



*REPORT ON FINANCIAL STABILITY*

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*The Act on the Magyar Nemzeti Bank lays down the basic tasks of the central bank, which include promoting the stability of the financial system. A fundamental requirement for maintaining and promoting financial stability is that the parties involved have access to a wide range of information on the financial system as a whole, its competitive environment, and the narrower and broader conditions for its operation. The Magyar Nemzeti Bank's main objective with the publication of this semi-annual 'Report on Financial Stability' is to meet this requirement, harmonizing with the practice of other central banks. Other important objectives of the Bank are to inform the professional public regarding the state of the country's financial intermediary system and to provide assessments of the sector's stability in the light of important domestic and international developments.*

*In the Report, the Bank seeks to publish the latest statistical data, widely used internationally, which describe the state and robustness of the financial system in a manner that enables comparison whenever possible. Furthermore, the Bank intends to provide comprehensive analyses of the position of the sectors participating in financial intermediation or influencing its stability, in addition to evaluating macroeconomic developments. In view of the fact that, as a small, open country, Hungary is closely integrated into the international flows of goods and capital, the Report gives separate coverage of global cyclical and monetary developments relevant to financial stability.*

## Overview

*Robust global economic growth  
but with considerable risks*

Since the previous *Report*, the global economic recovery has gathered pace and become more broad-based, with the US economy as its main engine, in addition to Asia. Meanwhile, however, the downside risks to growth have increased. Currently, oil price developments are a major risk factor, but the substantial fiscal and current account deficits in the USA and imbalances of major currencies also represent a considerable degree of risk.

*Conducive international  
financial environment*

Risk premia on high-risk financial assets are at historical lows. Investors' strong risk appetite worldwide is explained mainly by the low interest rates in the industrial economies. The risks to global economic growth, which are poised to increase as the year progresses, are not yet reflected in assessments of risks related to emerging countries. One key condition for the sustained favourable global financial climate is a steady, gradual approach to raising interest rates in developed-country central banks.

*Low volatility in domestic  
financial markets, albeit with  
significant longer-term risks*

In contrast with episodes of turbulence in earlier periods, Hungary's financial markets were characterised by lower volatility during the six months since May 2004. The market's expectations of short-term exchange rate and yield developments are more favourable and less uncertain than six months ago. Nevertheless, some significant long-term risks inherent in financial market trends must be acknowledged, despite this benign environment.

Looking forward, the gravest risk to future movements in the exchange rate and yields is posed by medium and long-term developments in macroeconomic fundamentals. No significant improvement occurred in the assessment of Hungary's equilibrium position in the last six months of 2004. Highly favourable trends in global financial markets are the most important underlying reason for the improvement in the short-term risk assessment.

*Stable economic growth,  
favourable changes in growth  
structure*

The rate of economic growth gathered pace in 2004 relative to a year earlier. In the current forecasts, the Hungarian economy grows at a stable rate of 3.5%–4% in the period to 2006.

The upturn in the business cycle has also resulted in favourable changes in the pattern of growth compared to previous years. In 2004, gross fixed investment (fixed capital formation plus inventory investment) was the strongest contributor to GDP growth. There are, however, significant risks around the central path, due mainly to uncertainties

surrounding global business activity and the world market price of oil.

*With one-off effects wearing off, the rate of consumption growth slows*

Over the past years, households' consumption and saving behaviour has been simultaneously influenced by longer-term structural transformation and one-off effects as well (e.g. a rise in the minimum wage, public sector wage increases and the extended availability of the subsidised housing loan scheme). Accordingly, the sector has often confounded expectations pertaining to its behaviour over the past period. The rate of consumption growth is likely to slow in the years to come, but the consumption-to-disposable income ratio is expected to stabilise at a higher level relative to outturns in the second half of the 1990s.

*Stable corporate profitability*

Domestic enterprises' key costs developed unfavourably in the past period. For the time being, however, this has not affected exports adversely: the share of Hungarian exports increased in EU markets in 2004 H1. Looking ahead, the sector's productivity is expected to improve slightly and consequently, no major changes are expected in corporate sector profitability.

*Diminishing risks from inflation expectations*

In 2004, it was generally believed that the rise in indirect taxes would add to upward risks arising from inflation expectations. Corporate and household surveys reveal that a large number of economic agents anticipate the one-off price-increasing impact of rises in indirect taxes will wear off. Consequently, an expected decline in inflation in early 2005 should come as no surprise.

*External deficit remains high, but the pattern of financing improves*

Macroeconomic imbalances persisted in 2004 H1, with the Hungarian economy continuing on a path of indebtedness that is unsustainable over the longer term. The country's external borrowing requirement exceeded 9% of GDP, and net external debt rose to 25.6% of GDP. This means that Hungary's net external debt practically doubled relative to end-2001.

One favourable structural development was that the corporate sector accounted for a larger portion of the current account deficit relative to 2003. Household borrowing grew at a more modest pace and the sector's net financial savings increased. The effect of the realignment between net lending of households and the corporate sector was also reflected in current account deficit financing. Due to the net inflow of direct investment capital, the proportion of non-debt inflows rose. Nevertheless, the weight of debt-creating financing remained above 70%.

Despite the high external deficit and rising outstanding debt, the money and foreign exchange markets have remained fairly stable since March 2004. The extremely benign environment,

both globally and regionally, and the relatively favourable structure of government debt, i.e. a low proportion of short-term and foreign currency-denominated debt, have also contributed to the maintenance of financial stability, in addition to the Bank's cautious interest rate policy. The vulnerability of the forint diminished as an effect of two factors: one was the benign external climate which stimulated a rapid rise in exports; the other was low exchange rate and interest rate risks, which, in turn, was attributable to the favourable structure of debt.

*Most significant risk: delay in fiscal consolidation*

Looking forward, potential delays in reducing the government's budget deficit pose the greatest risk to stability. Neither households nor the corporate sector is expected to undertake marked adjustments which could facilitate a reduction in Hungary's external deficit. For this reason, a fiscal policy aimed at bringing down the general government deficit must be given priority to arrest the process of indebtedness and lower the current account deficit to a sustainable level.

In addition to the delay in fiscal consolidation, a worsening in the external economic climate may also represent an additional source of risk to financial stability. If external demand turns out to be lower than projections due to lower-than-anticipated growth in European economies, the current robust growth in exports and the economy may also falter, strengthening the markets' perception of vulnerability.

*An overview of money and capital market structures*

FX swap market transactions have played an important role in developments in foreign participants' exposure to exchange rate risk in the recent past. Foreign investors have been able to influence the extent of their exchange rate risks to a large degree by buying forint-denominated instruments or entering into synthetic forward transactions. The liquidity of the forint government securities market is lower than that of other markets in the region, as evidenced by the fact that the bid-ask spread is higher in Hungary than in the Czech Republic or Poland. The possible reasons for this are (i) interest rate volatility, which began to increase in 2002, before starting to fall from 2004; and (ii) a non-electronic, hence less transparent dealing system, which differs from that in place in other European countries. Money market turnover grew strongly in 2004 H1, driven by a more modest use of O/N central bank instruments and money market transactions by the Government Debt Management Agency to smooth the Treasury Account balance.

*Depth of financial intermediation increases further*

In 2004 H1, the depth of financial intermediation by the banking sector increased further. Owing in part to the global economic recovery and in part to the fact that the private

sector borrowed mostly at home rather than abroad, growth in the asset portfolio of the banking sector continued to outpace the rising rate of domestic output growth.

*A shift in corporate lending towards SMEs represents a risk*

The growth rate of non-financial corporations' demand for domestic loans slowed in 2004 H1. Nevertheless, the ongoing recovery in manufacturing and vigorous infrastructure development contributed greatly to a rise in the loan portfolio of the sector vis-à-vis banks. Manufacturing firms' credit demand is unlikely to increase, owing to the uncertainty surrounding future developments in external business activity. Simultaneously with this, a gradual slowdown in domestic consumption and excessive inventory investment may lead to low profitability and weaker loan demand in the services sector. Credit supply may, however, continue to grow because of increasingly intense competition for SMEs. The assessment of risks facing non-financial corporations may deteriorate slightly this year. Low profitability is likely to persist in the services sector during the rest of the year, which may add to the likelihood of defaults on payment. In view of the above, a continuous shift in lending towards SMEs represents an increasing risk to systemic stability.

*Growing foreign currency debt of firms and household adds to the vulnerability of the financial system*

Borrowing by firms and households in foreign currency is continuing to gain ground, and this is seen as a negative development. The corporate sector's growing amount of Swiss franc-based loans suggests that an increasing number of firms have unhedged FX positions and are exposed to exchange rate risks, which contributes to the vulnerability of the financial system.

*Household indebtedness still on the rise*

Although the growth rate of household indebtedness slowed down markedly in 2004 H1, it remains high. Despite the considerable tightening of the housing loan subsidy scheme, housing debt continued to grow due to market developments, albeit at a slower pace. Both supply and demand side factors contributed to the stronger increase in consumer loans relative to 2003.

*To reduce risks inherent in foreign currency lending to households, banks must adopt more prudent practices*

In earlier years, banks extended foreign currency loans to households predominantly through their financial enterprises. With respect to financial stability, the most important development in 2004 has been the rapid rise in foreign currency lending by banks. Most banks offer foreign currency products to a broad customer base, and foreign currency products are likely to gain ground in the future. More prudent practices by banks may also help reduce risks at the sectoral level. Households' vulnerability to exogenous shocks is constantly rising. Essentially, the increasing popularity of foreign currency loan can be contained in two ways. over the short term by negative experiences and increasing the risk

awareness of households and banks, and over the long-term by a decline in long-term forint interest rates and renewed momentum in the convergence process.

*Quality of the corporate sector's portfolio deteriorated; by contrast, that of households improved, while specific provisions against loans increased*

The quality of the corporate loan portfolio deteriorated, with the proportion of non-performing items increasing. In the wake of a slowdown in lending for house purchases, the quality of the household sector's loan portfolio improved further, albeit at a slowing pace. For different reasons, the liquidity risk related to both the household and corporate loan portfolios increased. An increase was also seen in the proportion of claims less than 90 days overdue, which is not necessarily reflected in ratings. In addition, there was a perceptible increase in the proportion of such claims within the entire portfolio. This indicates liquidity problems linked to the domestic business cycle and a higher interest burden in the case of the corporate loan portfolio. As regards the household loan portfolio, this situation does not pose considerable risks to stability, but as the portfolio continues to mature its quality is likely to deteriorate. From a financial stability perspective, the increase in specific provisions against loans is seen as a favourable development.

*Structure of banks' derivative transactions changed*

Major changes occurred in the derivatives market transactions conducted by banks in 2004. While foreign exchange derivatives were dominant in 2002 and 2003, the number of interest rate derivative transactions grew significantly in 2004. As a consequence, the proportion of foreign exchange contracts fell to below 60%, down from 70% at end-2003.

*Banks' exposure to exchange and interest rate risks remains within reasonable limits*

Despite the recent increase, banks' exchange risk exposure is not significant, particularly in comparison with the banking sector's ability to absorb stress and the amount of capital set aside to cover exchange rate risks. A build-up of long-term foreign currency balance sheet positions has implications for financial stability through the unhedged foreign exchange exposure of the domestic economic sectors. Overall, as regards interest rate risks in bank books, the interest rate exposure of forint items has been increasing since 2003, but banks do not engage in maturity transformation in respect of foreign currency items. In order to accurately assess interest rate risks, the impact of changes in spread and embedded options must also be taken into consideration.

*Liquidity risk further increased*

In our opinion, banks' liquidity position continued to represent an increasing risk in 2004, the reason for this being that the banking sector is unable to finance the rapid expansion of lending with deposit liabilities. The increase in foreign liabilities has mainly taken the form of mortgage bonds and inter-company loans from banking parents.

*Banks' capital position is*

The domestic banking sector continues to be adequately

*stable, but the accumulation of internal funds provides insufficient capital side coverage for the expected expansion of banking activity*

*Simultaneous dependence for capital and liquidity on foreign owners adds to exposure to home country shocks*

*The contradiction between high profitability and low efficiency calls for improvement in efficiency*

*Special topics*

*1. Foreign currency lending to households in Hungary and in other new CEE Member States of the EU*

capitalised. At the same time, however, the number and market share of banks with CAR below 10% (among them banks which are key to systemic stability) increased further. Despite a high level of internal capital accumulation, the increase in regulatory capital may become an effective hurdle to higher risk taking.

Banks' increasing reliance on their foreign owners is a major concern. This trend is strengthened by owners' provision of capital as a pre-requisite for further growth and easing increasingly tight liquidity through the provision of loan capital by banking parents. Overall, the vulnerability of the banking sector to potential shocks arising in owners' home countries has increased.

In 2004 H1, the profitability of the banking sector continued to grow at a rate almost identical to that seen in earlier periods. Banks managed to significantly reduce the impact of increased interest rate volatility on interest income by adjusting their pricing behaviour and restructuring their portfolios. The main source of banks' increasing profits is rising interest income, while the growth rate and income generating role of commissions and fee income both diminished. Banks' outstanding profitability continues to be associated with low efficiency by international standards, underscoring the need for further improvement.

Increasing household indebtedness is a general phenomenon. The ratio of foreign currency loans within the overall household loan portfolio varies markedly across the new EU Member States. The most important underlying reasons for such a high degree of heterogeneity include, as characteristics of converging economies, (i) the yield differential; (ii) households' price sensitivity and enhanced risk awareness; (iii) institutional characteristics, e.g. the housing loan subsidy scheme; (iv) regulations governing the financial sector and foreign currency lending and credit supply, i.e. willingness to lend; and (v) competition among banks. Despite the sharp increase in foreign currency lending to households in 2003, Hungary remains in mid-field in the CEE. Supply-side pressure in the wake of increasingly fierce competition amongst Hungarian banks, the tightening of the housing loan subsidy scheme and the high interest rate differential fuelled foreign currency lending in 2004. In the absence of negative experience, households tend to opt for foreign currency loans with lower instalment amounts, in spite of exchange rate risks. The events in Poland in 2003 have proved, however, that a significant weakening of the exchange rate, i.e. materialisation of exchange rate risks, might strengthen households' risk awareness.

*2. Changes in the pattern of household consumption and savings in the early 2000s*

Between 2001 and 2003, households' purchased consumption and fixed investment expenditure exceeded the rise in their real net income significantly. By contrast, financial savings fell markedly. Changes in the pattern of household consumption and savings are parts of a switch-over process in converging economies. Households are heading for a path that can be characterised by higher consumption and indebtedness ratios and lower net lending. Since this is basically an equilibrium process, we do not expect changes in the pattern of household consumption/savings to reverse to an extent that would significantly affect the future prospects for economic activity. As indebtedness grows, households become more vulnerable. A prolonged slowdown in household real income and a potential negative exogenous shock (depreciation of the forint or a rise in international interest rates), affecting the foreign currency loan portfolio, may result in solvency problems in the household sector and a marked fall in household demand (purchased consumption plus fixed investment) at the whole-economy level.

*3. Non-financial sector profitability and stability*

In view of the 2003 balance sheet totals and financial statements of non-financial corporations, the financial stability of the sector as a whole changed favourably in 2002. The entire sector is better off in terms of profitability. This was the first time since 1998 that the aggregate earnings potential had risen. Changes in business conditions in 2003 were beneficial particularly to sectors competing with non-residents. Their market opportunities improved substantially due to a pick-up in external demand, which is reflected in rapidly increasing profitability. No changes in firms' capital structure occurred which would have added to the stability risks facing the sector as a whole.

*4. Major measures in legal harmonisation from a stability perspective*

In 2004, a number of major regulatory measures were taken to facilitate the creation of the single EU financial market and ensure the efficient and sound operation of financial intermediaries. Legal harmonisation with the EU Directive on the supplementary supervision of financial conglomerates (2002/87/EC) deserves special mention. It contributes to maintaining the stability of the financial system by laying down comprehensive, uniform regulations and establishing the necessary supervisory infrastructure for credit institutions, capital market institutions and insurance undertakings. Furthermore, legal harmonisation with the EU Directive on financial collateral arrangements (2002/47/EC) and the EU Directive on electronic money institutions (2000/46/EC) was another major step from a financial stability perspective.

*Studies on consumer lending*

Two studies in this issue of the *Report* examine the main characteristics of the vigorous growth in consumer lending

and banks' risk management practices related to consumer lending. Owing to rapid and intense market-building, the economic weight of consumer lending in Hungary has reached that of the lower-performing countries in the industrialised world. As a result, the period ahead can less and less be regarded as a convergence process. Consequently, the risk related to the emergence of procyclicality will increase in the future, which may threaten financial stability, due to the combined large market share of banks and their financial enterprises. Domestic characteristics and international experience point to a steady annual increase of approximately 20% in consumer lending. The share of consumer credit in total lending to households is high in comparison with industrial economies, with the bulk of households' interest burden attributable to such credit. Although the share of debt instruments within sub-portfolios still suggests traditional lending practices, we expect revolving and unsecured credit to become widespread. Foreign currency lending, a characteristic phenomenon in convergence economies, is taking on massive proportions in Hungary as well.

