's entry barrier due to their cost requirement. Considering the complexity and magnitude of the activity of the given investment firms, the directive requires the institutions to provide for independent internal audit, risk management and compliance functions. Where independence based on the above will not be required, the institution will have to prove that the detailed rules and procedures are in accordance with the nature of the activity, and they efficiently provide for the control functions' adequate operation. Organisational rules include provisions for conflicts of interest. In the future, institutions will have to define potential conflicts of interest, apply adequate procedures and organisational solutions for handling them, and inform customers of potential conflicts of interest, if they believe that the applied means are insufficient to handle these conflicts. The above reflects that functional independence will be emphasised. Therefore, institutions will need to review their organisational charts, reporting channels and powers delegating systems.

Internalisation, order execution rules

One of the most important elements of MiFID is the so-called internalisation, or in-house trading. Accordingly, an investment services provider can execute customer orders regarding securities also listed on the stock exchange even from his own account, or can pair received client

orders 'in house' as well. The service provider can also execute the client order from his own portfolio, but only based on the so-called best execution principle.

It means that the broker, considering all the possibilities, executes the transaction on the basis of the price, term of fulfilment and all other aspects important for the client. While in stock exchange transactions the offer price is the decisive factor, in internalisation, in addition to the price, other factors (costs, speed, settlement) can also be taken into account, which may make the execution more flexible and better, especially in case of larger-than-average transactions.

Continental practice has mainly relied on compulsory stock exchange trading. Of course, in several countries using other channels was allowed earlier as well, and in many market segments (e.g. bond) OTC trading has a larger weight than stock exchange trading, so the regulation did not only create a kind of new norm, but also did react to existing market developments and needs.

If the above rules function adequately, this system may enhance financial markets' efficiency, reduce clients' transaction costs (at least with the costs due to stock exchange trading), and allow the reduction of clients' and service providers' risks (e.g. in case of large transactions). It will most probably enhance financial markets' liquidity, and in case of proper operation it will even raise the level of the quality (speed etc.) of services.

Both the investment services provider and (provided that the former's behaviour is law-abiding) the client will face an easier-to-handle, smoother system during trading. From a central bank's aspect the expected increase in market efficiency and liquidity is not negligible at all; all this can also make monetary transmission more efficient, while the increase in liquidity and the deepening of turnover are natural 'supporters' of financial stability.

The innovations included in the directive raised several practical problems, and there were efforts during the discussions preceding adoption to handle these difficulties. During national implementation, special attention will have to be paid to creating regulations in conformity with the real intention and will of the provisions of law.

A basic issue related to internalisation is the protection of investors, especially small ones. Due to small investors' confidence in the market and the public sentiment vis-à-vis financial markets, in an indirect manner it is also a stability interest to protect those investors who do not have sufficient information and whose ability to enforce their inter-

ests is limited. In order to increase investor protection, the directive separates institutional investors and small investors. In case of small investors strict counterparty protection rules must be applied, while institutional investors fall under other, less serious judgement in terms of investor protection (this is the so-called 'eligible counterparty' institution).

Announcement requirements – creation of transparency

One of the most important issues of internalisation is transparency. A key point in *in-house trading* is the existence, proof and unambiguous verification of the best execution. In the regulation this issue is mainly approached from the aspect of investor protection, but in terms of market efficiency it means that if the execution of the order is not coupled with adequate transparency, the market as a whole loses information, and thus the expected increase in efficiency may also be questionable.

This was one of the reasons for formulating one of the most criticised and perhaps most debated packages of rules of the industry, the so-called *trade transparency* rules. The sector objected to the creation of the package of rules, because in their opinion obeying them would impose such high costs on individual market participants that only companies of adequate economies of scale could afford them. However, as a consequence, smaller firms would sooner or later be 'priced out' of the market, which could trigger an increase in market concentration, a decline in competition and thus a decline in the efficiency of markets. The Commission's reply to these serious concerns was a slight simplification of the rules and the extension of the implementation time-limit (increase in time for preparation, since the text of the directive has been available for 2 years).

Based on the type of trading the directives name two kinds of transparency: 'pre-trade' and 'post-trade' transparency. As for the announcement rules of stock exchange and non-stock exchange trading, attention was paid to the different character of trading, in addition to small investors being involved.

As for internal pairing, **preliminary announcement** has been limited to standard sizes of share transactions executed in regulated markets (the underlying reason is that in bond contracts small investors' interest is not typical). Those companies which perform regular internalisation have to, among other things, continuously make public their prices quoted for shares (they have to quote prices), together with the quoted quantities, and it only does not have to be done

if the given security's market is not liquid (the issue of liquidity appears in the implementation provisions of law).

Within the framework of **post-trade announcement obligation** for the transactions outside the regulated market or outside MTF internalising firms must announce the magnitude, price and date of deals made. This information must be made public as close to real time as possible, on a reasonable business basis and in an easily accessible manner for other market participants. Certain delayed announcement might also be possible at the member states' discretion, but only in exceptional cases (e.g. one-off transaction, which is much larger than usual).

The above rules also oblige firms to verify that the transaction executed through internal pairing was the most beneficial for the client. Moreover, such information must be preserved for a long time (5 years) too. The transparency and preservation (verification) provisions ensure the adequate efficiency of order execution to attain the aim determined by the legislators. Interpretation standards for best execution will most probably be formulated as a result of intense dialogue and coordination between firms and supervisory authorities.

3.1.2. EU-LEVEL REFORM OF THE REGULATION OF LARGE EXPOSURES

The new European capital adequacy regulation allows institutions to use their own internal models for determining the necessary capital requirement. This does not mean that banks can apply discretionary calculations, but they can substitute their own parameters in a system of formulae determined by the regulatory authority.

Underlying these formulae is a well-founded financial mathematical model, one of the most important assumptions of which is that the portfolio of lending exposures is well diversified (i.e. none of the exposures has a large enough weight to allow its individual risk properties to affect the risk properties of the portfolio). However, this requirement is not met in reality, but risk concentrations may be observed alongside certain dimensions in the real portfolios. Several types (dimensions) of them can be distinguished: geographical, product-level, risk-factor level (e.g. an interest rate) or 'implicit' or secondary concentrations (when it is not the exposures that are concentrated alongside a dimension, but for example the guarantees behind the exposures). The so-called large exposures, which mean the concentration of exposures alongside clients, belong here.

Large exposure means exposures vis-à-vis one debtor (partner, client or group of connected clients), which – due to their size – may jeopardise an institution's stability, if the debtor cannot meet its payment obligation. However, it is hard to tell the threshold above which an exposure is classified as large exposure in an economic sense; regulation usually determines it as a certain percentage of the regulatory capital of the lending institution. In Hungary – in line with EU Member States – an exposures vis-à-vis the same client or group of connected clients the amount of which reaches or exceeds 10 per cent of the regulatory capital is considered a large exposure.

Although the necessity of regulating large exposures is generally accepted, and relevant EU-level regulation was also adopted, national regulatory practices (may) differ from one another at several points. These include, for example, measuring the magnitude of exposure (book value, gross value, etc.), the scope of application of large exposure regulation (individual institutions vs. groups), the practice of reporting large exposures and handling of exposures

within a group. A significant part of the current regulation will be taken over by the new EU capital requirement directive (CRD) as well, which contains new provisions too, mainly with regard to the management of hedges.

In order to review the experience related to the new regulations, standardise and modernise the regulation as a whole, and in line with the provisions of the CRD, the European Commission initiated a review of the large exposure regulations. For this purpose, WGLE (Working Group on Large Exposures), one of the latest working groups of CEBS was established. In the working group the experts of 12 European countries (including Hungary) review the current national regulations of large exposures, the institutional practice of managing these risks and are attempting to elaborate the new framework regulation (and are striving to deal with other types of concentration risks too). The final deadline for this work is 31 December 2007 (considering this deadline, preliminary ideas and future practices related to the application of the relevant provisions of the CRD also constitute the subject of work).

3.2. Operation and risks of the payment system

The central bank's task is to develop the national payment and settlement systems, to facilitate the safe, efficient and smooth operation of payment and securities settlement systems and to regulate money circulation.

In relation to payment and securities settlement systems, the MNB fulfils a number of simultaneous functions; as a service provider, it manages credit institutions' accounts, on which the final settlement of forint positions from inter-bank transactions is performed. It operates the real time gross settlement system (VIBER). It is the co-owner of GIRO Clearing House Ltd. (GIRO Zrt.) and Central Clearing House and Depository Ltd. (KELER Zrt.). It is a participant of all three settlement systems. Taking into account the entire settlement infrastructure, it fulfils regulatory, licensing and supervisory functions as an overseer. As a neutral partner from the point of view of market competition, the MNB actively promotes the development of infrastructure requiring the joint approval of all stakeholders.

3.2.1. CHANGES IN THE LEGISLATION OF PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

- Amendment to Act CXX of 2001 on Capital Markets: Currently in Hungary a singly company, KELER Zrt. acts as a Central Counterparty guaranteeing with its own capital the settlement of exchange spot market securities transactions and derivative transactions and as a central securities depository. The safe and smooth operation of the central securities depository is of key importance for the MNB, as the securities provided for as collaterals in respect of the central bank loans granted in connection with monetary policy operations and payment systems are blocked at the central securities depository in favour of the central bank. These two functions carry risks of different magnitude and character. The financial risks run by the Central Counterparty function may potentially jeopardise the fulfilment of the central securities depository activity, which latter itself carries only operational risks, because under extreme market conditions it cannot be excluded that the clearing house becomes insolvent and unable to operate, if it has to use its own resources to meet its guarantee obligations.

The prevention of spreading of financial risks between individual functions, attaining the central bank's monetary policy targets, ensuring financial stability and the

European Central Bank's relevant expectations made it justified and necessary to divide KELER Zrt's Central Counterparty functions and central security depository functions into legally separate companies. On the MNB's initiative and with its active participation the Act on Capital Markets was amended in December 2005 accordingly. By including the licensing and operating conditions, risk management and liquidation rules of the organisation performing independent central securities depository activity in the legislation, the legal preconditions of organisational separation of central securities depository function, on the one hand, and of classical clearing house activities including Central Counterparty function, on the other hand, were created. The amended Act entered into force on 1 January 2006, and allows KELER Zrt. two years for carrying out the separation.

- Decree 23/2005 (XI.23.) MNB of the Governor of the Magyar Nemzeti Bank on the material, technical, security and business continuity requirements related to carrying out clearing transactions by clearing houses for credit institutions was published in November 2005 and entered into force on 1 January 2006. Compared to the earlier regulation, this decree specifies the requirements vis-à-vis clearing houses for credit institutions in a more detailed manner and a wider scope, which contributes to increase the stability of the payment system. In respect of VIBER, the provisions of the decree also apply to the MNB in order to ensure equal requirements for all domestic interbank payment and settlement systems.

3.2.2. SYSTEMS DEVELOPMENTS, THE VIBER MONITOR

In 2005 a new function was added to VIBER: monitor service for VIBER participants became available and was launched at the end of the year. By this, in addition to the possibility of data request done earlier by a SWIFT message, the continuous on-line monitoring of data related to one's own banking account and daily cash flow, the modification of not yet executed payment orders, the changing of the priority order and enquiries are available on earlier data became possible.

The new service offers a state-of-the-art tool for VIBER participants for the continuous and active managing of their position, by providing an opportunity of prompt intervention in an emergency (under possible turbulent market conditions), which contributes to the reduction of the sys-

tem's liquidity risks and to the efficient management of banks' liquidity position.

The optimum setting of the end-of-day position is also enhanced by extending the standby facility by half an hour following VIBER working hours.

3.2.3. TURNOVER, LIQUIDITY AND OPERATIONAL SECURITY OF THE PAYMENT AND SECURITIES SETTLEMENT SYSTEM

The Hungarian payment and securities settlement system is robust and it works in a stable manner, which is confirmed by the fact that liquidity risk is declining while the turnover is growing, and availability and operational reliability are high amidst ongoing developments.

Turnover developments

Interbank transfers are settled in VIBER (real time gross settlement system) and ICS (interbank clearing system).

The turnover of systems operated by the MNB and GIRO Zrt. is growing dynamically (more in value than in volume, which is a result of the increasing number of very high value individual payments). The combined turnover (650 thousand billion forints) was 24.7 times as much as GDP in 2004, and this ratio reached 29.8 by 2005.

Chart 3-1

Developments in the value of interbank payment turnover as a proportion of GDP



Source: MNB.

The growth in value of the securities transactions (Budapest Stock and Commodity Exchange, OTC government securities) by 38.7 per cent performed by KELER Zrt. exceeds even that of previous years. More than 90 per cent of the turnover is settled in the MNB's real time system, VIBER.

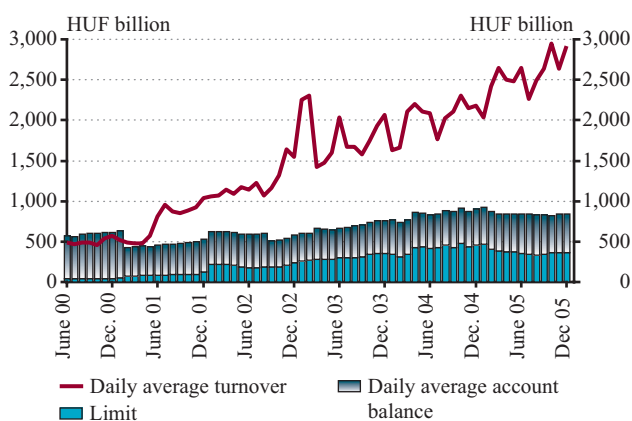
In the year under review, in value terms more than 91 per cent of the turnover was performed in the systems operated by the MNB. By volume, three quarters of the turnover of the real time system are constituted by bank-to-bank items and the securities deals made by them.

Changes in the liquidity position of payment and securities settlement systems

While the turnover grew rapidly (by 25.9 per cent), the liquidity that serves as collateral remained at an almost unchanged level, the credit line declined by 9.8 per cent, which was partly offset by the 10.7 per cent growth in account balance. The ratio of average daily turnover to liquidity changed from the 2.5 times ratio in 2004 to 3 times by 2005, which continues to reflect ample liquidity. However, it is to be noted that this ratio shows significant differences across banks, and that there is a probable relationship between the size of the ratio by banks and queuing up, which calls the attention to the need of increased liquidity management at the level of the banks concerned, although it does not really affect the stability of the system as a whole.

Chart 3-2

Comparison of banks' average daily liquidity and payment transactions



Source: MNB.

The intraday distribution of payments continues to indicate an undisturbed turnover: 91–95 per cent of the turnover is processed before 15 hours, i.e. large turnover at the end of the day is not typical. A change compared to previous years is that the higher turnover of morning hours is now performed somewhat later.