Credit risk, the most important risk segment of consumer lending, is affected by the fact that some debtors are unable to accurately assess the reasonable limits of their financial capabilities regarding principal repayment, which can be partly attributed to deficiencies in the domestic financial culture. Adding to credit risk, the likelihood of default on payment is hard to assess, due to the limited availability of information. In addition, exchange rate and interest rate risks facing debtors in the case of foreign currency products further increase credit risk. Growing competition in the market of car purchase finance has induced lenders to extend the limits of their own risk-taking attitude. An adverse consequence of this may ultimately affect domestic market-leading banks, which are the owners of financial enterprises involved in car purchase finance and are exclusive sources of finance for these enterprises. With respect to the profitability of consumer lending, the current interest margins are high even in international comparison. At the same time, though, the steadily falling interest rates in car purchase finance provide lower protection against actual risks.

# I. Macroeconomic environment

## I. 1. International environment

As the Hungarian economy is fairly open, international business developments influence the domestic business cycle to a considerable extent through the euro area, and particularly Germany, the country's most important trading partner. Moreover, international financial market trends and the significant role of international capital flows can also have a profound impact on the development of domestic exchange rates and interest rates. Thus it is expedient to start an assessment of Hungary's macroeconomic stability with an analysis of the risks to the international business cycle and financial developments.

### I. 1. 1. The global business cycle and associated risks

Since the previous *Report*, the global economic recovery has become more powerful and broad-based: the annual growth rate in 2004 is expected to exceed 4% and may thus be considered outstanding in historical perspectives. The main driving force behind the recovery is the economy of the United States, in addition to Asia. Demand generated in the USA has greatly contributed to a gradual improvement in the euro area and Germany, which directly affects the Hungarian economy. Although the global recovery has been strengthening, new risks have emerged and old ones have increased. Currently, oil price developments constitute the major risk to the global recovery, but the substantial fiscal and current account deficits in the USA as well as the imbalances of major currencies also represent a considerable threat.

**Table I.1 Global and regional growth rates**

	2002	2003	2004*		2005*	
			April 2004	September 2004	April 2004	September 2004
Global economy	3.0	3.9	4.6	5.0	4.4	4.3
USA	1.9	3.0	4.6	4.3	3.9	3.5
Euro area	0.8	0.5	1.7	2.2	2.3	2.2
CEECs	4.4	4.5	4.5	5.5	4.4	4.8

\* *Forecast.*

*Source: IMF: World Economic Outlook (April 2004, September 2004).*

Despite the fact that the outstanding growth registered in the United States in 2004 Q1 slowed in Q2 and Q3, the growth rate forecast by major international institutions can still be considered fairly high. In addition to considerable rises in real property prices, excessively lax fiscal and monetary policies have also contributed to the robust consumption growth seen in the previous few years; and the expected rise in employment suggests further increase in consumption. Over the past few quarters, businesses have become financially healthier and increased their investment activity, which may fuel the recovery even if consumption growth tapers off. One major risk is involved in the fact that the savings rate is at a historic low; thus, for example if the upturn on the labour market were to flounder or if inflation in real property prices were to unexpectedly drop, the resulting adjustment could lead to a precipitous fall in consumption. This, in turn, could

lead to a reduction in corporate investment activity, on the heels of a drop in companies' profit expectations.

Currently, the expected development of the US economy has a profound impact on growth in the euro area and particularly in Germany, as European domestic demand is insufficient to sustain growth. Although in certain member states of the euro area, such as Spain, domestic demand is increasing at a considerable pace, the euro area as a whole is still growing predominantly as a result of the rapid increase in net exports. Despite low interest rates and improving corporate financial positions, the considerable uncertainties related to the recovery are leading to delays in investment activity, while the uncertainties related to structural reforms have put the brakes on consumption growth. The fact that, primarily in respect of Germany and France, Q3 data fell short of expectations is also indicative of the uncertain nature of Europe's economic recovery. Although the strength of the euro has a negative impact on the competitiveness of the euro area, it reduces the effects of the oil price shock and allows the ECB to maintain a low rate of interest. Further significant strengthening of the euro against the US dollar on account of the imbalances in the US economy may engender an additional risk to the competitiveness of the euro area.

The economies of Asia, with China and the South-East Asian countries as the engine of development, continue to grow rapidly, and Japan's economic recovery is also gaining strength. Currently, the Chinese economy shows signs of overheating, and the question of whether this excessive growth can be curbed in an orderly manner is cause for concern for the global economy as well as the international financial markets. A 'hard landing' for the Chinese economy would mainly have an adverse impact on the economies in the Asian region, but as the energy needs of the rapidly expanding Chinese industry play a significant role in rising oil prices, a faster-than-expected decline would reduce oil prices and would consequently have a favourable effect on the global business cycle. Asian central banks also play a significant role in arresting the depreciation of the US dollar and maintaining long-term US interest rates at a low level. Currently, the exchange rate of the Chinese currency, which is pegged to the US dollar, can be considered undervalued. The interest rate increase undertaken at the end of October 2004 carried the message that instead of appreciating the exchange rate, the Chinese authorities wished to cool down the economy by raising interest rates. The central banks of China's competitors, including Japan, which is concerned about its fledgling recovery, wish to maintain the competitiveness of their economies (and the value of their foreign exchange reserves) by holding in check the decline in the value of the US dollar.

Currently, the most significant risk to growth is embodied in the development of oil prices. Rises in oil prices, which may be considered significant and persistent, are due to an increased demand for energy producing materials, generated by the global recovery, the uncertainties related to oil production and speculative behaviour. The current high oil prices hamper the growth rate of the global economy and affect global inflation. The major international institutions expect the oil price shock to have a modest effect on the international business cycle, as in real terms rises in oil prices are far less than in the 1980s, and the advanced economies have also considerably reduced their dependency on oil. Another reason for the less pronounced effects of the oil price shock on economic growth is that inflation expectations have remained low in the developed countries, and this allows central banks to raise the currently low interest rates slowly and gradually.

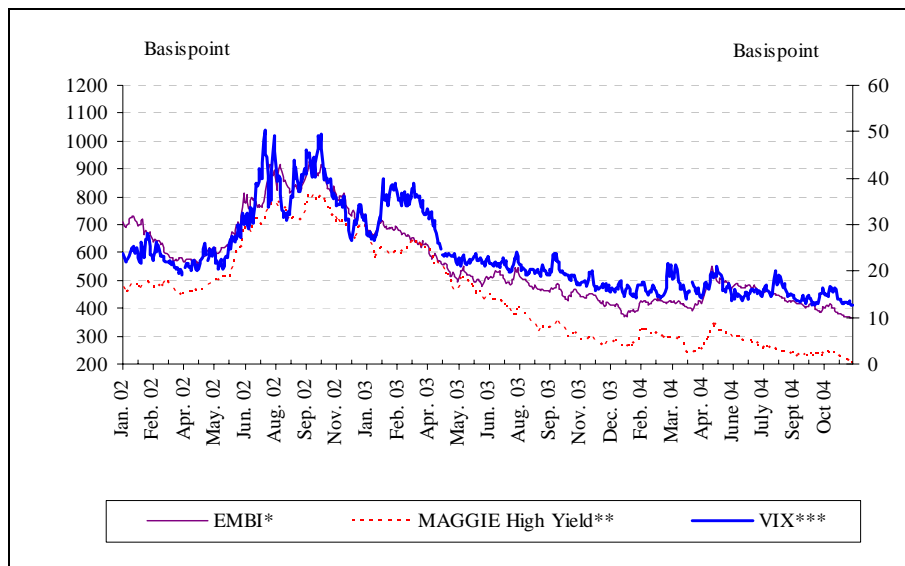
Further risks to stability are found in the massive current account deficit of the United States and the exchange rate imbalances of the major currencies, i.e. the US dollar, the euro and

the Asian currencies. The US imbalance implies downside risks for the euro area economy. The US current account deficit is explained primarily by a high budget deficit and a low consumer savings rate, but normalization of these two indicators may result in a slowdown of the US economy, and consequently a drop-off in global growth. If, however, US fiscal policy and consumer behaviour do not change, only further depreciation of the US dollar or an interest rate increase can restore a balance. This would not necessarily slow down growth in the US, but any further depreciation of the US dollar would certainly impair the competitiveness of the euro area and its outlook for economic growth. In the short and medium term, imbalance does not necessarily cause problems, but in terms of stability it is a fundamental question: can adjustment, which is unavoidable in the long term, take place gradually, in an orderly manner, or will an unexpected and costly mechanism work to restore economic balance in the USA.

### **I. 1. 2. International financial markets and risk assessment**

Risk premia on high-risk financial assets are at historical lows. This is primarily explained by the low interest rates in the developed markets, which increase international liquidity and prompt investors to purchase higher-risk securities. Just as in the past, recently the global risk appetite has developed under the influence of the US and euro area monetary policy, and the related market expectations. As a result of outstanding US growth data in April and May 2004, market participants priced in an early and relatively significant rise in the interest rates, and the expected premia on higher-risk investments increased simultaneously. The transparent communication of the Fed, acting as the central bank of the USA, the moderate pace of interest rate rises launched at the end of June, 2004, the news of a slowdown in the US recovery and the surrounding uncertainties have lowered expectations concerning interest rate rises, and thus global risk premium indicators have gradually trended down to their historic lows. The events are indicative of the fact that gradual and predictable interest rate rises may lead to a moderate increase in risk premia required on higher-risk assets; however, an unexpected significant official interest rate hike poses a sizeable upside risk to higher-risk assets. This may happen if in the developed countries economic recovery turns out to be stronger than expected or high oil prices lead to increases in inflation expectations, which in turn prompt central banks to take tightening measures.

Chart I.1 Global indicators of risk



\* EMBI Global Composite – interest premium index of sovereign and quasi-sovereign issuers’ dollar-denominated bonds, as calculated by JP Morgan-Chase.

\*\* MAGGIE High Yield – the interest premium index (bp) of euro-denominated government and corporate bonds as calculated by JP Morgan-Chase.

\*\*\* VIX – Implied volatility derived from options for the S&P500 indices.

Developments in risks related to emerging market economies (EMEs) are assessed as particularly favourable: following a peak in May, the indicator of risk premia in this category (EMBI Global) has gradually declined to the extremely depressed level seen in early 2004. The risks to global economic growth, increasing in the course of the year, have not yet been reflected in the assessments of risks related to EMEs. This may be explained by the fact that in the majority of EMEs, macroeconomic imbalances are currently far less frequent than in the previous years. Moreover, the oil price shock and raw material price hikes have had definitely favourable impacts on a good number of countries in the category. However, the most likely explanation is that in emerging market economies developed-market interest rates (i.e. global liquidity) have a far stronger impact on the interest rate premia than the growth outlook.

International stock markets have been affected by expectations related to the global business cycle. Disregarding the temporary rise seen in May, the rate of recovery has led to moderately declining stock price indices in developed markets since early 2004. However, the implied volatility indicators of stock market uncertainty (e.g. VIX) have remained modest throughout the period, which may suggest that although investors have lowered their growth rate expectations, their doubts regarding the robustness of recovery have not undergone major change. With the exception of the Asian region, vigorous economic growth and a promising outlook have led to bullish stock market indices in EMEs. In addition to predictable interest rate developments, the financial position of US and European companies has also contributed to the fall in sovereign spreads of higher-risk corporate bonds, included, among others, in the MAGGIE index.

Risk perception of the Central and Eastern European region may affect interest rates and exchange rates in Hungary, as some investors treat the countries in the region as a single unit. The assessment of risks regarding Poland and the Czech Republic, similarly to Hungary, have been affected by continued uncertainties related to fiscal policy

developments, favourable growth outlook in the region and recurrent political uncertainties. Recovery moved forward in Poland, the largest economy in the region. In response to the fiscal reforms undertaken by the government that took office in May and the improvement in the growth outlook, the Standard and Poor's credit rating company revised the credit rating outlook for the country upwards. Zloty strengthened considerably over the period, probably as a result of interest rate hikes by the Polish central bank and a moderate improvement in risk perception. The strengthening of the zloty's exchange rate may have also contributed to the appreciation of the forint. Despite the fact that foreign investors treat CEECs in an increasingly differentiated manner, it cannot be ruled out that events in the region will significantly affect Hungarian exchange rates and interest rates in the future.

Currently, the overall international environment may be considered favourable in terms of growth and financing. If, however, the risks outlined above actually materialise, as the situation stands currently this would have an unfavourable effect on the macroeconomic stability of the Hungarian economy. The persistently high current account deficit has rendered the economy vulnerable in terms of balance: in the event of a significant unexpected decline in the external demand or if financing conditions turned unfavourable, investors' currently tolerant assessment of deficit sustainability may easily become critical. The materialisation of any of the two fundamental risks, i.e. considerable global slowdown and rise in developed-market interest rates, may cause serious stability problems in the Hungarian economy; it is, however, important to note that these two scenarios are extremely unlikely to occur simultaneously.

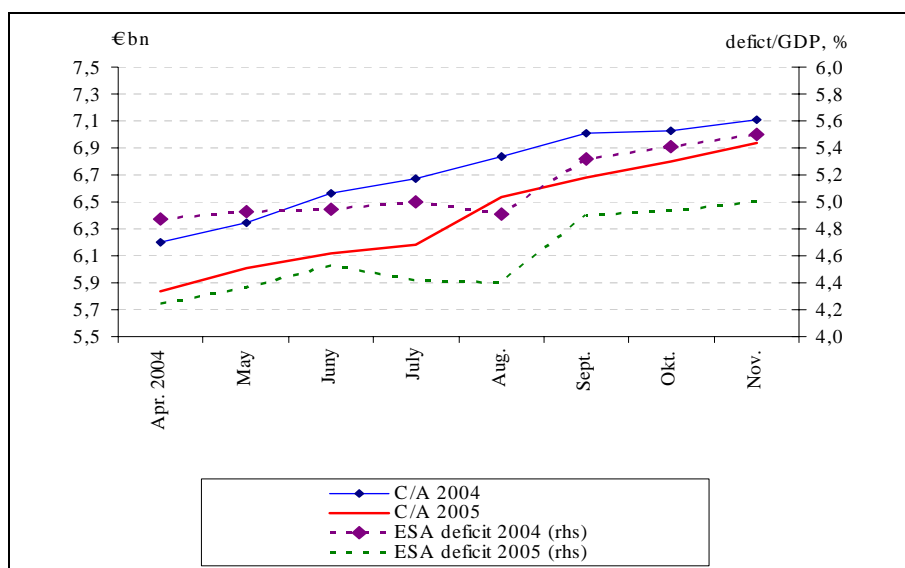
## **I. 2. Domestic financial market developments**

In contrast to the turbulence in the periods discussed in previous *Reports*, the second half of 2004 was characterised by lower volatility in the Hungarian financial markets. In the past, increased volatility resulted fundamentally from a less favourable assessment of Hungarian macroeconomic developments. While macroeconomic fundamentals did not improve in the last six months of 2004, the extremely favourable international financial environment resulted in a relatively stable exchange rate and yields in that period.

### **I. 2. 1. Exchange rate and yield developments**

After the Fed raised the interest rate by 25 basis points in June 2004, uncertainties regarding the future path of US interest rates declined considerably. In Hungary, the effects of the ensuing improvement in the international environment was offset by investors' gradually deteriorating assessment of domestic equilibrium indicators (budget deficit and the external balance), which are crucial to financial stability.