The number of items queuing up in VIBER increased almost one and a half times compared to the previous year, while the value of amounts queuing up doubled. It happened twice at the end of the day that queued items had to be cancelled due to being uncovered (while there

was no such case in 2004). Despite all this, the magnitude of queuing up does not require any intervention in terms of systemic risks.

The reliability of the systems' operation, their availability

The average availability of VIBER was 99.77 per cent last year, with increasing number of incidents at the end of the year. The December incident was not directly in the VIBER system, but in the central bank's computer network, which affected the operation of VIBER as well.

In addition to intraday lost working time, the number of pre-operating hours problems of VIBER and the ones related to daily closing increased. Otherwise, this availability is the same as last year's. Neither of the incidents had an effect

that would have jeopardised the stability of VIBER and the connected payment systems.

VIBER availability stands international comparison with the EU's TARGET1 system for high-value urgent payments.

Reliability of the operation of KELER Zrt.

KELER Zrt's availability was at the same level as in the previous year (99.5 per cent), slightly below that of VIBER. The incidents were basically of IT character, and did not jeopardise the safe operation of the securities settlement system. From a stability aspect this level is acceptable.

3.2.4. SERVICES, COMPETITION, TRANSPARENCY AND FEES

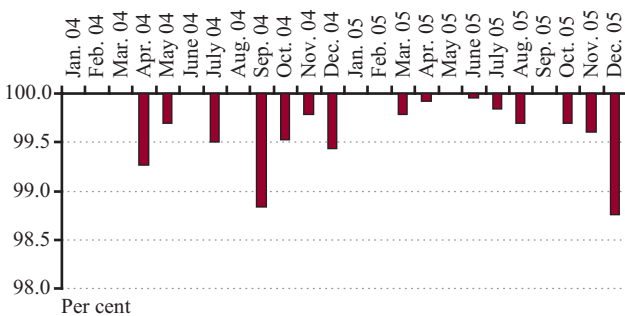
The fees of MNB-operated systems and related services do not include a profit element, but only cover the return in 5 years of those costs that are related to their operation and establishment. The central bank fee policy serves the increasing efficiency of the financial intermediary system and the enhancement of competition among market participants. However, very often this positive effect cannot succeed at all or only to a small extent in case of credit institutions' customers.

Recent years' continued decline in VIBER fees charged to banks by the MNB is usually not followed by banks, which leave their fees, which are very often several times higher than the central bank fee, unchanged, keeping the price level of this service artificially high, which is also a reason why the ratio of customer payments is below 20 per cent in VIBER.

Similar market behaviour can be experienced in case of cross-border, small-value euro transfers. Most Hungarian banks joined in some form the pan-European settlement system (STEP2), which has been operating since April 2003 and which processes transfers below the value limit of 50,000 euros. This system allows a faster and cheaper processing of transactions compared to using traditional correspondent banking relations. However, the majority of customers are not informed about this opportunity, as banks do not indicate these transactions' rates in their list of conditions, and thus the principle of fee transparency breaches.

Chart 3-3

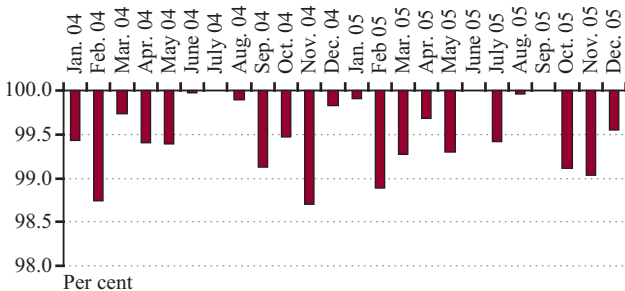
VIBER availability in 2004 and 2005



Source: MNB.

Chart 3-4

KELER availability in 2004 and 2005



Source: MNB.

Box 3-1: The MNB's fees in VIBER and for small-value euro payments

In 2005, for transactions processed in VIBER the MNB charged HUF 450 per item to the owner of the debited account in case of direct VIBER members, while to non-direct VIBER members – in case of payment orders submitted through the mediation of MNB – a fee of HUF 900 per item. These fees are lower than the ones applied in 2004, when the MNB charged HUF 750 to direct VIBER members. Fees are revised annually, on the basis of the comparison of previous year's costs and income.

As a result of a development carried out together with GIRO Zrt. in March 2005 the MNB created an opportunity for Hungarian banks to

connect through the MNB to the system which processes small-value payments (HUNSTEP2 service).

With the MNB's direct connection, all domestic bank accounts with an international bank account number (IBAN) became addressable. The MNB processes outgoing euro transfers for 0.2 euro, i.e. approximately 50 forints, which is a fraction of commercial banks' fees for payment services provided through correspondent banks, while incoming transfers are processed free of charge for credit institutions connected through the MNB.

Beside the reasonable transaction fee, this service – utilising the advantages of the GIRO communications network – involves the saving of the SWIFT cost, which allows the charging of a competitive fee to customers.

The fees charged on the basis of the fee policy applied by the central bank are much lower than the financial sector's transaction fees, and they meet the conditions of reliable, safe, efficient and transparent operation required of payment systems. Consequently, they constitute an important element

of stability. In the longer run, these prices and the development of the single euro payments area (SEPA) will create a competitive environment for commercial banks, which can result in a decline in the prices of their services – at unchanged quality –, which is advantageous for customers.

Box 3-2: SEPA, the single euro payments area

SEPA services are pan-European means of payment – credit transfer, direct debit, card, e-payments, mobile payments –, which are technically (account number, message format etc.) and in terms of procedural order (determined service providing criteria, method of fee settlements) uniform within the euro area as a result of a standardisation process, and which will gradually replace specific national payment methods and standards.

According to the Roadmap, starting from 2008, banks in euro area Member States will have to offer to their customers the new pan-

European credit transfer and direct debit (collection), and the uniform use of cards will also have to be provided for. Euro area banks participating in the European Payments Council undertook the obligation to take part not only in the development of these instruments, but also in their introduction, hoping that as a result of their example the critical volumes that will make the use of these payment methods irreversible and efficient at the same time will become available as soon as possible.

There is no obligation for non-euro area EU member countries' banks to join the SEPA payment schemes and infrastructures, but it is possible on an individual, voluntary basis.

3.2.5. OVERSIGHT, CENTRAL BANK ASSESSMENT OF SETTLEMENT SYSTEMS, KELER ZRT.

The MNB performs its oversight activity, which belongs to its basic central bank tasks, on the basis of international (BIS, ECB) recommendations related to the operation of payment and securities settlement systems and central banks' oversight activity and also taking into account the oversight methodologies and practices developed by other Member States of the EU. In addition to the continuous monitoring and control of payment and securities settlement systems through data collection and analysis, an important element of the oversight activity is the comprehensive assessment of systems in order to establish whether they are, and to what extent, in conformity with international requirements.

In 2005 the MNB performed a comprehensive assessment of KELER Zrt's securities settlement system operated in relation to domestic securities transactions according to the relevant recommendations of BIS (Recommendations for securities settlement systems, www.bis.org). The assessment did not cover those services of the clearing house that related to international, cross-border securities transactions (BIS recommendations 16 and 19).

Most recommendations cover a complex scope of questions, which do not always allow unambiguous yes and no

answers. Therefore, the MNB follows the scale also used by the ESCB, which allows a more precise assessment, as interpreted below:

- Fully compliant: adequacy can be established in all important scopes of issues,
- Basically compliant: there may be some smaller differences, although they do not affect adequacy significantly,
- Partly compliant: there are serious deficiencies in some issues,
- Not compliant: there are serious deficiencies in almost all issues.