**Chart I.2 Historic developments in expectations regarding the current account and the budget deficit as a % of GDP**

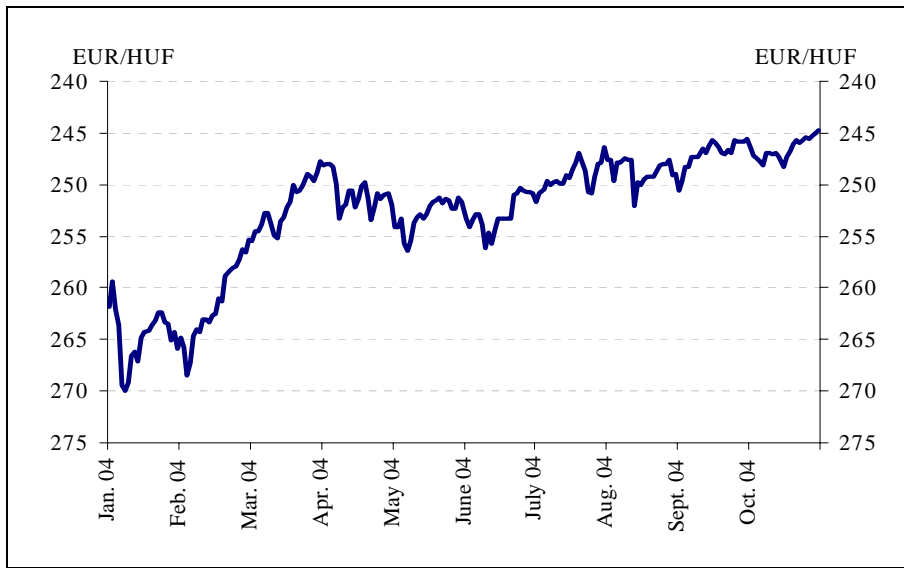


Based on monthly data on the budget deficit, the likelihood that the government can meet its year-end target deficit ratio of 4.6% of GDP has gradually decreased. The doubts raised in connection with fiscal policy were temporarily further exacerbated by the resignation of the Prime Minister in August 2004 and the uncertainties surrounding the political objectives and composition of the new government. In mid-September, while the cabinet was being formed, the Finance Minister announced that this year's deficit target had been raised to 5.1%–5.3% of GDP. Simultaneously, he also indicated that the 2005 deficit may also exceed the figure specified in the Convergence Programme.

Statistical changes implemented in connection with Hungary's accession to the European Union on 1 May 2004 (conversion from monthly to quarterly balance-of-payment statistics) and the transitory effects related to a change in the customs procedure in the foreign trade of goods delayed assessment of the external balance. Reuters surveys reveal that in the last six months of 2004 market analysts were constantly raising their projections for the 2004 and 2005 deficit on the current account.

The return to a path of disinflation was, however, a favourable development in terms of fundamentals. In the wake of tax hikes in early 2004, the rate of inflation peaked in May (at 7.6%) and due, *inter alia*, to the strong and steady exchange rate, then fell to 6.3% in October.

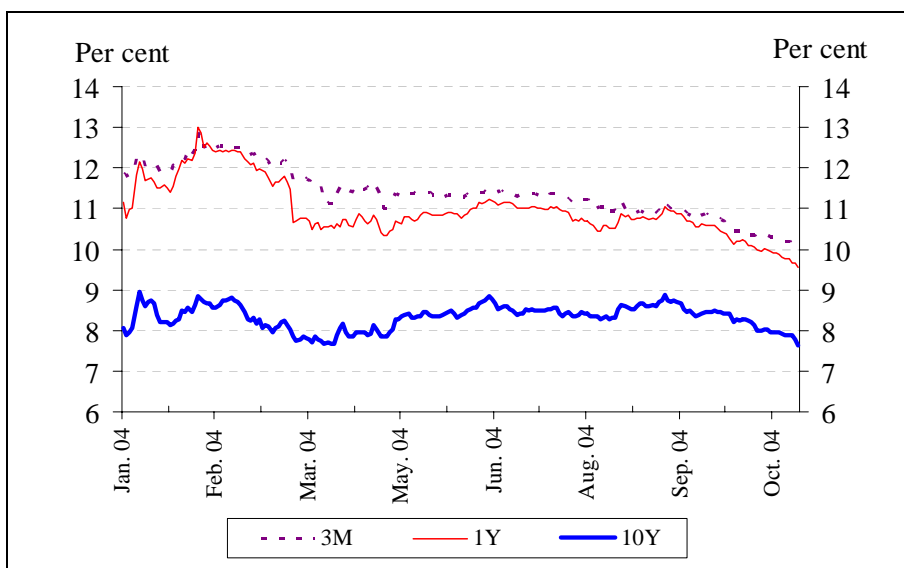
Chart I.3 EUR/HUF exchange rate



From mid-April 2004, the exchange rate of the forint was strong and reasonably stable in comparison to the volatile exchange rates of past periods. The appreciation that started in early February resulted in the forint strengthening by approximately 8%. This came to an end in mid-April, and subsequently the exchange rate fluctuated in a narrow band, between 245–255 forints to the euro.

Several factors played a role in the exchange rate stability seen in the past few months. On the one hand, short-term devaluation risks declined as a result of the favourable international money market environment and the cautious policy of decreasing interest rates adopted by the central bank, while on the other, the proximity of the strong end of the exchange rate band limited the possibility of further strengthening.

Chart I.4 Benchmark yields in the government securities market



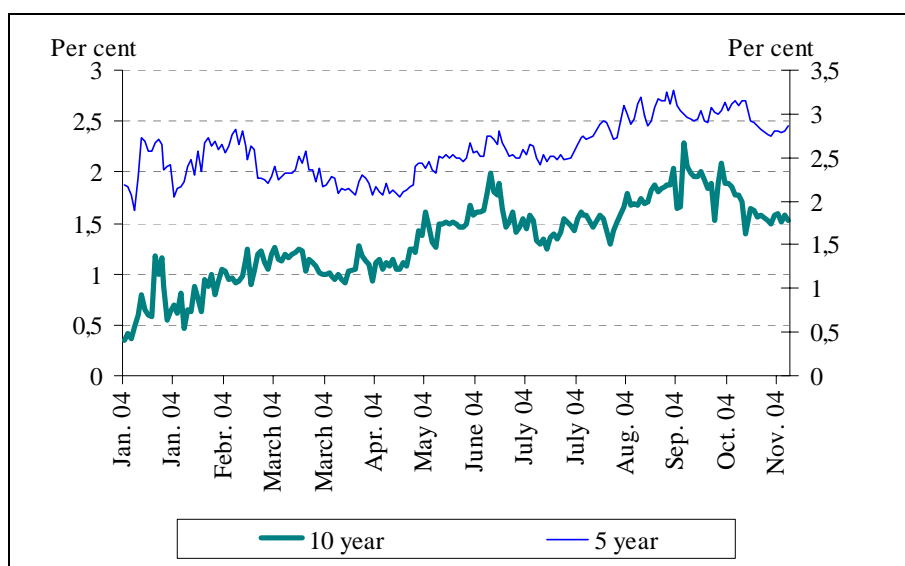
Hand in hand with the spring break in the exchange rate strengthening, yields stopped declining and rose considerably between early May and mid-June at nearly every maturity. The increased uncertainty in August caused but temporary yield increases, with yields starting to fall in mid-September. This decline intensified in October, primarily in shorter maturities. The Monetary Council pursued the cautious interest rate policy adopted in the spring, lowering the key policy rate by altogether 150 basis points between August and November 2004. Interest rate reductions by the central bank met the expectations calculated from the yield curve, and thus came as no surprise for market participants.

### I. 2. 2. Exchange rate and yield risks

The risks inherent in exchange rate and yield developments play a key role in the assessment of financial stability perspectives. Through its effects on the financial assets and liabilities of economic agents, any significant decline in the exchange rate and/or rise in yields directly affect(s) the stability of the financial sector. While the share of assets denominated in foreign exchange is high in the private sector, a considerable portion of the corporate sector enjoys natural coverage from its export revenues. In 2004, however, household foreign exchange borrowing also gathered pace, and consequently, the currency risk of households increased significantly. As the interest rate on subsidised housing loans was tied to market yields, the interest sensitivity of credit demand has also increased.

Looking forward, the most severe risk to the exchange rate and yields is posed by medium and long-term developments in macroeconomic fundamentals. No significant improvement occurred in the perception of equilibrium indicators in the last six months of 2004. The most important underlying reason for the improvement in short-term risk perception includes highly favourable trends in global financial markets. The euro/forint forward differentials, which reflect the essence of long-term risks, remained high and showed an increase during most of 2004.

**Chart I.5 Implied 3-month EUR/HUF forward differentials**

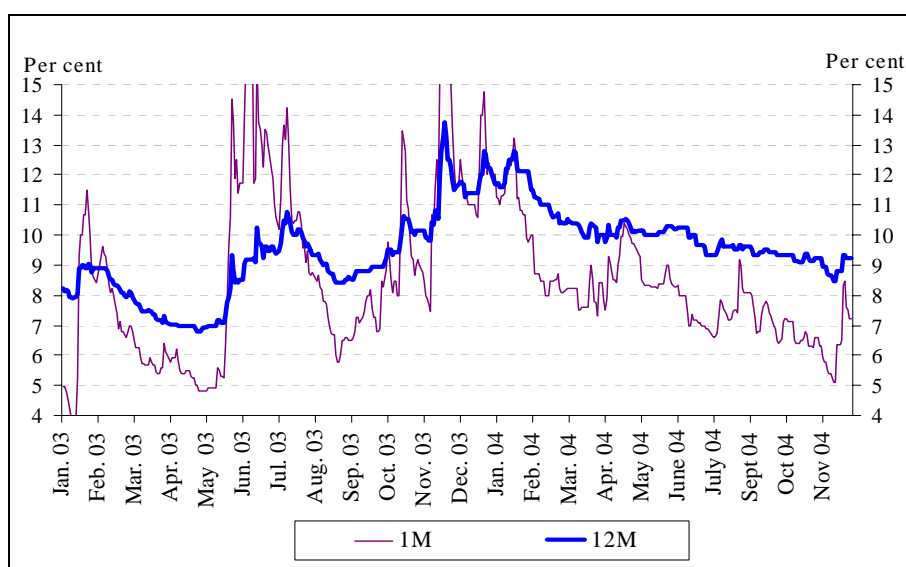


This suggests that market participants are more pessimistic about the longer-term outlook of the Hungarian economy than they were in previous years, and deem Hungary's convergence path for introducing the euro to less and less realistic. Recent market analyses

indicate that the most important market participants expect to see a significantly weaker forint exchange rate in the medium term, which may also be related to a less favourable long-term assessment. A change in the current extremely benign international environment may imply a major risk to developments of the Hungarian economy, if a sharp decline in the global risk appetite occurs when Hungarian macroeconomic fundamentals are viewed as unattractive.

Uncertainties in market participants' short-term exchange rate expectations are reflected in the implied volatility calculated from forint option prices. In the early summer of 2004, one-month implied volatility decreased. The uncertain situation in August resulted in merely temporary rises, and after repeated declines, in early November implied volatility fell to its lowest level in 2004. Annual implied volatility did not rise in August, and the decline which began in early September also suggests a drop in short-term uncertainties related to exchange rate expectations.

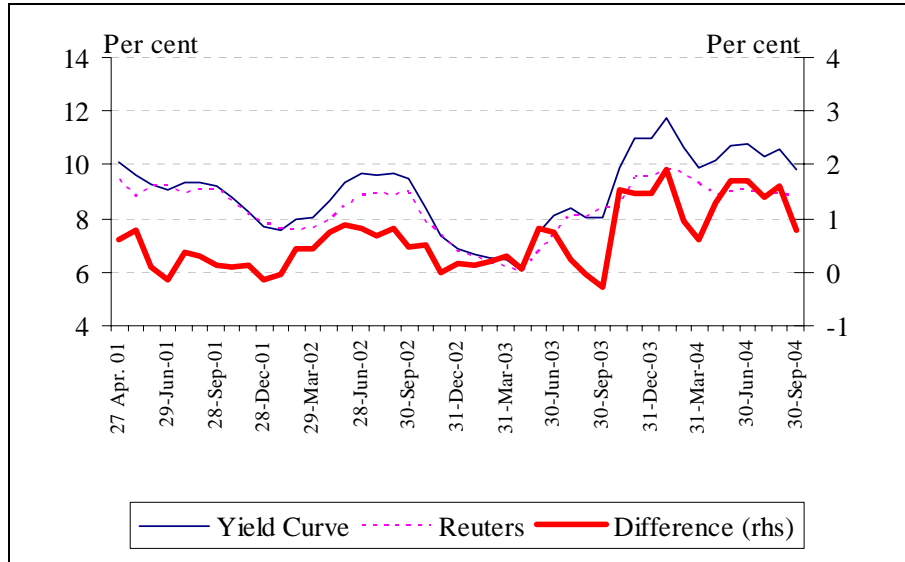
**Chart I.6 EUR/HUF implied volatility**



There are two sources of information on market participants' yields expectations. On a monthly basis Reuters surveys market analysts regarding expected central bank and market yields; relevant expectations on future interest rates may also be calculated from the yield curve. In the Reuters survey, the analysts specify the most likely yields they expect, while the expectations extracted from the yield curve theoretically also reflect the market view regarding the probabilities of all the possible yield scenarios. The difference between the two approaches may be significant if the probability distribution is more skewed than earlier, in other words, market participants assign a relatively high probability to the less favourable outcome. A look at the two projections for the central bank interest rate expected after 12 months indicates that the difference has increased since the turbulences in the foreign exchange market in late 2003: analysts in the Reuters survey regularly expect lower key policy rates than what is consistent with the yield curve. The difference may be explained by the fact that at the end of 2003 the market-perceived probability of scenarios assuming slighter interest rate cuts than the baseline (or eventually interest rate hikes) increased. Although this probability seemed to be losing ground in the course of 2004, it is still higher than the low probability characteristic of previous years. This suggests that although market participants clearly do not consider this scenario as the most probable,

future outcomes described by slowing interest rate cuts or even interest rate hikes continue to affect their expectations.

**Chart I.7 Key policy rates expected in 12 months**

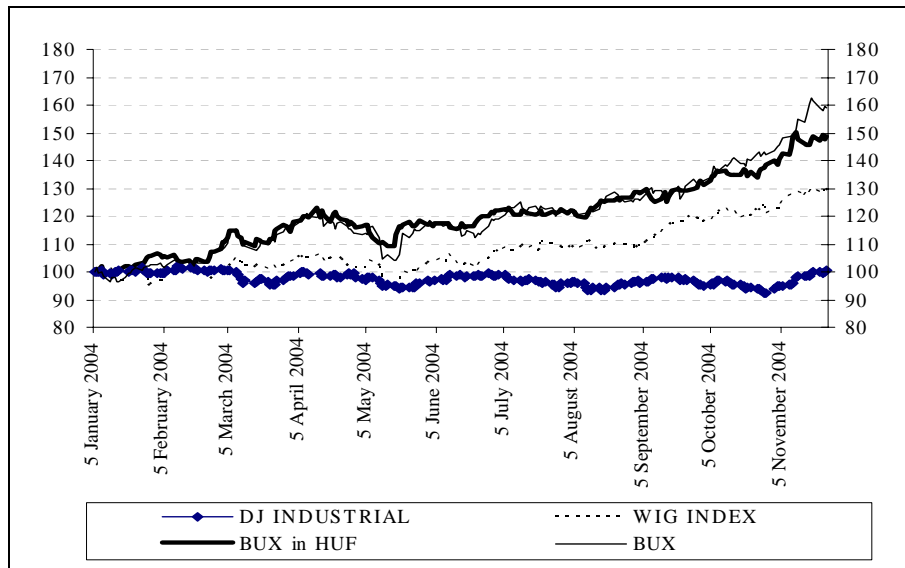


Overall, even amidst the current favourable conditions, the significant long-term risks inherent in financial market trends must be kept in view, despite the fact that the market considers the expected short-term exchange rate and yield developments to be more favourable and less uncertain than in the first half of 2004.

**I. 2. 3. Stock exchange**

At the end of November 2004, the forint-based BUX index repeatedly set new records and peaked at 14,100. This represented an increase of approximately 30% since early May. As the US dollar saw major weakening, the growth rate calculated in US dollars was even higher (40%). International stock exchange indices have not even come close to this performance in the past months. The main index applied by the most significant foreign stock exchange, Dow Jones Industrial, has declined despite the positive global environment. Amongst regional stock exchanges, rise in the Warsaw index (WIG) in US dollars was also due in part to the strengthening of the zloty against the dollar.

**Chart I.8 Major stock exchange indices**  
1 January 2004=100; USD



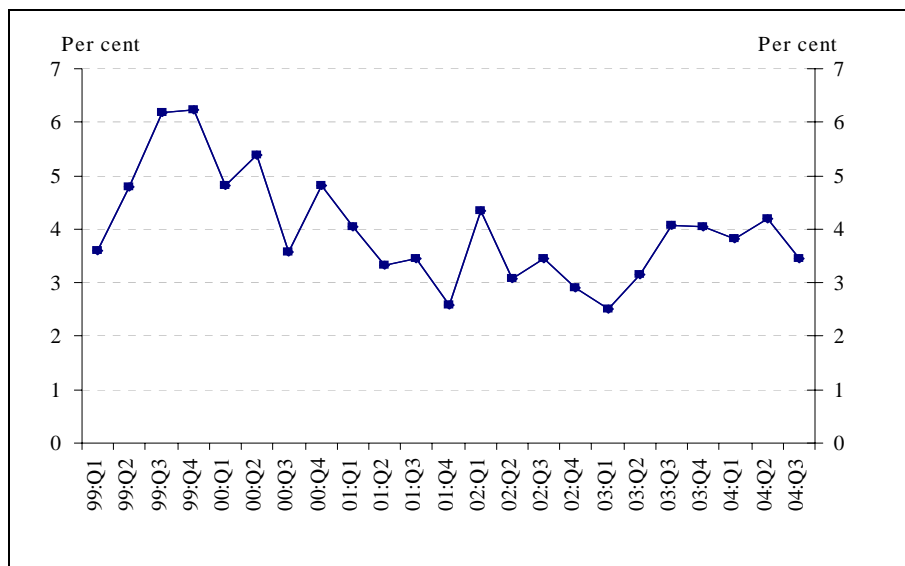
In an international comparison, the Budapest Stock Exchange experienced an extremely successful period in the last few months of 2004. The favourable effects of EU accession may have contributed to this faster-than-global growth, as this may have led to a revaluation of regional financial assets, including Hungarian shares. In addition to good news concerning macroeconomic fundamentals, growth was also due to sector-specific factors. The two largest companies traded on the stock exchange (OTP and MOL) saw their shares prices increased by over 60%, while share prices for other major listed companies did not rise.

### I. 3. Growth and inflation

#### I. 3. 1. Growth outlook and risks

The rate of growth accelerated in 2004 relative to a year earlier. The Hungarian economy is projected to grow at a stable rate of 3.5%–4% until 2006.

**Chart I.9 GDP growth**  
Annualised quarter-on-quarter growth rates



The upswing in the business cycle also brought about favourable changes in the structure of growth compared to previous years. In 2004, gross capital formation (fixed capital formation and inventories) was the largest contributor to GDP growth. The rise in household consumption slowed considerably, but was still higher than expected. Just as in 2003, net exports contributed negatively to economic growth in the first half of 2004.

The rapid rise in fixed capital formation observed in 2004 is not expected to continue. Next year, the rate of economic growth is likely to slow slightly. However, there are significant risks around this central path, owing mainly to uncertainties surrounding the international business cycle and global oil prices. The following presents an overview of the most important risks to the projected development of business cycle components that more directly affect the profitability of financial sector: household consumption and corporate investment. Risks to external balance are discussed in a separate section.

**Table I.2 Annual growth rate of GDP and its components**

Annual growth rates, per cent

	2003	2004	2005	2006
GDP	3.0	4.0	3.7	3.5
Household consumption	7.6	3.3	1.8	1.9
Fixed capital formation	3.4	9.2	4.2	3.6
Domestic absorption	5.5	4.8	2.5	2.3
Exports	7.6	14.5	11.3	11.0
Imports	10.4	14.8	9.3	9.2

Source: *Quarterly Report on Inflation, November 2004*.

Households' consumption and saving behaviour are simultaneously being influenced by a longer-term structural transformation and one-off effects. As a result, over the past period the sector often reacted differently than expected.<sup>1</sup>

In terms of both the structure of use of disposable income and the ratio of indebtedness to income, the Hungarian household sector has converged to the developed countries in the past few years. Despite its extremely rapid increase, indebtedness is still significantly lower than the corresponding data for developing countries, and primarily consists of collateralised lending facilities (homes, cars etc.). For the purposes of debt servicing and household demand for loans, it should be remembered that following a rapid rise, the rate of consumption to disposable income is still very high in Hungary even by international standards. The vigorous rise in this indicator in the past few years was due to structural changes and transient effects (a rise in the minimum wage, public sector wage increases and the extension of the subsidised housing scheme). Once transient effects terminate, the ratio of consumption to disposable income may drop, and eventually find a new equilibrium exceeding the level characterizing the 1990s. This projection is, however, uncertain, as it is difficult to specify how long it will take for consumption to decline.

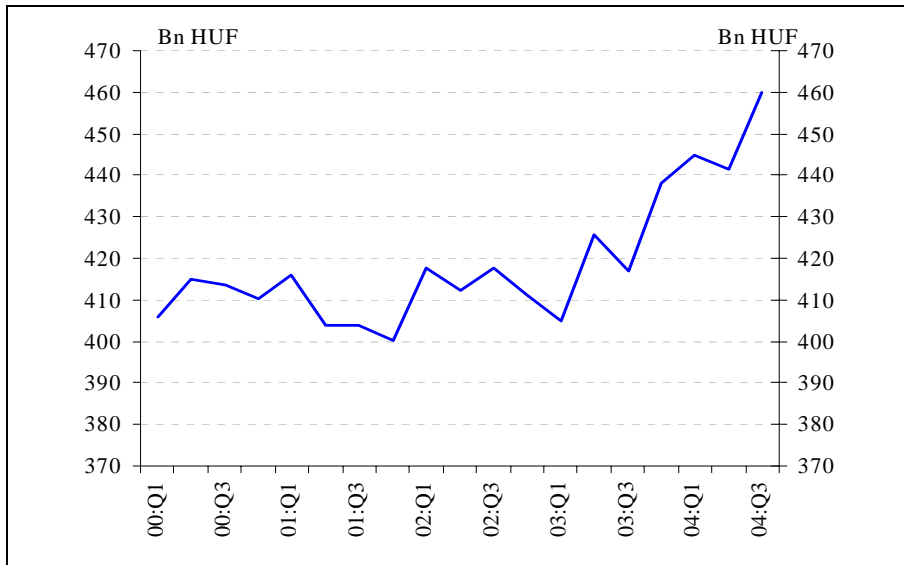
A high consumption rate may confine households' room for manoeuvre, and thus considerably impede adjustment to situations that are less favourable than expected. This may lead to macroeconomic risks if incomes increase significantly more slowly than expected by households, which have benefited from the easing of liquidity constraints.

From the perspective of the financial intermediary system's profitability, the prospective development of corporate investment (characteristically funded from bank loans) is a key consideration. As the global economy recovered in 2003, corporate investments increased. This trend continued in 2004 H1, although at a slowing pace. A breakdown of sectors shows that slowing primarily affected the service sector, while investments in the manufacturing sector, which is more sensitive to the external business cycle, have only seen minor changes.

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<sup>1</sup> The section *Current topics* discusses household behaviour in more detail than usual, covering a longer period in retrospect and providing an international comparison.

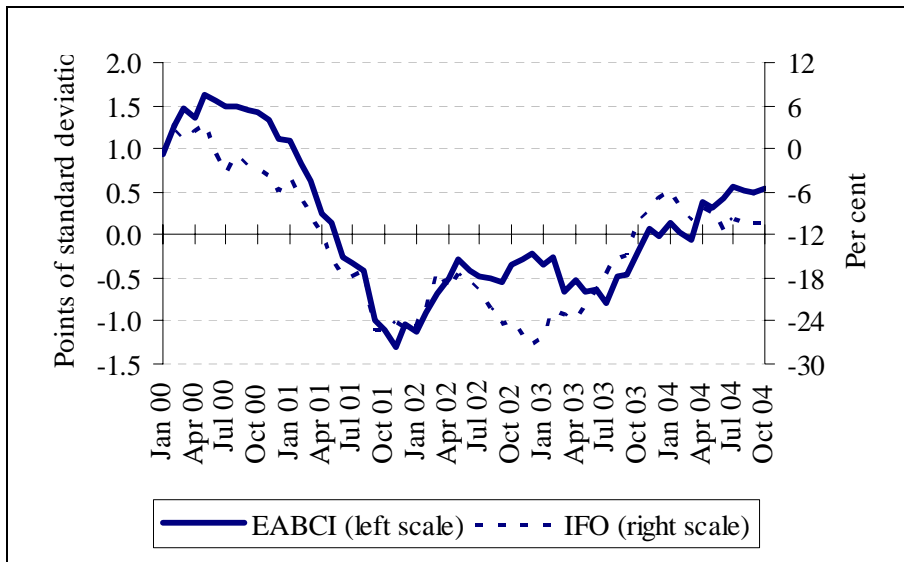
**Chart I.10 Corporate investments\* (at 1998 prices, HUF billions)**



\* MNB estimate.

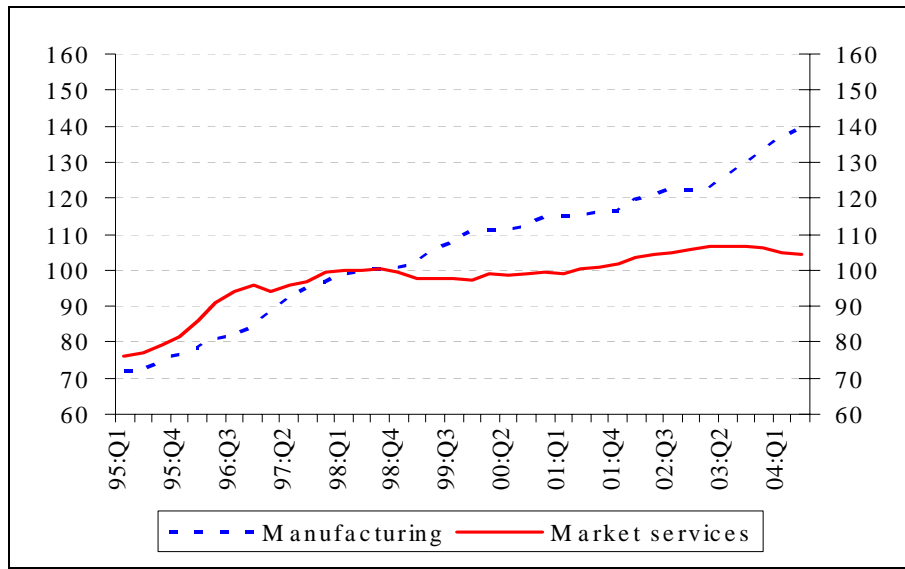
Due to the small size and openness of the Hungarian economy, the external business cycle has a profound influence on investments. Hungary's main target markets have been less optimistic: in the past few months, the outlook for growth in the German economy has become less favourable (cf. IFO index), and the business indicator of the euro area (cf. EABCI) has also been relatively flat in 2004 Q3. These data suggest that no further robust growth can be expected in investments in the period ahead of us.

**Chart I.11 Business confidence index for the euro area (EABCI) and Germany (IFO)**



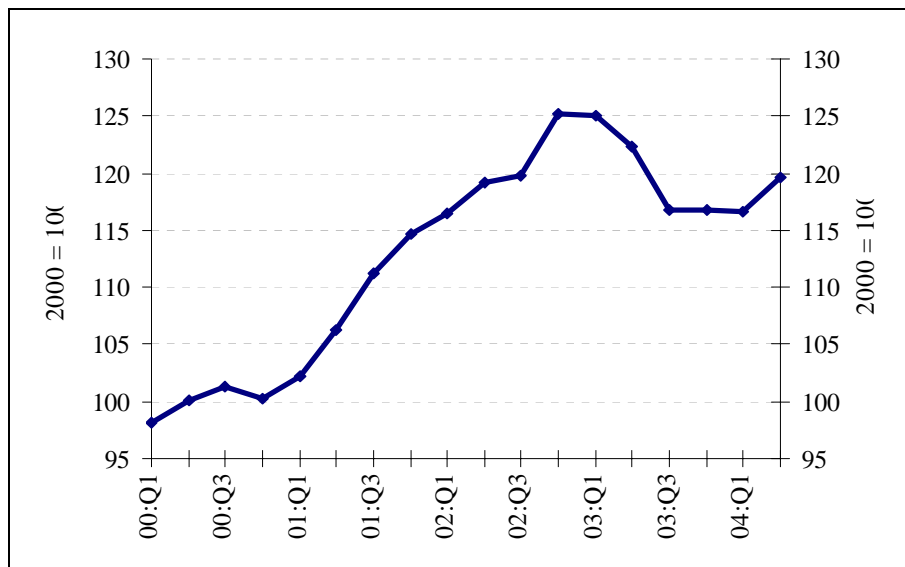
Corporate sector profitability is determined on the basis of business cycle prospects, productivity and cost-side factors. There are marked differences between the sectors in terms of productivity. Productivity growth slowed in manufacturing over the last six months of 2004, but it was still rapid. In contrast to market services, productivity has been deteriorating for over a year. Overall, the corporate sector can be expected to improve slightly in the future. Such improvement may be fuelled by labour market adjustment, especially in market services.

**Chart I.12 Corporate sector productivity (1998=100)**



Developments in costs relevant to the corporate sector continued to be unfavourable in the period past. In contrast to flatness in the previous quarters, in 2004 Q2 the cost-based real effective exchange rate index (ULC-based real exchange rate), one of the determinants of corporate sector profitability, fell as a result of the high rate of wage costs. In addition to significant exchange rate strengthening in the spring, Hungarian wage costs rises also contributed to the appreciation of the ULC-based real exchange rate.

Chart I.13 Cost-based real effective exchange rate index\*

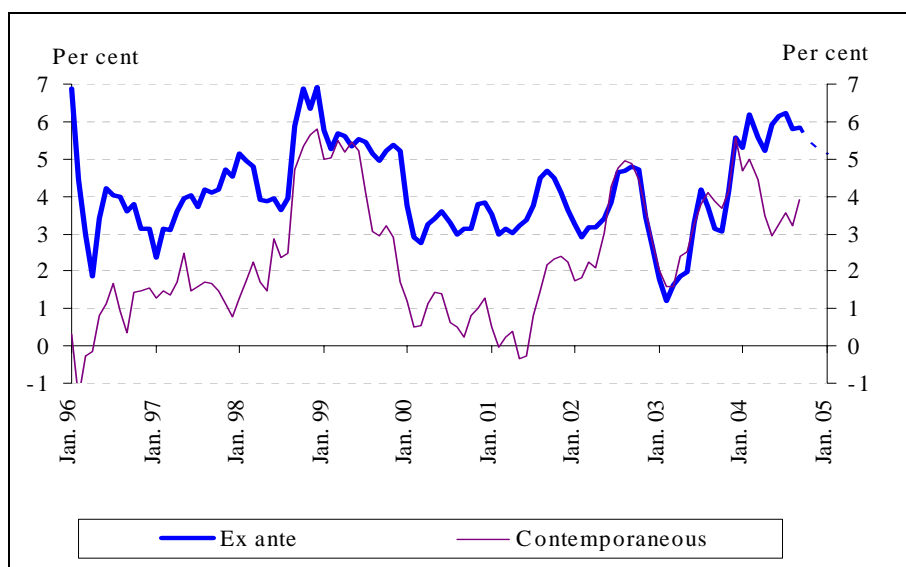


\* Manufacturing unit labour cost index (ULC). Higher values indicate a stronger real exchange rate.

However, when risks are considered, it is important to understand that a stronger real exchange rate has no adverse effect on exports: in our estimation Hungary increased its share in the EU export market in 2004 H1.

In terms of corporate cost constituents, rising energy prices and high forint real interest rates are also likely to lead to a drop in profitability. Following a rise in early 2004, in the past few months the real 12-month interest rate fell slightly; nevertheless, it remains high at above 5%. Drop in the *ex ante* real interest rate is primarily due to the yield decrease seen in the past few months. Due to the inflationary impact of indirect tax hikes, contemporaneous real interest rates were significantly lower than *ex ante* interest rates in 2004. A gradual rise is expected in the contemporaneous real interest rate once the effects of indirect tax hiked filter out of the base, leading it to approach the *ex ante* rate once again.

Chart I.14 \*Real interest rates



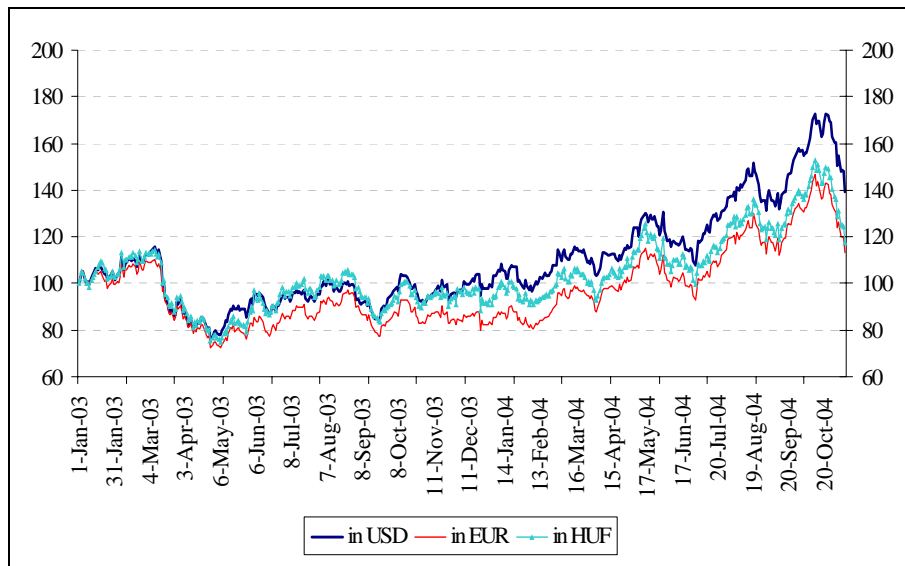
\* The ex ante real interest rate time series relies on 12-month ex ante inflationary expectations calculated from the Reuters survey.