The Hungarian securities settlement system is fully compliant with the requirements of 16 of the 17 BIS recommendations used for the assessment.

In 2005 the number and duration of operational incidents perceived by customers as well was practically equal to those of 2004, but they did not cause any serious interruption in the smooth operation of the securities settlement system, thus the requirements with regard to security, operational reliability and business continuity were basically met. For good order's sake, it is also to be noted that in practice there is no securities settlement or payment system the security level or operational reliability of which could not be perfected.

Appendix

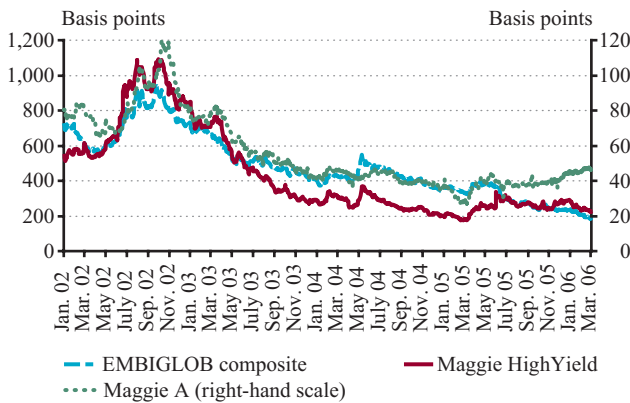




Macroeconomic and financial market environment

Chart 1

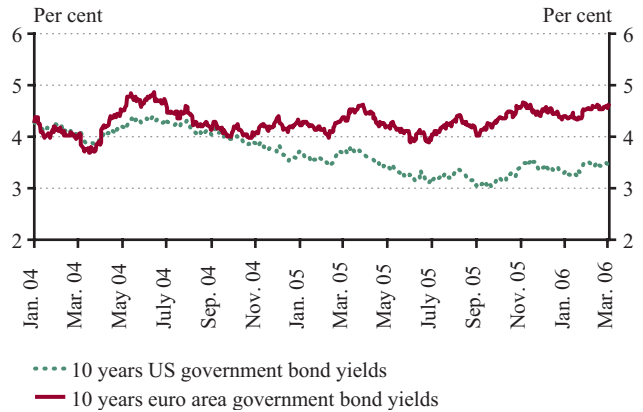
Global risk indicators



Source: J.P. Morgan-Chase, Thomson Financial Datastream.

Chart 2

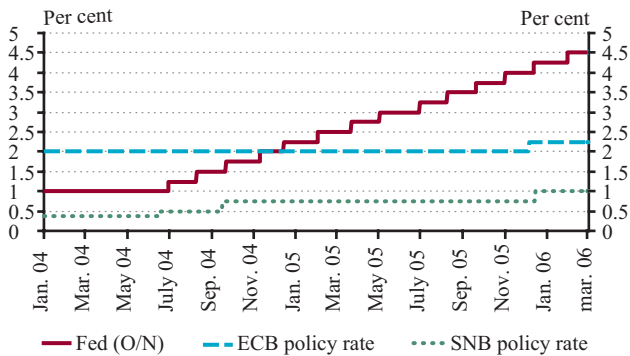
Long-term USD and EUR bond yields



Source: Thomson Financial Datastream.

Chart 3

Policy rates of the Fed, the ECB and the National Bank of Switzerland



Source: Thomson Financial Datastream.

Chart 4

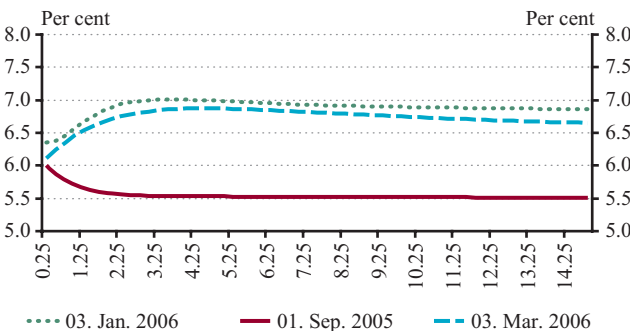
The exchange rate of the forint



Source: MNB.

Chart 5

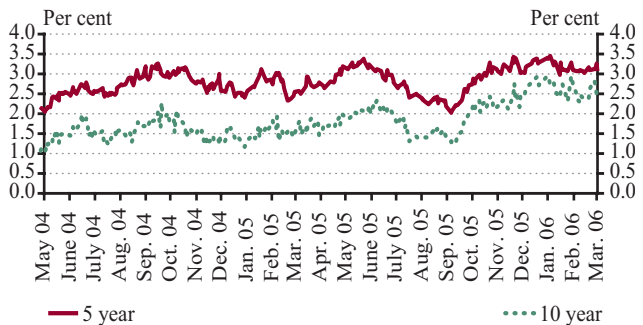
Development of the yield curve



Source: Reuters and MNB.

Chart 6

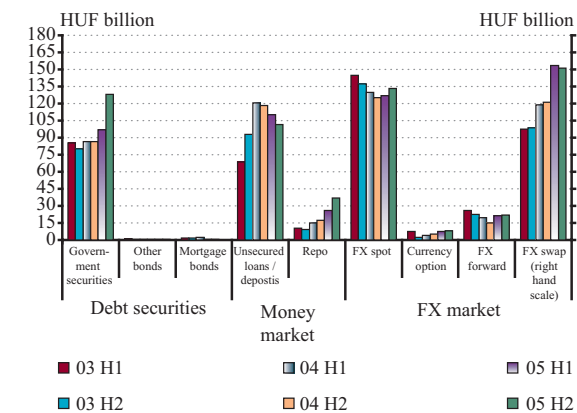
Development of implied 3 month forward differences



Source: MNB.

Chart 7

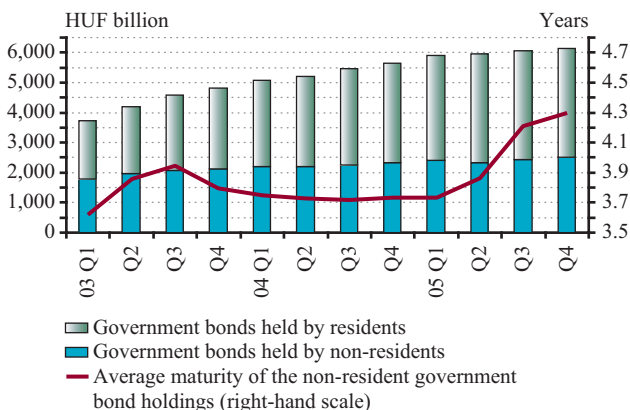
Average daily secondary market turnover of certain segments of Hungarian financial markets (billion Forint)



Source: MNB.

Chart 9

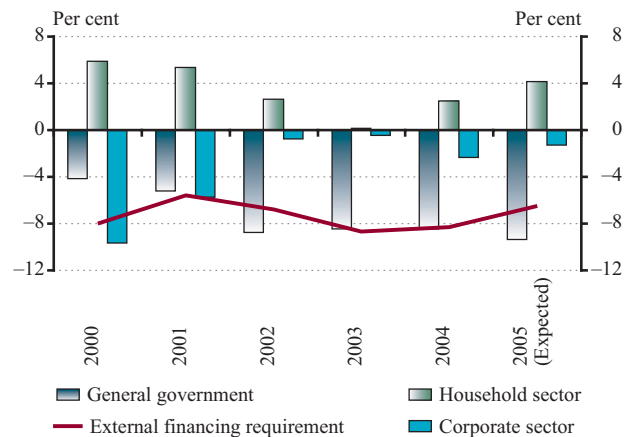
Distribution of the outstanding amounts of the HUF government bonds by resident/non-resident (average of daily outstanding amounts)



Source: ÁKK Ltd., MNB.