Among international risks the impact of oil price hikes was noted (sub-section I-1). Similarly to the global effects, high oil prices influence both growth and inflation in the Hungarian economy. In a previous, comprehensive analysis of the effects of oil prices on the Hungarian economy,<sup>2</sup> the macroeconomic impact of a hypothetical 10% rise in oil prices was estimated. The results indicate that such a price rise would lower the rate of GDP growth by 0.3 percentage points in a year, and push up the inflation rate by 0.4%. Over an eighteen-month period the current account deficit would increase by 0.4% of GDP, and as a longer-term effect on the terms of trade, the deficit might increase by 0.3 percentage points even in subsequent years.

<sup>2</sup> *Quarterly Report on Inflation*, August 2004.

**Chart I.15 Price of Brent oil in USD, EUR and HUF**

1 January 2003 = 100

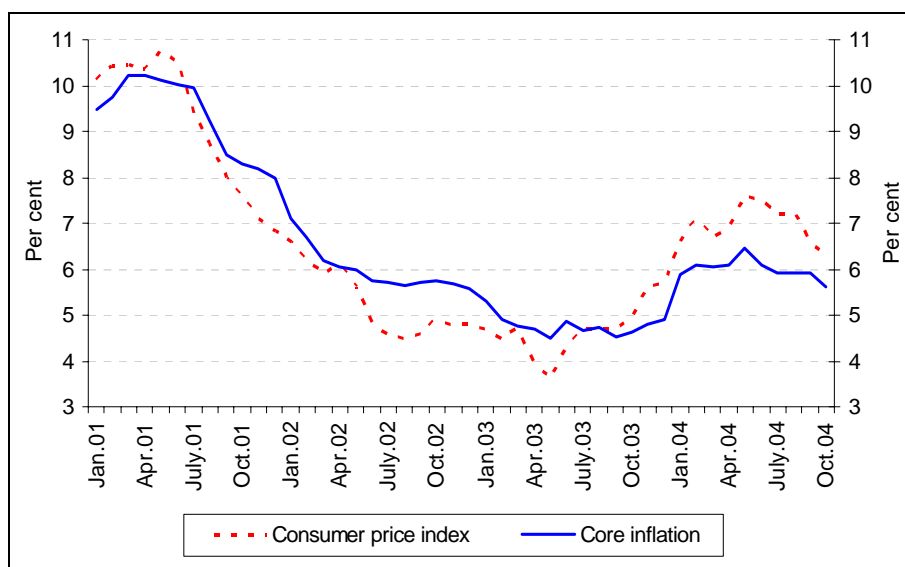


Due to the recent weakening in the US dollar exchange rate, the global fluctuation of oil prices calculated in dollars had a smaller effect on oil prices calculated in forints and euros. The fact that oil prices and dollar exchange rates changed in opposite directions mitigated the unfavourable direct effects on the Hungarian economy. The strengthening of the euro vis-à-vis the US dollar limited the real economic effects of oil price hikes in the EU, and therefore the unfavourable effects of higher energy prices were also modest in external demand relevant for the Hungarian economy. In the future, however, a weakening of the negative correlation between oil prices and the US dollar exchange rate may pose risks for the Hungarian economy.

### **I. 3. 2. Inflation**

The moderate inflation environment that has characterised the Hungarian economy in the past few years does not involve major risks to macroeconomic stability. Under such inflationary conditions, it is mainly surprise inflation (i.e. an inflation rate that diverges from expectations) that may cause losses to the economic participants and carry risks to macroeconomic stability. In 2004 it was the rise in indirect taxes that was most likely to add to the risks implied in inflation expectations.

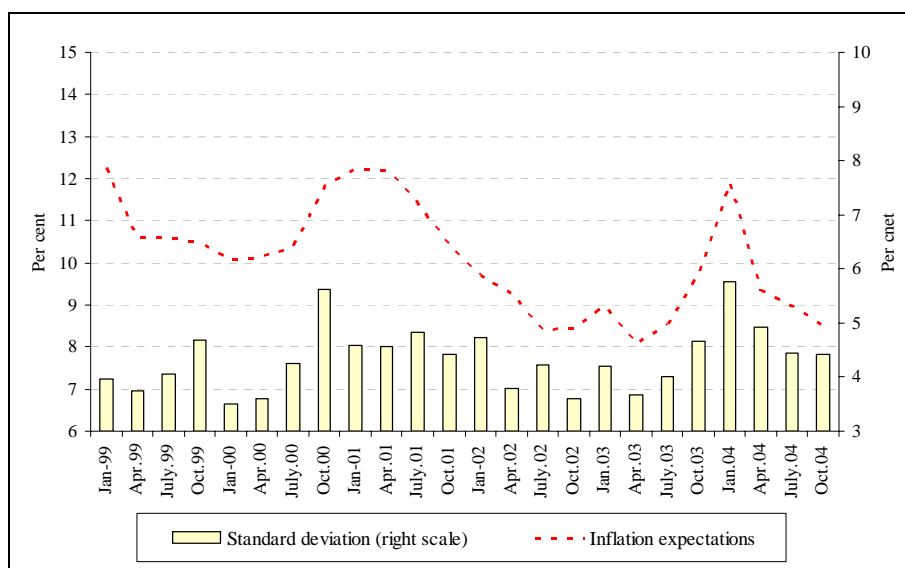
Chart I.16 CPI and core inflation (annual changes)



The rate of inflation reached its 2004 peak at 7.6% in May. In the first five months of the year the rise in inflation was due primarily to indirect tax hikes, while the constant tax price index remained unchanged. Both the full CPI and core inflation reflected the decline in the rate of inflation after May; and genuine disinflation took place from August. Between the May peak and October, the CPI dropped by 1.3% in total. From the beginning of 2005, the effects of the 2004 tax hikes will no longer be felt in the annual indices.

As Hungarian economic history has experienced long periods of high inflation and backward-looking expectations are thus strong, in 2004 considerable risk was related to the inflationary expectations of the individual market participants in response to the transient rise in inflation caused by indirect taxes. The surveys of diverse groups of economic agents in the past few months indicate that macroeconomic analysts, corporate executives and households all expect the inflation rate to decline in the coming months. According to a poll by TÁRKI, corporate executives' 12-month inflationary expectations and inflation perceptions declined in 2004 Q3. A further favourable development is that in addition to the average expectation calculated from the sample, the standard deviation of expectations has also dropped. An analysis of the mean and the standard deviation of expectations clearly reveals that in addition to increasing the average expectations, the announcement of indirect tax hikes in 2003 also enhanced inflationary uncertainties. However, from 2004 Q2, both indicators definitely indicate downward inflationary risks.

**Chart I.17 Inflation expectations by corporate executives and the standard deviation of their expectations**



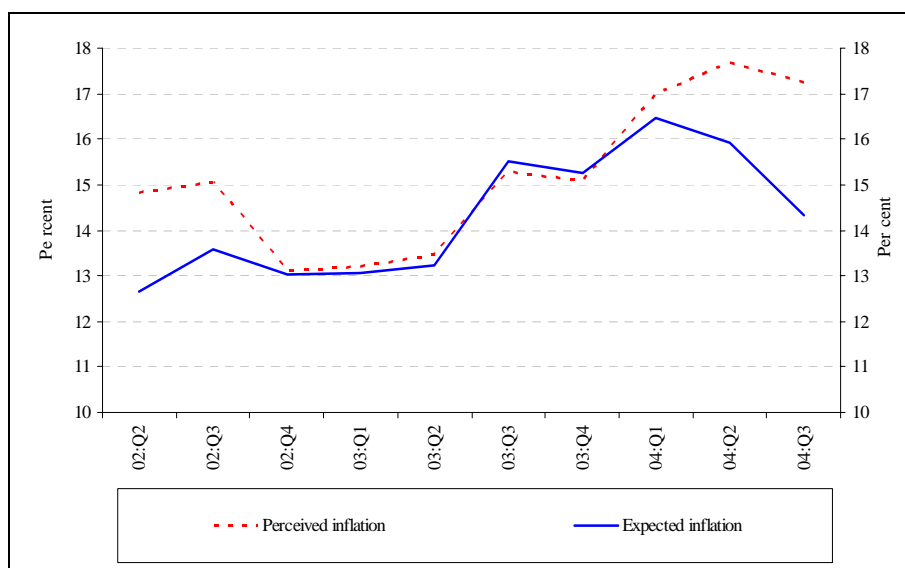
\* Standard deviation calculated for the entire sample.

\*\* Arithmetic average calculated without regard to extreme observations (approximately 1.2% of the sample).

Similar trends can be elicited from TÁRKI's household survey. Although inflation perceived by households is traditionally much higher than that recorded by CSO, such expectations also began to fall in the summer. A further favourable development is the fact that in 2004, the rate of inflation expected by households in a year's time fell even more rapidly than perceived inflation. Such a trend has not been seen for a long time.

According to the evidence of surveys, both corporations and households expect the one-off inflationary pressure of indirect tax hikes to subside. The prospective decline in the rate of inflation in early 2005 will presumably not take economic participants by surprise.

**Chart I.18 Households' perceived and expected inflation, based on a TÁRKI survey**

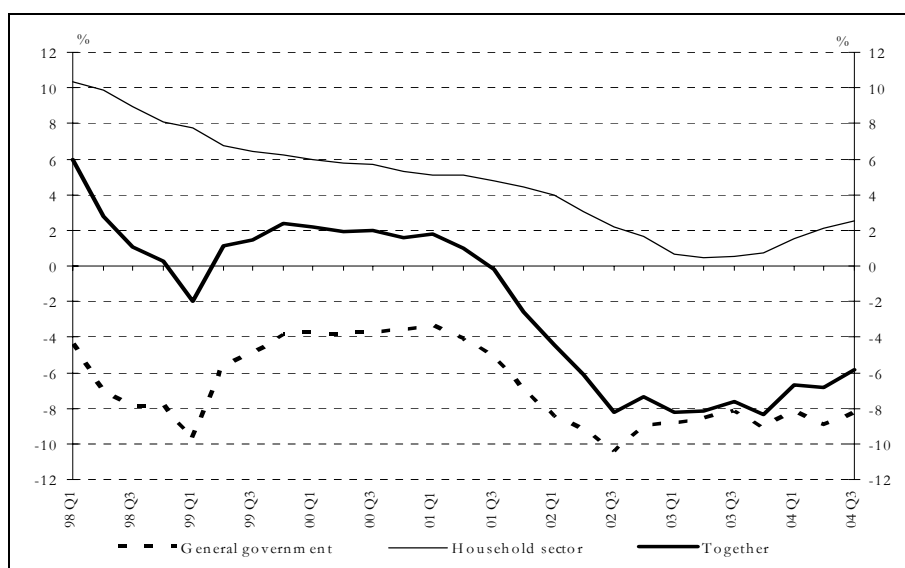


## I. 4. External balance

### I. 4. 1. Developments in external balance

Although in the past three years the Hungarian economy's external financing requirement-to-GDP ratio has not significantly exceeded the ratio measured earlier, the saving-to-investment balance of the individual sectors has been rearranged to an extent that has resulted in an external balance which is unsustainable in the long term. The broad general government financing requirement (consolidated with the MNB), including quasi-fiscal activities, has stabilised at extremely high rates since 2002. Households' rapidly decreasing net GDP-proportionate financial savings was only able to finance a considerably smaller requirement than in the past. The effects of the simultaneous deterioration in the positions of the general government and households on the current account were partly offset by a historically rapid decline in the corporate financing requirement, which was due to subdued investment volumes.

**Chart I.19 Net financing requirement in proportion to GDP in the general government and the household sector (seasonally adjusted data)**

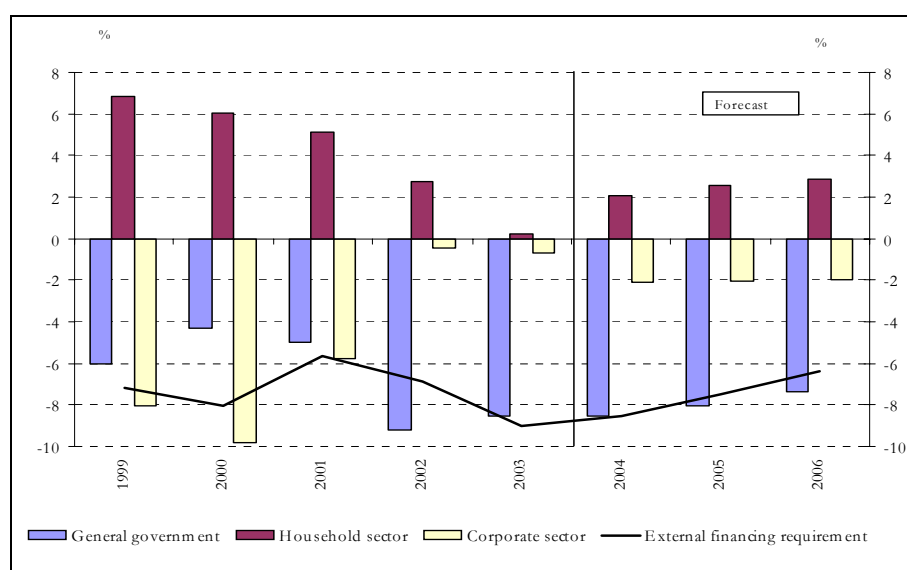


In 2004 H1, the current account deficit was slightly up on 2003, and reached 10.1% of GDP. The net external financing requirement increased slower because the 2004 Q2 rise (generated by EU transfers) in the capital account partly offset the higher current account deficit.

Although there was no improvement in the external imbalance, the sector breakdown of the savings-to-investment balance shifted in a favourable direction and reduced the vulnerability of the forint. Due to increasing net financial savings, households were able to finance a larger proportion of the general government deficit. The borrowing requirement generated by the corporate sector's financing requirement implies lower risks from a stability perspective as corporate investments contribute to future export increases, and the sector's borrowing requirement is financed from characteristically more favourably structured capital flows, which, for the most part, do not generate debt.

The GDP-proportionate financing requirement of the broad-based general government practically has not changed: from 8.5% in 2003 it fell to 8.4% in 2004 H1.<sup>3</sup> The net GDP-proportionate financial savings of the household sector rapidly increased in 2004 H1, and following last year's historic low it approached 2% of GDP. The historically still extremely low rate of household financial savings has increased primarily as a result of the rapid drop in borrowing after the government tightened the conditions for subsidised housing loans. Meanwhile, capital expenditure increases have deepened the corporate borrowing requirement, and offset the rise in household savings, and thus Hungary's external financing requirement remained high.

**Chart I.20 Net lending of sectors and the external financing requirement as a proportion of GDP**



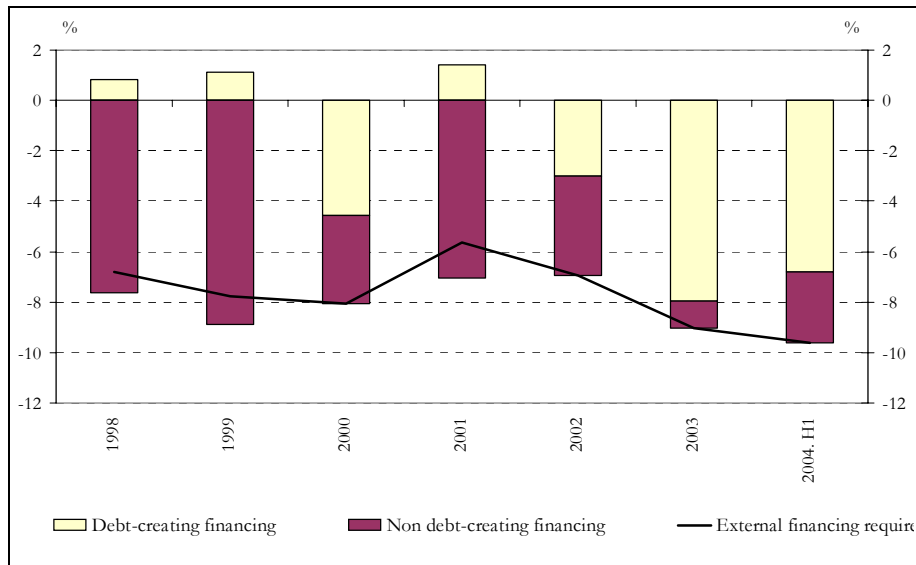
#### I. 4. 2. Financing the current account deficit

The recent structural changes in the rate of savings to investment and stabilisation of the external financing requirement at a high level has had a massive impact on Hungary's net external debt. Due to the fact that in 2002-2003 the high external financing requirement was attributed to shifts in the positions of sectors (such as the general government and households), which were partly or fully incapable of non-debt-generating borrowing, the large current account deficit was accompanied by a rapid accumulation of net external debt. In proportion to GDP, Hungary's net external debt increased from 14% in 2001 to 23% by late 2003. In 2004 H1, the private sector's savings-to-investment balance shifted in a more favourable direction, and this improved the structure of capital flows. As the corporate sector's financing requirement expanded, so did net FDI inflows. The underlying reason for this was less vigorous regional expansion of Hungarian companies than in 2003, and (to a minor extent) increasing non-resident direct investment in Hungary. Non-debt generating financing, which includes stock purchases and foreign direct investment, amounted to

<sup>3</sup> In the course of adjustment, the one-off effect of a monthly shortfall in the revenues collected from imports and VAT after EU accession was filtered out.

approximately 30% in 2004 H1. In historical terms, this rate can still be considered very low, but it does represent an improvement compared to the low of 12% in 2003.

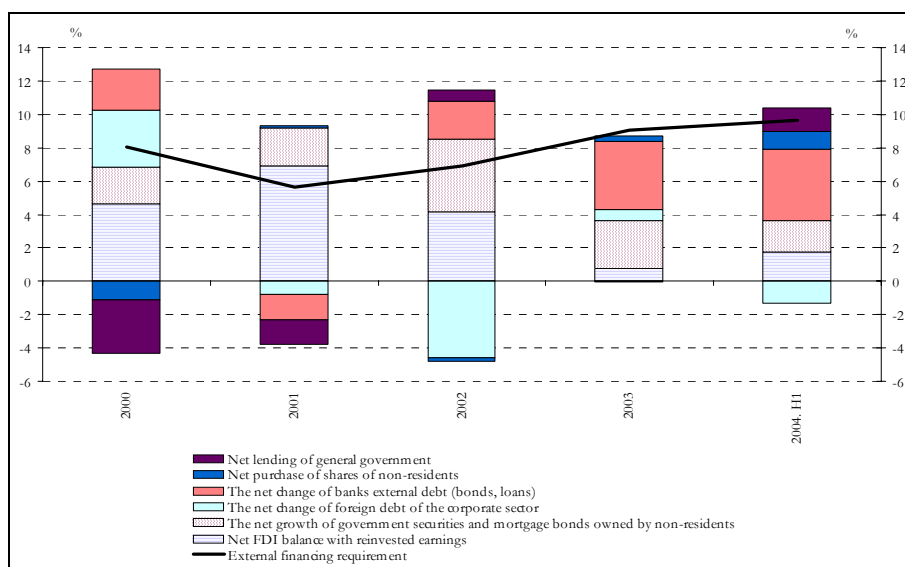
**Chart I.21 External financing structure of the Hungarian economy**



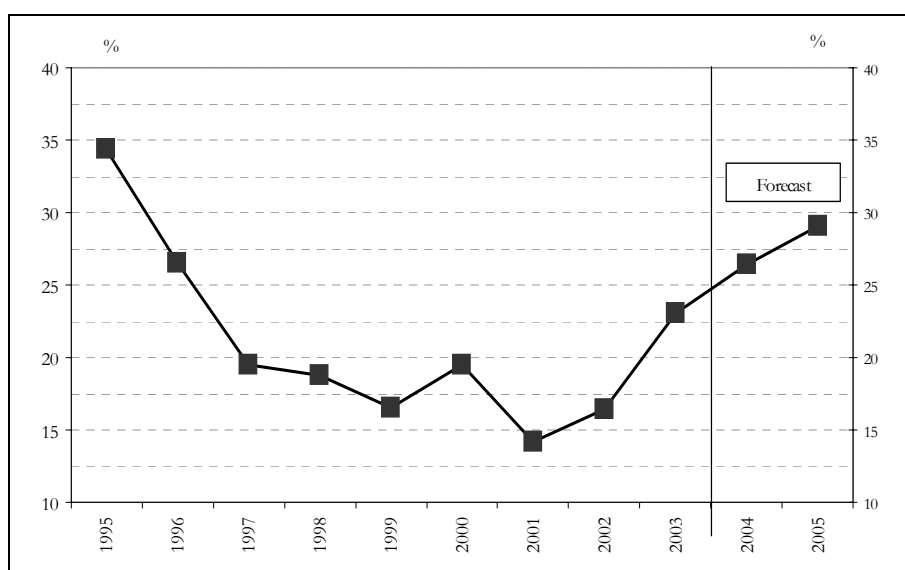
Although—as a result of the above described trends—the role of debt-generating items has declined slightly, such items have remained predominant: indebtedness continued to grow, albeit at a somewhat slower rate. Simultaneously, the portfolio shifts which began in 2003 H2 within debt-generating items have also continued without interruption. Instead of net sales of forint-based government securities to foreigners, more and more the external borrowing requirement in excess of net FDI is financed by increasing the indebtedness of the Hungarian private sector to non-residents with the mediation of banks.

Within private sector borrowing, the most characteristic transaction has been the borrowing of funds from abroad, while net corporate debt stocks have declined. In the case of domestic companies, the reduction of fund-raising abroad has been accompanied by an expansion in foreign exchange lending by Hungarian banks. A similar phenomenon was observed in the household sector, which increased its outstanding foreign exchange borrowings and foreign exchange leasing stock by EUR 700 million in 2004 H1; thus the household sector has run into a net debit position. As a result of the above, the risk involved in a foreign currency position in a rise in the net national debt has been undertaken by non-residents through the purchase of government assets and mortgage bonds, while the household sector also slightly increased its role in risk-taking.

**Chart I.22 External financing requirement and its financing as a percentage of GDP**



**Chart I.23 Hungary's net foreign debt to GDP**



Prior to 2001, a similarly high deficit on the current account was financed from foreign direct investment; accordingly, GDP-proportionate net external debt gradually declined, and by late 2001 it had shrunk to below 13%. After 2002, foreign debt resumed rising, and had grown to 23% by the end of 2003. With an additional 3 percentage point increase in 2004 H1, debt has approached the 1996 level. Initially, the general government played the most important role in the process of indebtedness, but from 2003, the financial intermediary system's soaring external debts also made a major contribution, while corporate sector GDP-proportionate liabilities fell.

**Table I.3 Economic sectors' net external financial position as a percentage of GDP**

	1999	2000	2001	2002	2003	2004 H1
Net external liabilities of Hungary	75	73	67	67	79	84
o/w: non debt-generating liabilities	59	53	54	50	56	58
Debt (a.+b.)	16	20	14	16	23	26
a) Consolidated government	6	5	5	10	12	13
b) Private sector (1.+2.)	10	15	9	6	11	13
1. Corporate sector	6	8	6	1	3	2
2. Banking sector	4	6	3	4	9	10

### I. 4. 3. Risks to external equilibrium

In the next few years household net financing capacity may see a further modest rise, while—with the removal of liquidity limits in the household sector—its net financing capacity may stabilise at a level below that of the late 1990s. The corporate sector's financing requirement is likely to increase further. As the financing capacity of the private sector is highly unlikely to increase significantly, the general government must take a fundamental role in the reduction of the external financing requirement to a sustainable level where indebtedness can be stopped. External imbalance may improve if the government deficit specified in the Convergence Programme is realised.

From the point of view of vulnerability, a favourable impact of the position shift within the private sector is that the weight of non-debt generating items in financing external financing requirement is likely to increase, because capital inflows will probably strengthen as the corporate sector's financing requirement rises. However, despite favourable trends, Hungary's net external debt is likely not to stop rising, as the general government's high financing requirement prevents a decline in the weight of debt-generating financing.

In addition to its debt service requirement, higher GDP-proportionate debt affects the assessment of other indicators: At a higher debt rate, the current account and general government deficits are both assigned increased significance when vulnerability is assessed. Rising debt indicates moving away from the centre of balance. A decline in the credibility of economic policy may lead to rises in the risk premia payable by the debtor.

In Hungary's case, there are various reasons for market participants' undiminished confidence in forint assets despite the trends in external balance, which are unsustainable in the long term. In addition to a notable risk premium, these reasons include the commitment of the economic policy regime to the adoption of the euro and, consequently, future reduction of the general government deficit, which necessarily results in a decline in the external financing requirement and a slowdown in indebtedness in the medium term. A further element to support investor confidence is the relatively high rate of GDP and export growth. Currently, global willingness to take risks is keeping the risk premia expected of EME assets relatively low, while both US dollar and euro interest rates are low in a historical comparison. This greatly contributes to the decline in the GDP-proportionate interest burden on foreign debt, despite a rapid increase in the ratio of net external debt to GDP. Risks are also reduced by the general government debt structure, the

relatively low rate of foreign currency debt and the considerable share of long-term bonds, which slows debt re-pricing and mitigates interest rate risks. Despite rapid growth, households' indebtedness cannot be considered outstanding, and although in 2003 households became net foreign currency debtors, the exchange rate risk they bear is still negligible in proportion to their disposable income.

In order to improve the unsustainable current external balance the general government deficit must be reduced. In the Convergence Programme submitted to the European Union, Hungary undertook to gradually lower the general government deficit. Due, however, to the budget determinants, further substantial measures are required to improve the primary balance, which increases the risk that the deficit may exceed the plans. Failure to take such deficit reducing measures may result in considerable risks to stability.

In terms of the external balance a further important issue is the effect of institutions involved in quasi-fiscal activity and the so-called PPP schemes.<sup>4</sup> The existence of such schemes prevents the official general government deficit ratio, calculated in line with the ESA principles, from capturing the essence of fiscal policy's impact on equilibrium. When the actual impact of fiscal policy on demand is determined, the expansionary impact of quasi-fiscal activities and PPP schemes must also be taken into consideration. Thus, the performance of budgetary tasks in the framework of PPP constructions does not reduce the general government's impact on external balance. Therefore, it is important that the expansion of activities excluded from the deficit but incapable of generating demand should not offset a reduction in the official general government deficit.

A further risk may be involved in the fact that delays in fiscal consolidation may not only deteriorate the external balance, the international investment position and the debt structure, but also undermine the reliability of the economic policy. If the economic policy committed to adopting the euro at the specified time loses its credibility, the economy's vulnerability might be assessed less favourably.

In addition to fiscal consolidation, another major risk to vulnerability is the external business cycle. If the European economy grows at a slower pace than expected and external demand is consequently lower than projected, the expansion of exports and economic growth may also slow, and these are two major factors in the assessment of vulnerability. A more moderate European recovery may entail a reduced corporate financing requirement and consequently even lead to a decrease in the external financing requirement. Despite this fact, however, it may still increase the vulnerability of the forint exchange rate through the investors' assessment. This is the case because a slowdown in the growth rate of exports may strengthen expectations regarding devaluation, and a possible unfavourable structural change in the current account deficit, in other words, an increase in debt-generating financing, which may result from declining corporate capital attraction, may also have a similar effect.

Another risk to the capital flows that finance the external financing requirement of the economy is that as domestic capital markets develop, non-residents may undertake to finance the Hungarian economy by purchasing debt instruments in capital markets instead of making FDI investments, which ensure more direct control.<sup>5</sup> Similarly to the corporate financing requirement, which may exceed the projected value, this fact does not pose a direct risk to stability, as with the development of the economy and the financial markets,

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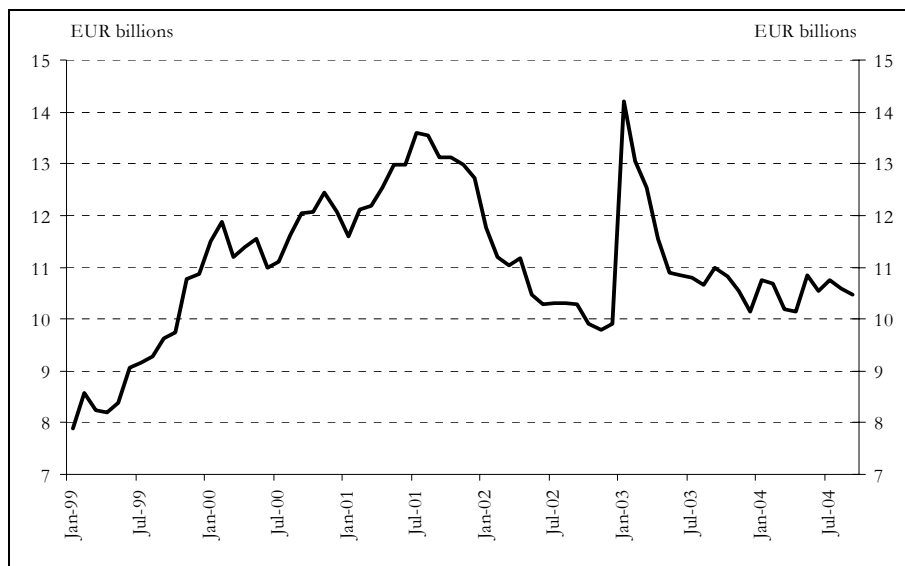
<sup>4</sup> See 'PPP projects from a macro-economic perspective', *Quarterly Report on Inflation*, November 2004

<sup>5</sup> See: *Report on Financial Stability*, December 2003.

the significance of cheaper, debt-generating items constantly increases in financing. At the same time, rising indebtedness indicators may weaken the assessment of the economy's vulnerability.

#### I. 4. 4. Foreign exchange reserves

Chart I.24 International reserves

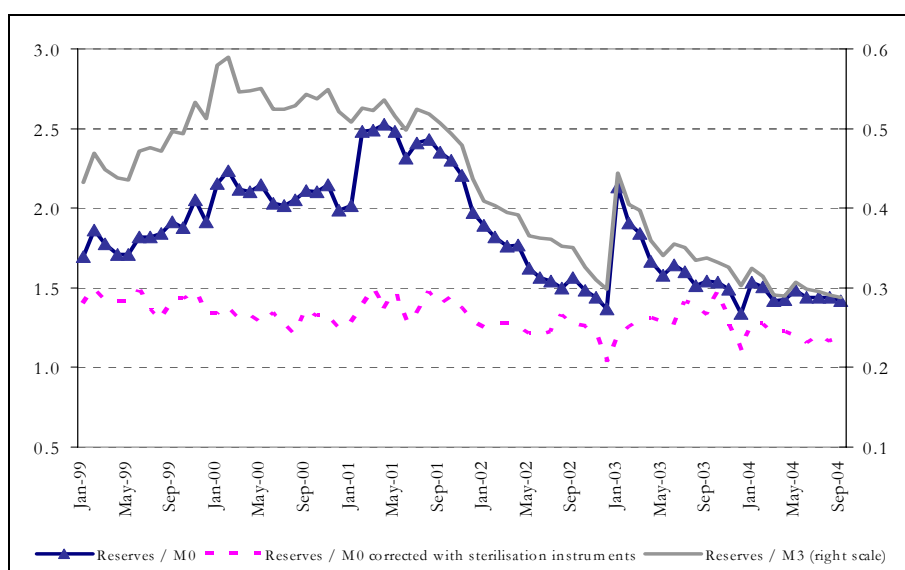


Investors monitor the development of foreign exchange reserves with special attention in the case of EMEs. If the reserves fall below what they consider desirable, they may consider this as a sign of the foreign exchange regime's vulnerability. This in itself may reduce the credibility of the foreign exchange regime and cause an increase interest rate spreads. In a critical situation it may even trigger expectations of devaluation. For this reason the Monetary Council passes resolutions on the central bank's reserve strategy for several years in advance, in compliance with the characteristic features of the particular exchange rate regime and the monetary policy objectives. In the course of decision-making, the Council also considers investors' expectations regarding reserves, thus in addition to the indicators that are appropriate for the Hungarian economy, the reserve policy is developed with a view to the indicators monitored by investors.

As a result of repeated interventions at the limit, in the narrow-band exchange rate mechanism foreign exchange reserves rose significantly and exceeded the optimum. After the intervention band was widened, foreign exchange reserves could be cut as a result of the general government financing strategy adopted in 2002. In 2003, reserve volatility increased significantly. At the beginning of the year, the MNB was forced to purchase nearly EUR 5 billion in defence of the exchange rate mechanism, and most of this amount was sold within the following six months in the foreign exchange market. Starting from the second half of 2003, reserves fluctuated between EUR 10–11 billion, with low volatility. To judge if reserves are sufficient, investors, rating agencies and international institutions analyse a number of indicators. Most frequently, reserves are examined relative to the monetary basis: the broader monetary aggregates M2 and M3, the economy's foreign debt with a maturity up to one year, or monthly imports.