Chart 11

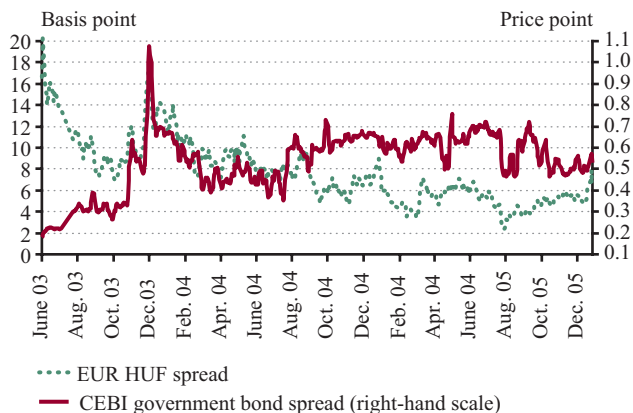
Net lending of sectors and the external financing requirement as a proportion of GDP



Source: MNB.

Chart 8

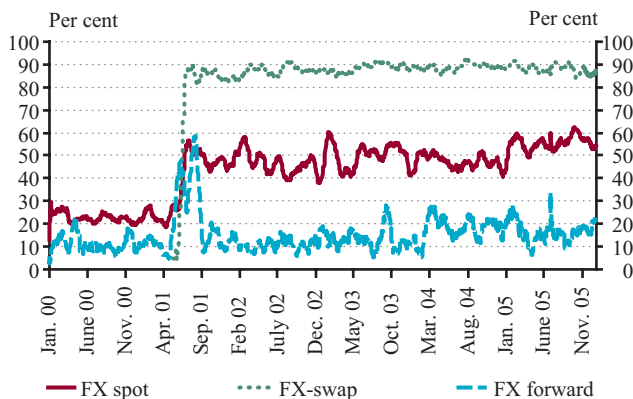
Bid-ask spreads in the spot FX market and the CEBI government bond bid/ask spread (5-day moving average)



Source: Reuters, DrKW.

Chart 10

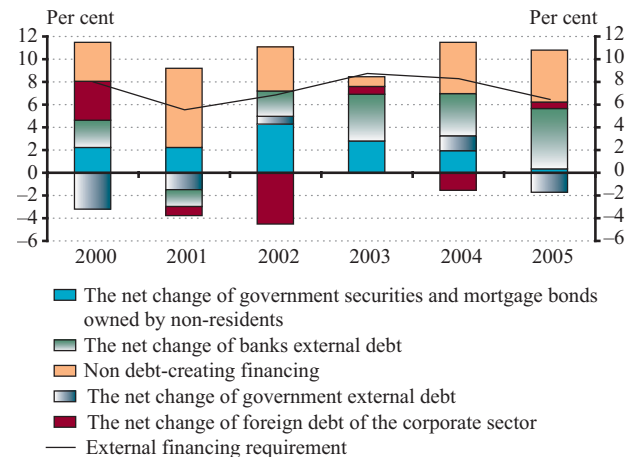
Share of non-resident market participants in the Hungarian FX market turnover



Source: MNB.

Chart 12

External financing requirement and its financing as a percentage of GDP

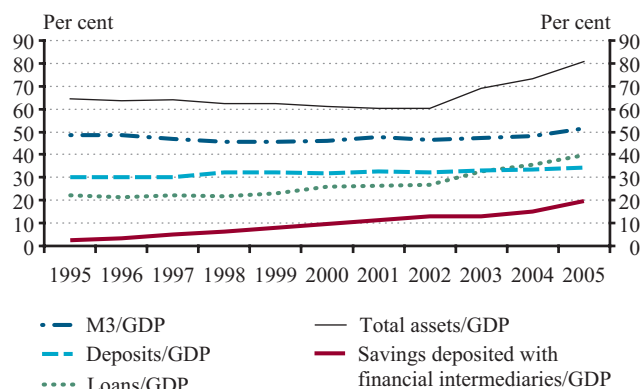


Source: MNB.

Indicators of financial stability in the banking sector

Chart 13

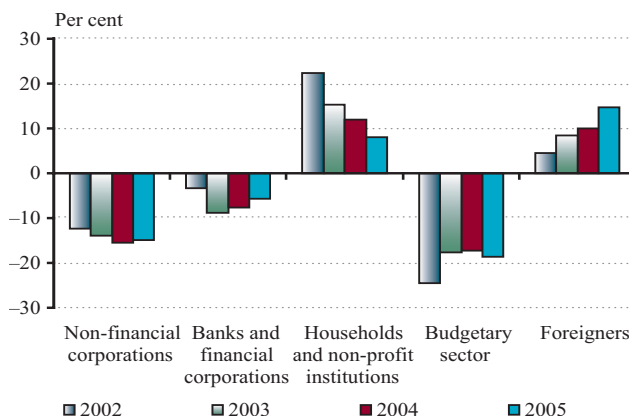
Financial Depth Indicators (in per cent of GDP)



Source: CSO and MNB.

Chart 14

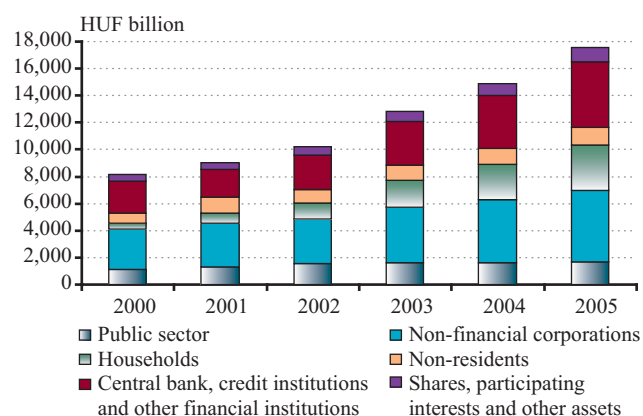
Net financial positions of different sectors vis-à-vis domestic banking sector



Source: MNB.

Chart 15

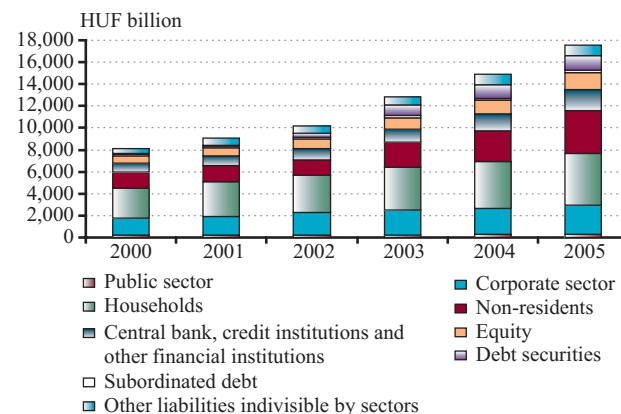
Banking sector assets



Source: MNB.