The reserves-to-monetary basis (M0) ratio indicates the amount of central bank money that can be covered by foreign exchange reserves. This indicator is used on the basis of the concept that if reserves exceed the monetary basis, the central bank has the theoretical choice to set up a currency board or unilaterally switch over to a single currency (dollarisation). If the central bank chooses a deposit instrument as its main means, then in the course of such a shift reserves must also cover the sterilisation instruments placed with the central bank. If, however, loans to commercial banks are chosen as the prime monetary policy means, the reserves required for such a shift are less than the monetary basis by the amount equivalent to the loans extended by the central bank to commercial banks.

**Chart I.25 International reserves relative to various monetary aggregates**

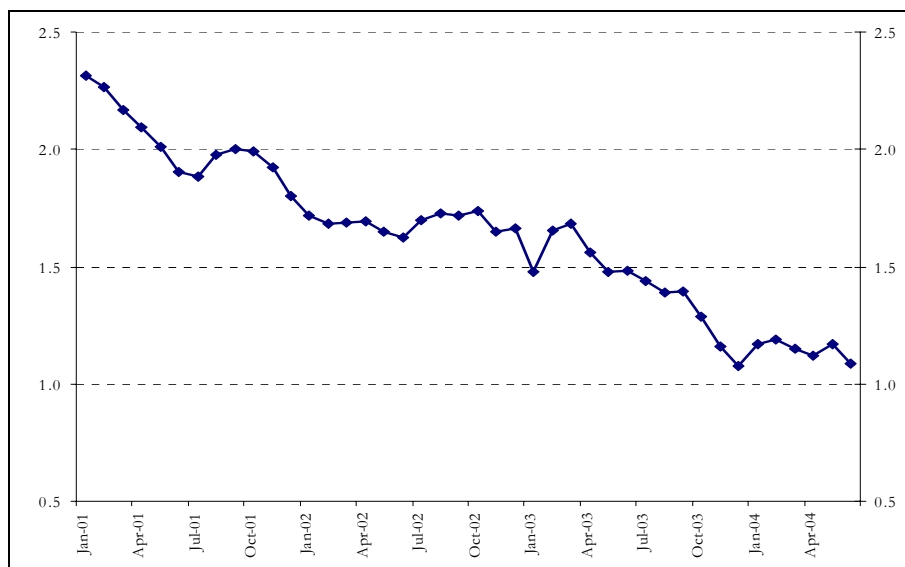


International comparative analyses frequently relate reserves to various indicators of the broader monetary aggregates. The information provided in the M2-to-reserves and M3-to-reserves ratios alone is insufficient, as these proportions usually fall with the development of the financial system and experience shows that these quotients are far lower in more developed financial systems than in less developed ones. Investors, however, often interpret a rapid decline in the ratios as increase in the vulnerability of the exchange rate regime. Disregarding the transient effect of the 2003 speculative attack, in Hungary the ratios of reserves to the broader monetary aggregates are on the decline. This results partly from a conscious reduction of reserves in 2002, and partly from the development of financial intermediation.

Since the Asian crisis, the so-called Guidotti rule, which compares reserves to the short-term foreign debt of an economy, has become one of the most frequently used indicators. This ratio assumes a crisis situation in which an extensive liquidity shock prevents all the economic participants from concluding new borrowing contracts, and estimates the time, expressed in years, for which the foreign currency reserves are sufficient to repay external debt. Although in Hungary the extremely high rate of non-resident ownership practically excludes the possibility of such a crisis, the MNB monitors this ratio as it is widely used. A further problem related to this ratio is that it fails to consider the private sector's sizeable short-term liquid claims vis-à-vis the rest of the world, even though this may be used as a resource of debt repayment in a shock situation as described above.

In Hungary's case, the ratio<sup>6</sup> has been gradually declining over the past three years, although it has always remained above 1. This decline in the ratio can be explained by the reduction of reserves at the beginning of the period, and a rise in the private sector's gross short-term debts over the past eighteen months.

**Chart I.26 International reserves as a percentage of the economy's short-term external debt\***



\* Based on balance of payments statistics and according to original maturity.

<sup>6</sup> For the purposes of quantifying the economy's gross debt with a maturity up to one year, the liabilities arising from credit institutions' derivative positions have been netted. This is due primarily to the settlement features of derivative instruments, as when transactions are concluded, both liabilities to non-residents and claims increase rapidly, while the net derivative position remains unchanged.

## II. The structure of financial markets

### II. 1. Summary

Reliable information on the risks arising from different financial intermediary activities and the positions undertaken is of key importance when ensuring the stable operation of the financial system and, of the banking system in particular. To this aim, two factors must be taken into account simultaneously: the size of the positions (exchange rate, interest rate, liquidity positions, etc.) undertaken by certain members of the financial intermediary system and the extent of possible shocks caused by changes in the price and amount of financial assets attached to various open positions. Although unexpected, large-scale shifts usually reflect the fundamental status of the economy, the effectiveness and liquidity of financial markets greatly influence the volatility of the price of assets and ultimately the risks to stability in a financial intermediary system.

Accordingly, this chapter examines certain segments of Hungarian financial markets including the foreign exchange market, the money market and the debt securities market with a view to how appropriate and effective they are. In this respect it is important to identify the typical participants of a given market segment (domestic banks, speculators and real-money investors), the extent of concentration and the transparency and effectiveness of pricing. When assessing the liquidity of a market, the size of the secondary market turnover, the size of the bid-ask spread and the volatility of asset prices and yields are also taken into account.

Of the domestic financial markets, the foreign exchange market continued to be the most liquid in 2004, which is a typical feature of small, open economies. The share of the FX swap market within secondary market turnover is especially large, although turnover in the spot foreign exchange market is also significant, despite the slight decline in 2003, in line with a decrease in exchange rate volatility. While banks, non-residents and domestic firms are all present in the spot market, the FX swap market is characterised by high concentration and the dominance of foreign participants. The interbank forward market continues to be narrow, with domestic enterprises typically conducting hedging transactions. The size of the Budapest option market is also negligible, mainly transmitting domestic speculative and hedging transactions to the forint option market in London with a much greater size.

In international comparison, foreign investors play an important role in the government securities market. Turnover is stable, but in contrast with the foreign exchange market, the increase in volatility has occurred simultaneously with a temporary drop in turnover on several occasions. The bid-ask spread on the forint government securities market is higher than in the Czech or the Polish markets. Possible underlying reasons for this include the volatility of yields, which started to increase in 2002, and only diminished in 2004, and a non-electronic, hence less transparent, system of transactions, which differs from that in place in other European countries.

In 2004 H1, a robust increase in money market turnover was discernible; and the growth of the deposit market was driven by more sparing use of O/N central bank instruments, suggesting that money market participants engage in trading with each other more intensively in managing liquidity positions on a daily basis. Repos became more popular

due to money market transactions by the Government Debt Management Agency in order to smooth the Treasury Account.

**Table II.1 Average daily secondary market turnover of certain segments of domestic financial markets (HUF billions)**

	2003 H1	2003 H2	2004 H1
Foreign exchange spot	144.8	137.3	129.7
FX-swap	325.9	329.7	396.6
FX forward	26.2	22.2	19.8
Currency options turnover	7.5	2.1	4.0
<b><i>Total foreign exchange turnover</i></b>	<b><i>504.4</i></b>	<b><i>491.3</i></b>	<b><i>550.2</i></b>
Government securities market	85.2	80.1	87.9
Other bonds market	0.9	0.4	0.5
Mortgage bonds	1.7	1.5	2.5
<b><i>Total debt securities market turnover</i></b>	<b><i>87.7</i></b>	<b><i>82.0</i></b>	<b><i>90.9</i></b>
Unsecured loans/deposits	68.6	93.0	117.0
Repos	10.3	8.9	14.8
<b><i>Total money market turnover</i></b>	<b><i>78.9</i></b>	<b><i>102.0</i></b>	<b><i>131.8</i></b>

## II. 2. Foreign exchange market

### II. 2. 1. Spot market

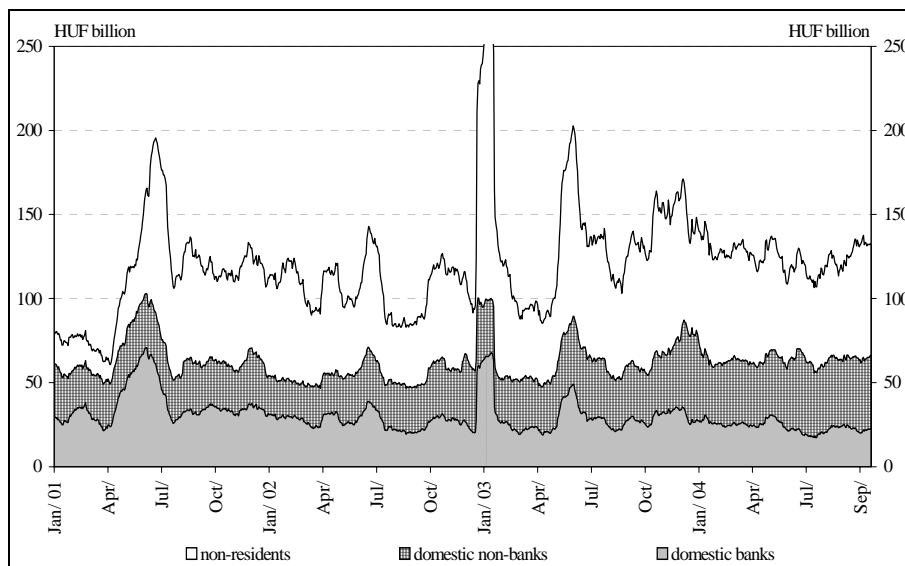
Foreign exchange spot transactions take place in the over-the-counter (OTC) market where Hungarian commercial banks act as market-makers and conclude trades mainly with non-resident clients vis-à-vis the euro. Despite this role, domestic banks only undertake exchange rate risks to a limited extent; and they moderate their balance sheet open positions in periods of turbulence with the help of derivative markets (the forward market in particular).

In addition to exposure, exchange rate risks undertaken by banks also depend on exchange rate volatility. The liquidity of the domestic market including turnover is key to maintaining this volatility at a moderate level. Based on an average daily turnover of EUR 500 million, the liquidity of the domestic forint-foreign exchange spot market is similar to that of other important foreign exchange markets in Central and Eastern Europe with the second highest volume of the forint market in the region. In early 2004, the daily turnover of the Polish zloty was EUR 750 million, while the turnover of the Czech koruna amounted to EUR 450 million per day. At the same time, the turnover of the Czech koruna remained flat over the past three years while the turnover of the zloty as reported by Polish banks fell by nearly 50%. This was due to the fact that foreign banks centralised their foreign exchange trading departments by relocating this part of the turnover abroad.

Turnover in the domestic foreign exchange market grew vigorously following band widening in 2001 and foreign exchange liberalisation. Due to more hectic exchange rate movements in 2003, average daily turnover grew further to HUF 140 billion, followed by a

recent stabilisation of foreign exchange market turbulence at a somewhat lower level with a moderate upward trend still in place.<sup>7</sup>

**Chart II.1 Forint-foreign exchange spot market turnover by types of customers (20-day moving average)**



Most of the activity on the spot market is attributable to foreign investors, which account for almost half of daily turnover. Their share of total turnover grew from 20% to 50% following foreign exchange liberalisation. According to the 2004 survey by the BIS,<sup>8</sup> one-third of the forint-foreign exchange spot market trading takes place in London, bringing the share of foreigners to an even higher level of nearly two-thirds of total turnover. This dominance by non-residents of a liberalised foreign exchange market whose size is small by international standards is understandable and typical of the other foreign exchange markets in the region as well. With regard to the Czech koruna, non-residents' share in the spot market (excluding the off-shore market) is around 50%, while in the case of the Polish zloty this figure is 60%.

Domestic non-bank market participants primarily need forint-foreign exchange conversion to carry out real economic, foreign trade and other foreign exchange transactions. Their market share showed a growing trend in the last two years: 35% of domestic transactions were made by domestic non-banks in the last few months on average, representing 50% nominal growth since 2002. This growth was due to the expansion of foreign trade turnover and the dynamic increase in residents' foreign currency loans.

Domestic banks conduct only a small part (15%–20%) of their turnover amongst themselves. The total amount of their daily transactions expressed in forints remained mostly flat over the last few years, suggesting that domestic credit institutions mainly focus on intermediation and covering open positions.

<sup>7</sup> See more details on liberalisation in 'Effects of the band widening and foreign exchange liberalisation' by Flóra László, Szabolcs Vigh-Miklé, Csaba Móré and Zoltán Wolf, *Report on Financial Stability*, June 2002.

<sup>8</sup> Based on the data collected in the framework of the survey 'Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2004' coordinated by BIS in 2004.

In addition to the longer-term trends in the above mentioned breakdown of spot market participants, seasonality also plays a special role. In the last 2–3 weeks of the last few years the activity of domestic non-banks in the foreign exchange market grew significantly, exceeding even 50% of their daily share in total turnover as the average of several days. This is explained by the fact that December futures contracts reach maturity in this period and settlement of such adds to the growing turnover, while closing positions at year-end could also contribute to the stronger activity of residents.

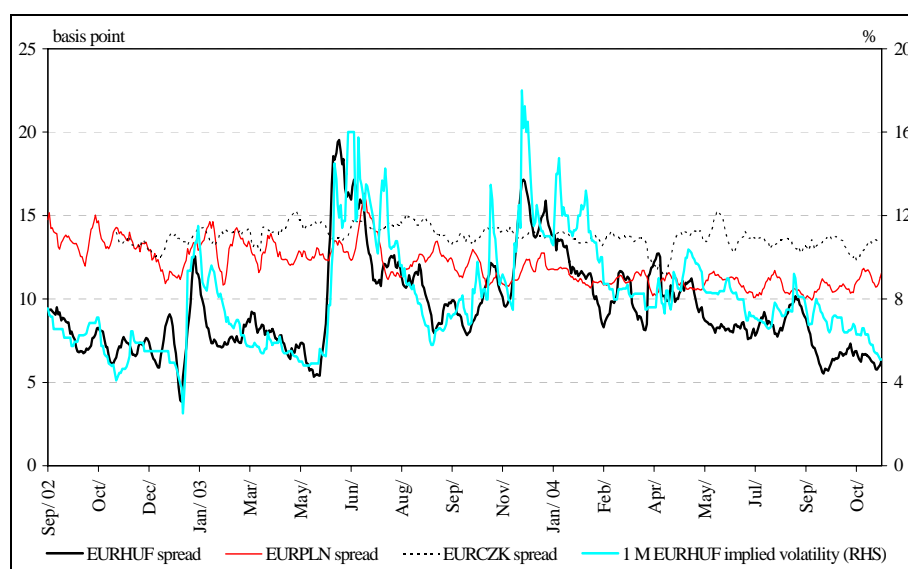
The foreign currency breakdown of the market shows that a major part of turnover is in euros, with a US dollar share of nearly 10%. Denominations according to foreign currencies shifted slightly in the last year and a half: the share of the Swiss franc grew from its previous level of 1%–2% to 5% by the third quarter of 2004. This trend is mainly due to foreign currency loans to households which have shown a dynamic increase since the spring of 2004, making the Swiss franc the second most popular foreign currency for loans after the euro.

The spot foreign currency market is rather concentrated with 25 domestic banks trading on a daily basis and the six largest banks accounting for 60% of total turnover. With regard to foreign banks, a similar concentration prevails: the six largest foreign banks are responsible for 50% of turnover. In addition to the big London banking houses, the ten largest foreign banks (conducting 70% of turnover) also include credit institutions with headquarters in Germany and Austria.

The liquidity of the foreign exchange market is usually characterised by the size of turnover, the bid-ask spread and changes in exchange rate volatility. In addition to daily average turnover of HUF 125 billion, market liquidity is well characterised by the fact that last year trading on the spot market with a value of less than HUF 85 billion was conducted only on one-tenth of trading days.

Market-maker banks can offset the risks arising from low liquidity levels by increasing the bid-ask spread of the foreign currency. In 2004, the average spread was 9 basis points (HUF 0.25) as a percentage of the exchange rate. The size of the spread is considered low in the region, exceeding the average 10–15 basis points characteristic for the zloty and the Czech koruna only in periods of major foreign currency turbulence (for reference, the euro-dollar bid-ask spread is around 3 basis points). In the longer term, the forint market spread correlates with exchange rate volatility. Following the growth in 2003 and in line with the decrease in volatility, the spread also fell, hovering around its historical trough in October 2004. At the same time, however, the growing spread and volatility in more turbulent periods resulted in greater spot market turnover, suggesting that the sudden increase in the spread in these periods was not a clear indicator of a fall in the liquidity of the market.