Chart 16

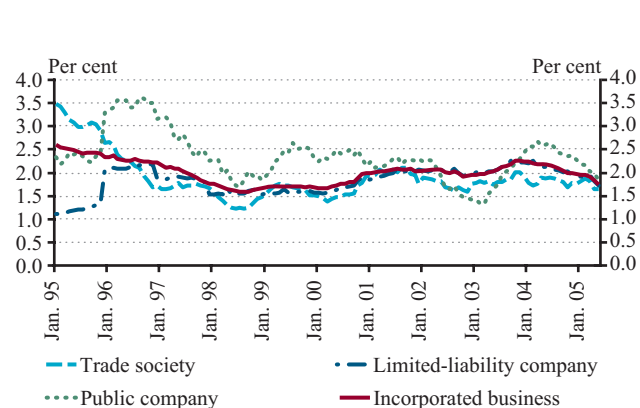
Banking sector liabilities



Source: MNB.

Chart 17

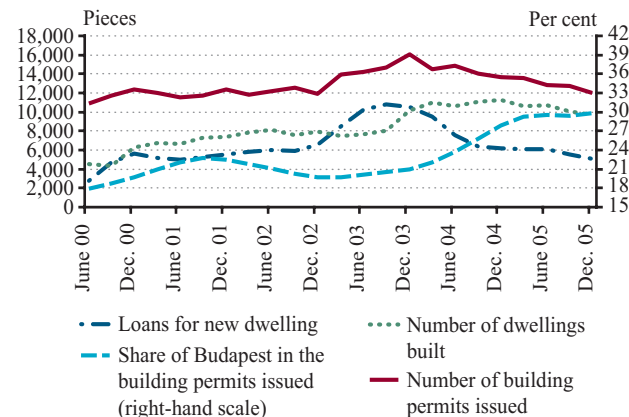
Annual bankruptcy rates for incorporated business



Source: Opten Kft.

Chart 18

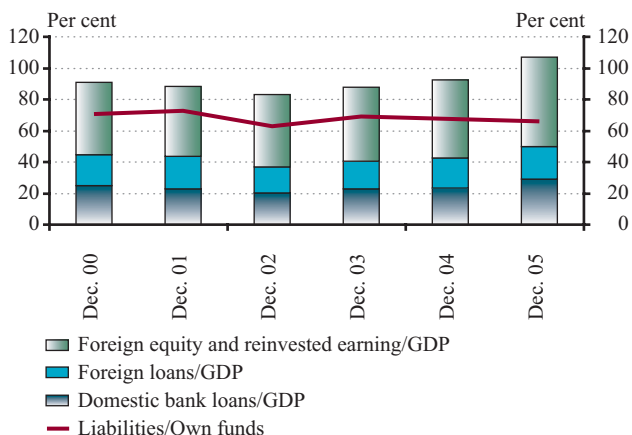
Housing market indicators



Source: CSO and DEM.

Chart 19

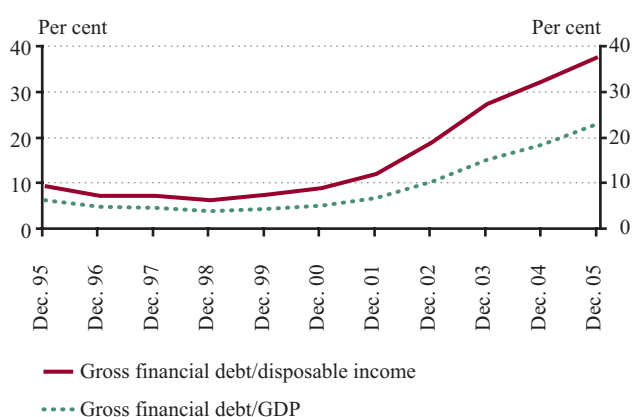
Indebtedness of non-financial corporations



Source: MNB.

Chart 20

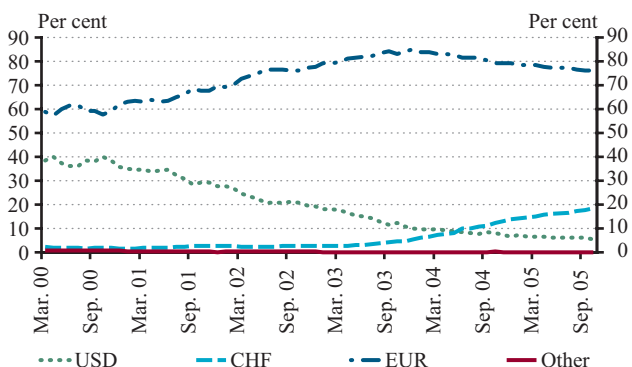
Household sector's indebtedness



Source: CSO and MNB.

Chart 21

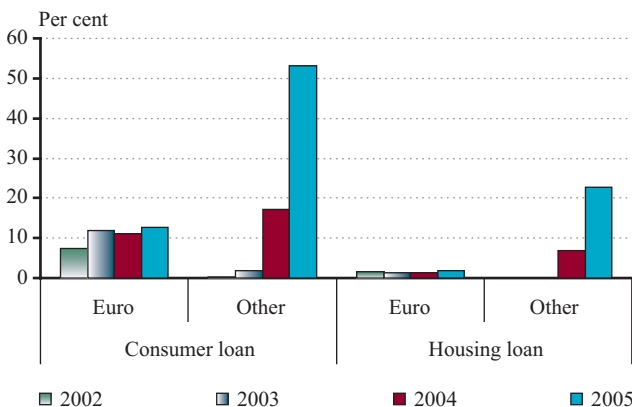
Denomination structure of the non-financial corporations' domestic lending



Source: MNB.

Chart 22

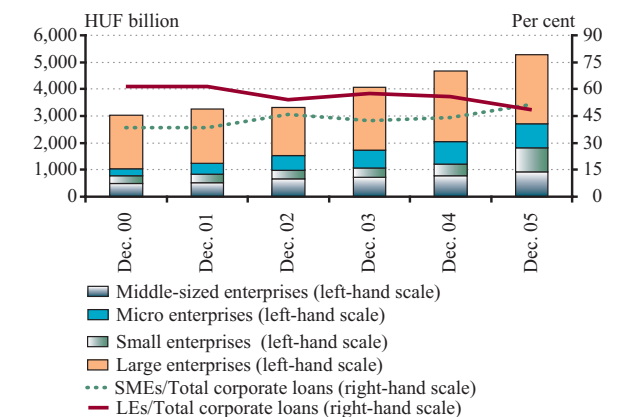
Denomination of household banking loans



Source: MNB.

Chart 23

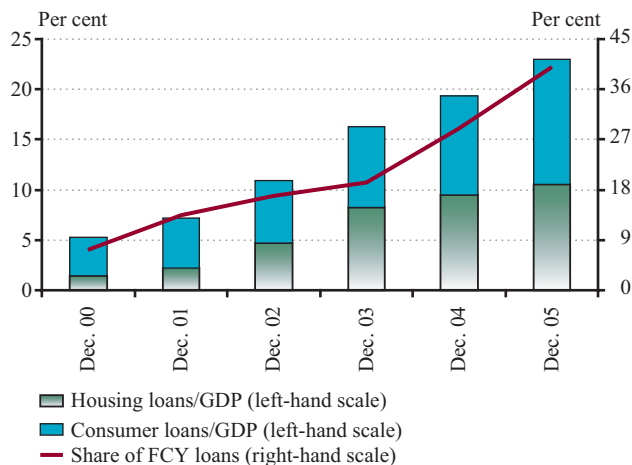
Distribution of non-financial corporate lending by company size



Source: MNB.

Chart 24

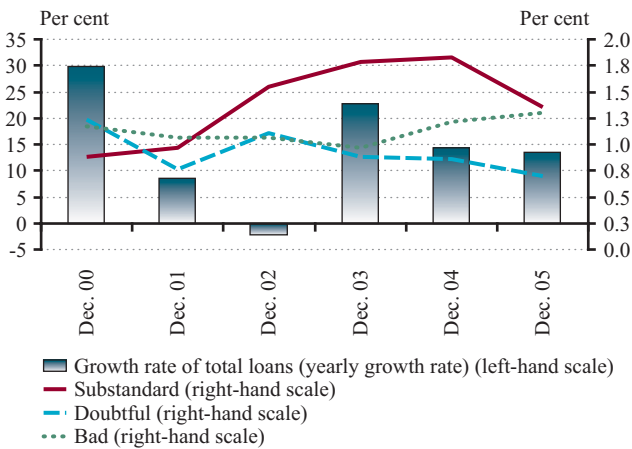
Growth and composition of household loans



Source: CSO and MNB.

Chart 25

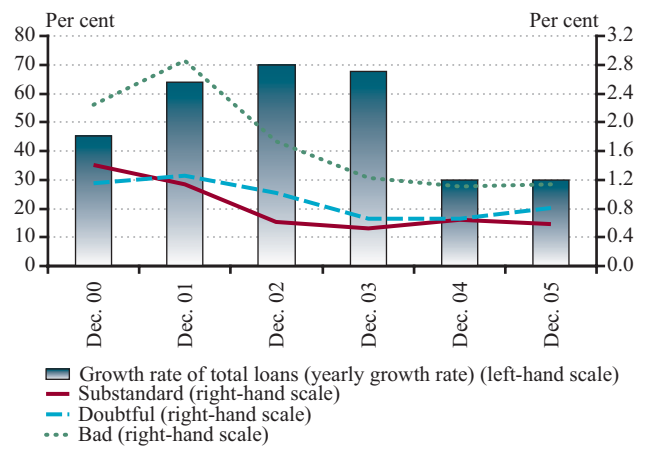
Portfolio quality of loans to non-financial corporations



Source: MNB.

Chart 26

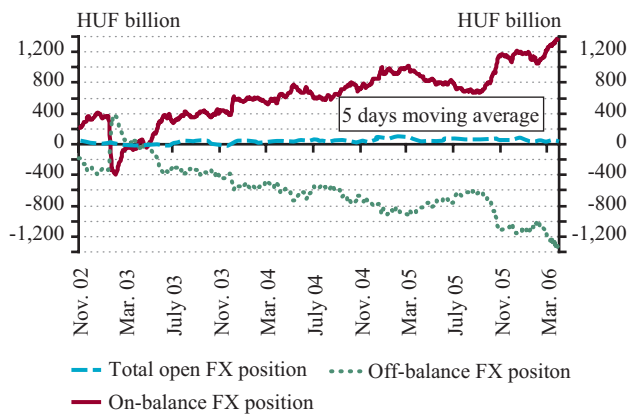
Portfolio quality of loans to households



Source: MNB.

Chart 27

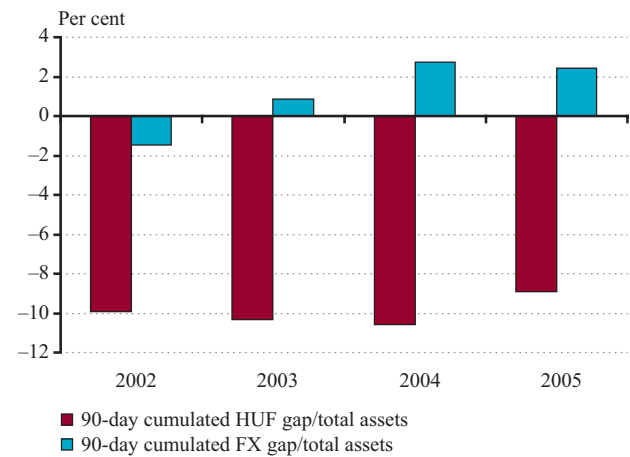
FX position of the banking sector



Source: MNB.

Chart 28

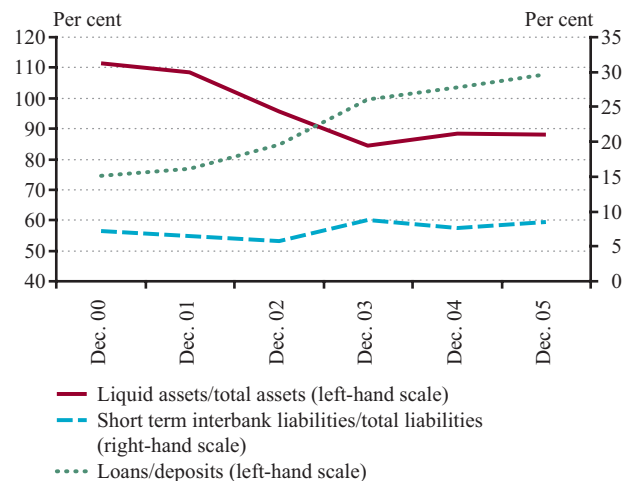
Banking sector interest rate risk



Source: MNB.

Chart 29

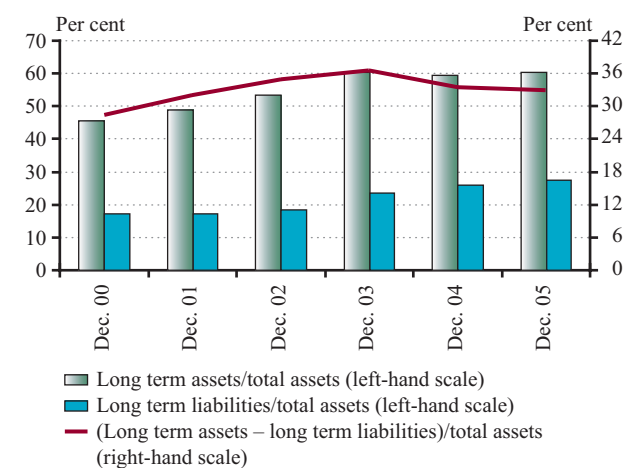
Liquidity indicators of the banking sector



Source: MNB.

Chart 30

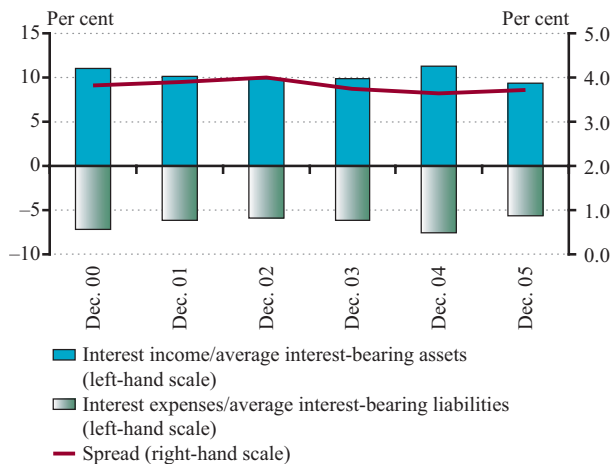
Long-term assets and liabilities of the banking sector



Source: MNB.

Chart 31

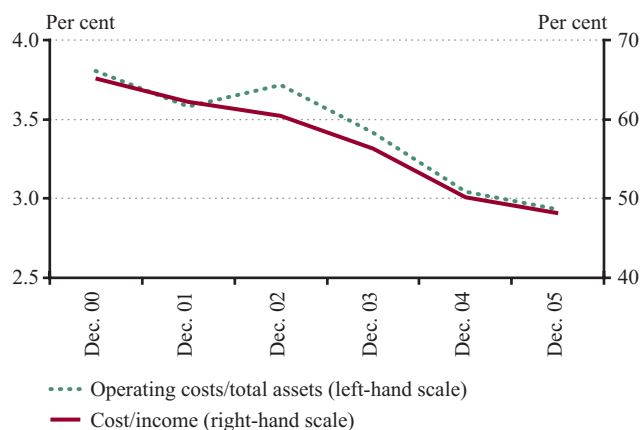
Spread and its components



Source: MNB.

Chart 32

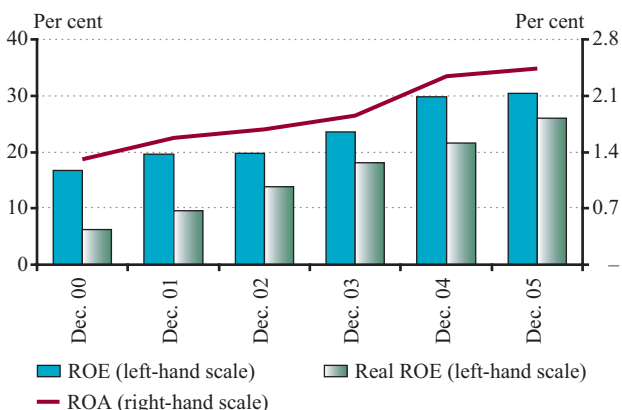
Cost-efficiency indicators of the banking sector



Source: MNB.

Chart 33

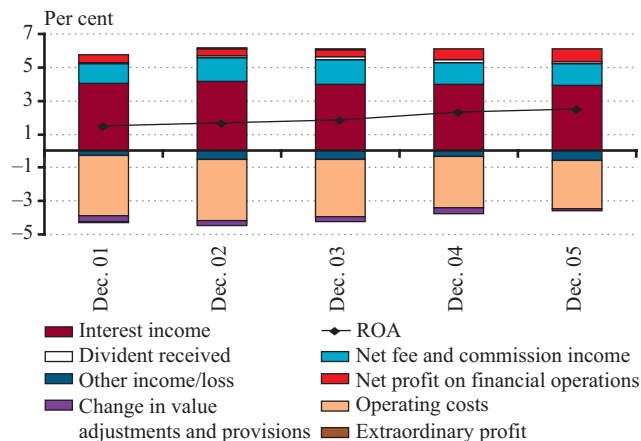
Banks' return on assets and return on equity



Source: MNB.

Chart 34

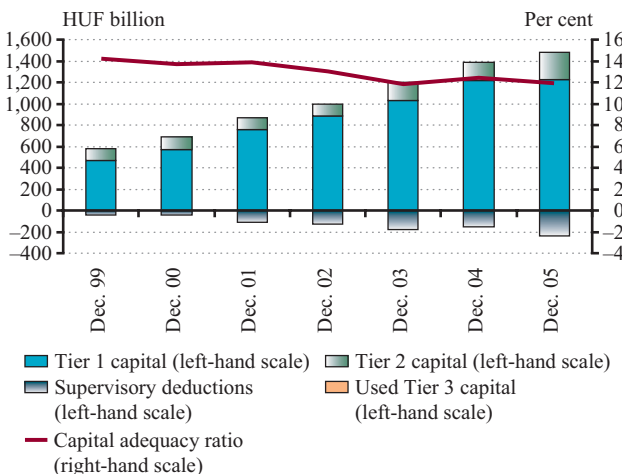
Components of pre-tax profit as a ratio of balance sheet total



Source: MNB.

Chart 35

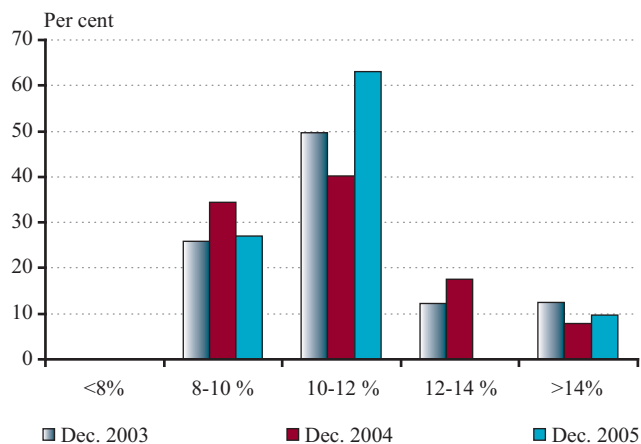
Banking sector own funds and capital adequacy



Source: MNB.

Chart 36

Dispersion of banking sector capital adequacy ratios



Source: MNB.

Notes to the Appendix

Chart 1 EMBI Global Composite – the index of sovereign and quasi-sovereign issuers' USD-denominated bonds, as calculated by JP Morgan-Chase. MAGGIE – the index of euro-denominated government and corporate bonds as calculated by JP Morgan-Chase.

Chart 8 The EUR HUF spread was calculated from the best bid-ask prices of the Reuters' electronic trading system. The government bond market spread is the Central European Bond Index (CEBI) HUF governments bond spread of the Dresdner Kleinwort Wasserstein (DrKW).

Chart 13 M3: According to the ECB's definition: M2 + repurchase agreements + investment fund units of money market funds + debt securities with maturity of up to 2 years. Loans, deposits and savings deposited with institutional investors: from/to non-financial corporations and households. Households savings deposited with institutional investors: life insurance, investment fund, and pension fund.

Chart 14 As a proportion of the balance sheet total.

Chart 15 Up to May 2001, private entrepreneurs are included in the corporate sector, as of June 2001, they are classified into the household sector. Up to May 2001 the household sector contains only household data.

Chart 16 Up to May 2001, private entrepreneurs are included in the corporate sector, as of June 2001, they are classified into the household sector. Up to May 2001 the household sector contains only household data.

Chart 17 Number of companies against which bankruptcy and liquidation procedures were initiated during the previous 12 months, as a percentage of the total number of companies.

Chart 18 The loans granted for the purposes of purchasing new homes are exclusive of loans denominated in foreign exchange. Foreign exchange substitution is, however, probably lower in this category.

Chart 22 The line termed 'other' contains loans denominated mainly in Swiss francs.

Chart 23 Due to a change in the definition of small, medium and micro-enterprises, the 2005 data are only partially comparable to earlier ones.

Chart 24 Consumer credit: including overdraft and loans granted for the purposes of purchasing securities. Denomination of loans provided by financial enterprises is based on MNB estimation.

Chart 27 The positive value denotes a long FX position.

Chart 29 Liquid assets: cash and settlement accounts, T-bill and T-bond holdings, securities issued by the central bank, short term deposits and short term claims on foreign banks.

Chart 30 Liabilities with maturity over a year: excluding shareholders' equity and provisions.

Chart 31 Spread: Interest income/average interest-bearing assets – Interest expenses/average interest-bearing liabilities. Annualised data.

Chart 32 Income is the sum of net interest income, net non-interest income, net profit on financial operations and dividends received. Interim data are annualised (preceding 12 months).

Chart 33 ROE: Pre-tax profit / (average shareholders' equity – Profit or loss for the financial year). Interim data are annualised (preceding 12 months). ROA: Pre-tax profit / average balance sheet total. Interim data are annualised (preceding 12 months).

Chart 35 Until 05/2001 deductions due to holdings in and subordinated loans granted to credit institutions, financial enterprises, investment firms and insurance companies were subtracted from Tier 1 capital.

Chart 36 Share of banks of given range in risk-weighted assets.

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