Chart II.2 Regional bid-ask spreads and the volatility of the forint (9-day moving average)



## II. 2. 2. The FX-swap segment

Based on gross turnover, the FX swap<sup>9</sup> market is the most significant segment of the forint foreign exchange market and has grown dynamically in line with the international trend. Average daily turnover exceeds HUF 350 billion, a value nearly three times greater than spot market turnover. Although—based on its size—the FX swap market is the most significant financial market segment, potential risks to stability in this market are somewhat different from those characterising other segments.

The FX swap transaction is essentially a loan transaction backed by foreign currency as collateral. This means that credit risk in this market segment is limited.<sup>10</sup> As most of the transactions are conducted between foreign partners and Hungarian banks with the aim of financing, this segment primarily represents a liquidity risk to the stability of the financial system. In earlier periods of market turbulence the FX swap market operated adequately: there have been no difficulties arising from the significant increase in turnover and the significant movements in capital experienced in these periods. Another reason for monitoring this market is that foreign market participants may enter into FX swap transactions with a speculative purpose, combining them with spot transactions as a substitute for forward market transactions which they tend to use less frequently.

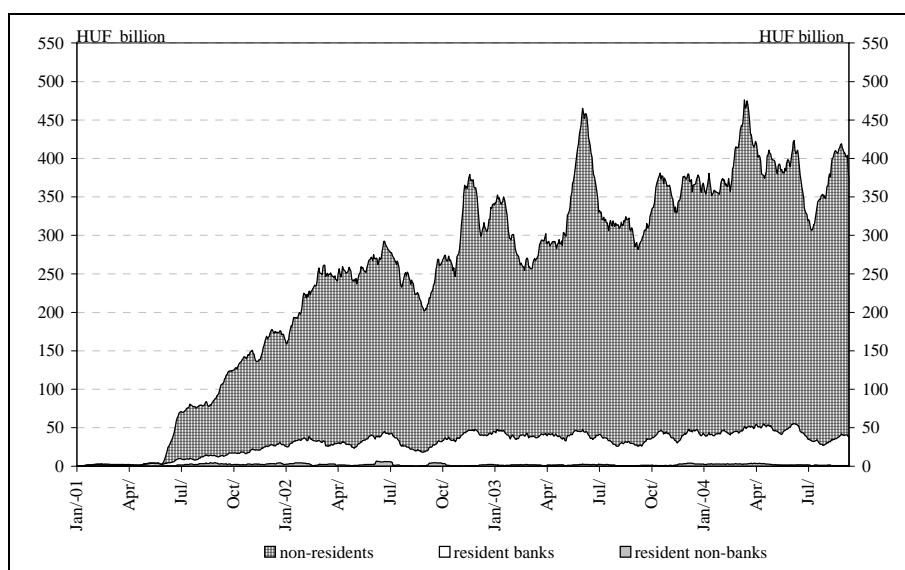
<sup>9</sup> The FX-swap is a simple exchange transaction in the course of which two counterparties swap two amounts denominated in two different foreign currencies (spot leg) and fix the date of swapping them back in the future (forward leg). The swaps (cash-flows) actually take place in both legs leaving no open foreign currency options on either side and the interest rate differential is built into the exchange rate of the forward leg. The FX-swap is the most simple form of foreign exchange swaps and is not equivalent with the currency swap of 'several legs'.

<sup>10</sup> The non-performance risk associated with the foreign exchange market (Herstatt risk) is naturally present in these transactions as well, but is managed by market participants through limits and the appropriate timing of settlement.

The share of domestic interbank turnover in FX swap turnover represents only one-tenth of transactions with foreigners. Transactions with domestic non-banks are rare with a negligible turnover.<sup>11</sup>

Following foreign exchange liberalisation in June 2001, the turnover of FX swaps on the domestic foreign currency market began to increase rapidly. In line with growth in transactions with foreigners, domestic interbank turnover also increased. Similarly, growth in turnover was dynamic in 2002 and 2003 (although to a smaller extent), apparently remaining flat, at a level of HUF 350–400 billion on a daily average since early 2004.

**Chart II.3 Forint-foreign FX swap turnover of the Hungarian banking system by sector (20-day moving average)**



According to the 2004 BIS survey, about one-third of the transactions making up the global forint FX swap turnover are conducted abroad,<sup>12</sup> suggesting that the turnover (most probably mainly attributable to London banks) represents HUF 180 billion, i.e. half of the turnover of the domestic banking system. This means that at present the daily average turnover of the global forint-foreign currency FX swaps exceeds HUF 500 billion.

This growth in turnover is in line with the global trend: FX swaps represent the fastest growing segment on all the foreign exchange markets of the world (based on the April 2004 BIS survey, global turnover grew by nearly 50% in three years). In a regional comparison the fact that the domestic FX swap market is three times larger than the spot market corresponds to developments in the Polish market, where the FX swap market is three and a half times larger than the spot market. The same multiplier is only two in the case of the Czech koruna, which may be attributed to a smaller share of foreigners in the government securities market.

The breakdown by denominations reflects the dominance of the US dollar in this segment: in contrast with the spot market, swaps conducted vis-à-vis the dollar make up 93% of

<sup>11</sup> See more details on derivatives markets in 'Development of the Hungarian derivatives market and its effect on financial stability' by Csaba Csávás and Gergely Kóczán, *Report on Financial Stability*, December 2003.

<sup>12</sup> Transactions conducted abroad mean transactions made between two foreign participants regarding which the MNB does not have regular quantitative information.

turnover. The remaining 6% of transactions was made vis-à-vis the euro and approximately 0.5% of turnover is related to transactions vis-à-vis the Swiss franc. The dominance of the dollar is also an international feature of the FX swaps explained by market participants as a market tradition.

With regard to maturity, in line with international proportions, transactions with the shortest maturity (of one week or shorter) dominate the Hungarian market, representing nearly 90% of turnover. The remaining 10% is evenly distributed among maturities of 1 week to 1 month, 1 month to 3 months and 3 months to 6 months. The share of transactions with a maturity of over 6 months is insignificant.

The concentration of the domestic FX swap market is reflected in the fact that although 25 domestic banks conduct transactions, only 14 of them have regular daily turnover and three domestic banks with the highest turnover (subsidiaries of large international parent banks) account for a 60% share of total turnover. Since liberalisation, concentration and the group of market leaders has not changed significantly.

With regard to the breakdown by foreign partners, mostly London investment banks, also active in the spot market, constitute almost 100 percent of the turnover vis-à-vis foreigners. Concentration is high with the six largest foreign participants conducting 50% of turnover.

The growing turnover of FX swap transactions is mainly due to the fact that, while prior to foreign exchange liberalisation foreign investors purchased forints needed for their demand for government securities through spot transactions, following the lifting of foreign exchange restrictions it was not only the 'traditional' derivatives market (forward and options transactions) that were opened to foreign participants, but they were now allowed to conduct open FX swap transactions with Hungarian banks as well. From that time on, market participants could modify their exposure, exchange rate or interest rate position at a very short notice without actually changing their assets in their balance sheets. This fact has significantly changed the nature of the connection between the demand on the foreign exchange market and on the government securities market.

Although the stock of government securities of foreign participants has been increasing since early 2001, this has not led to growth of similar path in the demand for forints on the foreign exchange market. This is due to the fact that foreigners may purchase government securities or obtain the amount needed to maintain their government securities portfolio through FX swaps (on the first 'spot' leg of swaps). This represents a significant shift compared with financing through spot transactions in the foreign exchange market, as through these FX swaps foreign investors do not modify their forint exchange rate exposure and do not change their forint positions.<sup>13</sup> Thus, foreign participants can differentiate between their decisions regarding their government securities holdings (or other outstanding forint assets) and on their forint positions and may make these decisions independently from each other. At the same time, using the high turnover of this market the combination of an FX swap transaction and a spot foreign exchange transaction allows a synthetic forward foreign exchange position to be built up.

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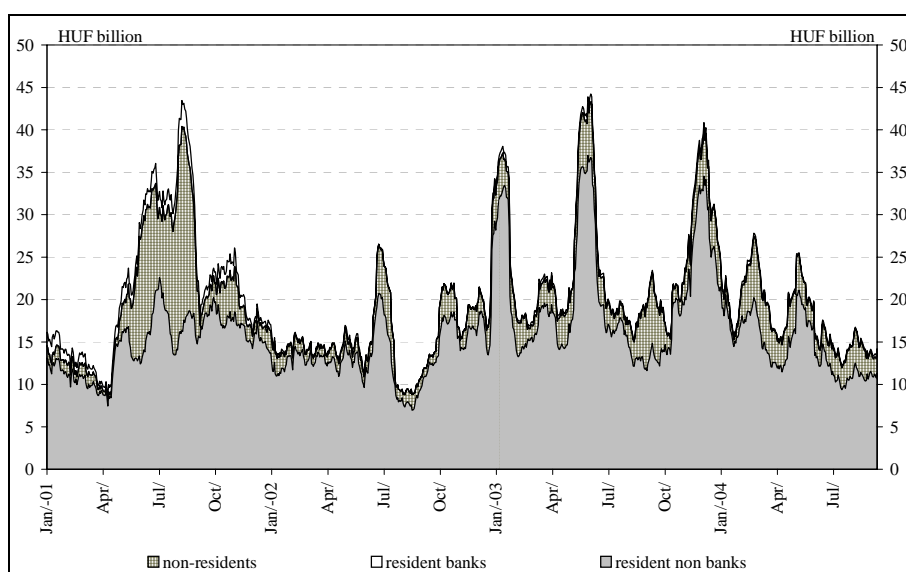
<sup>13</sup> Foreign investors most frequently finance their forint positions protected against exchange rate risks through the rollover of overnight swaps which partly explains why the turnover of short-term transactions is the highest in the case of swaps.

### II. 2. 3. The forward market

The turnover of outright forward transactions is significantly lower on the domestic forint market than on the spot market or the FX swap market segments. This market is primarily used for hedging, as, in contrast with the other two segments, the domestic market of these transactions is dominated by transactions conducted between banks and domestic non-banks making up 80%–90% of the average turnover of HUF 15–20 billion. The rest of the turnover is practically attributable to transactions with foreigners, with domestic interbank transactions representing a negligible portion of turnover.

Due to the relatively low domestic turnover in the forward market and its main use as a hedging instrument, it does not play a key role with regard to stability. During hectic foreign exchange market periods, however, this market segment gains importance as at such times domestic banks often endeavour to hedge their open positions undertaken on the spot market against their domestic customers on this market. This is reflected by the fact that, although the changes in the forward market turnover do not follow a well-defined trend, turnover has clear peaks during periods of turbulence on the foreign exchange market.

**Chart II.4 Gross forward forint-foreign currency turnover of the Hungarian market system (20-day moving average)**



According to the 2004 BIS survey, forward forint turnover abroad is significantly higher than domestic turnover (about three times as large with only one-fourth of turnover attributable to Hungarian banks), but even so it does not come close to the turnover of the swap and spot market segments. Indirect information also suggests that a significantly higher proportion of foreign turnover is attributable to interbank turnover.

At present, transactions with a maturity of 1 month or less represent half of the turnover and transactions with a maturity of 1 to 3 months and 3 to 6 months each make up nearly 20% of the turnover. In 2001, the share of short-term transactions (less than 1 month) was much higher, but since then their proportion has significantly declined.

The foreign currency breakdown of forward transactions shows that these transactions are conducted most frequently vis-à-vis the euro, while transactions vis-à-vis the US dollar are

also significant. In addition to these two dominant currencies, the Swiss franc also has a measurable turnover (around 5%), similarly to that of the Japanese yen and the pound sterling, resulting in a more varied foreign currency breakdown than in the case of the swap market.

The domestic market is concentrated in this segment as well with the six largest banks responsible for more than 60% of turnover; the group of key banks has not changed significantly since band widening.

#### **II. 2. 4. The option market**

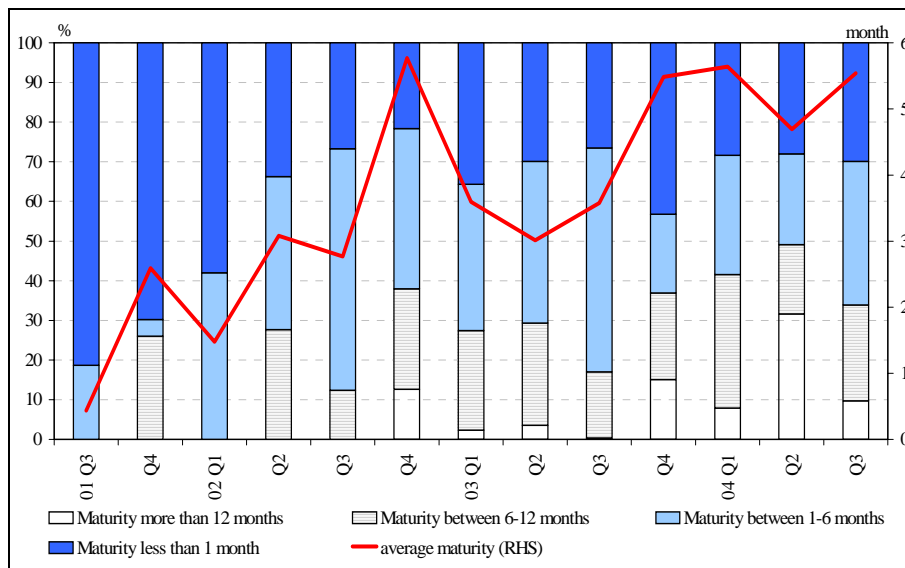
The option market represents the smallest segment of the domestic foreign exchange derivatives market. The size of this market is even smaller than the forward market, with an average daily turnover of HUF 5 billion. Based on market information it seems that, similarly to the forward market, this segment of the forint-foreign exchange market is also characterised by a concentration of market activity mostly abroad: based on estimates the turnover in London may be five times as large as that in domestic markets.

The option market plays an important role mainly in turbulent periods when daily turnover suddenly grows several times higher than usual. Although—similarly to forward transactions—this market can be used to build speculative positions, in addition to hedging, its turnover does not reach the size of the spot market segment even with the London market and thus we can assume that it is of no significance with regard to the market exchange rate.

The structure of the option market has most in common with that of the spot market. Foreigners represent more than one-half of turnover, with domestic non-banks also playing an important role. One special feature of this market is that banks hedge their options made with domestic non-banks against foreigners usually on the same day through an identical option transaction in the opposite direction ('option pairs'). While in 2002–2003 transactions conducted in these pairs represented 40% of turnover, their share grew to 75% in 2004, suggesting that domestic non-banks are increasingly dominating the market share concentrated in Budapest.

Similarly to the spot and forward markets, the most frequently used foreign currency of the option market is euro. The maturity structure is similar to that of the forward market; and the term of the options weighted with the transaction value was around five months last year. Options with a maturity of 1 to 6 months represent nearly 30% of transactions. The share of options with a maturity of 6 to 12 months is also relatively high at 40%, and the share of transactions with longer maturity is not negligible either. Changes to the maturity structure are similar to the trend experienced in the case of forwards: the share of options with a maturity of 1 month declined significantly in the course of 2002, while the proportion of transactions with a maturity of over 1 year grew by 2004. Consequently, the average maturity clearly became longer, reflecting the growth of the share of transactions by other domestic participants usually entering into longer-term options than foreigners.

**Chart II.5 Maturity structure of the domestic option market**



## II. 3. The bond market

### II. 3. 1. The government securities market

The Hungarian bond market is dominated by government securities, as enterprises issuing bonds are not a significant presence. Supply in this segment of the financial markets could only be diversified by the increasing role of mortgage bonds which appeared in the last few years. Nevertheless, only a negligible part of issued mortgage bonds appeared on the secondary market. On the government securities market, issued securities are mediated to investors by primary dealers, all of which are banks or investment enterprises closely attached to banks. Due to this intermediary role, more effective operation of the government securities market reduces banks' liquidity and interest rate risks.

A predominant part of the turnover of secondary government securities takes place on the OTC market. This is similar to the practice in the euro area, but there is a fundamental difference in that while most of the market turnover occurs via electronic trade, in Hungary most deals are made by telephone or through connections with market intermediaries. While in the case of trade through an electronic platform quoting prices takes place continuously, enabling every participant to monitor market movements, in Hungary information about the quotes of primary dealers can only be gained by contacting them directly, making market price movements less transparent.

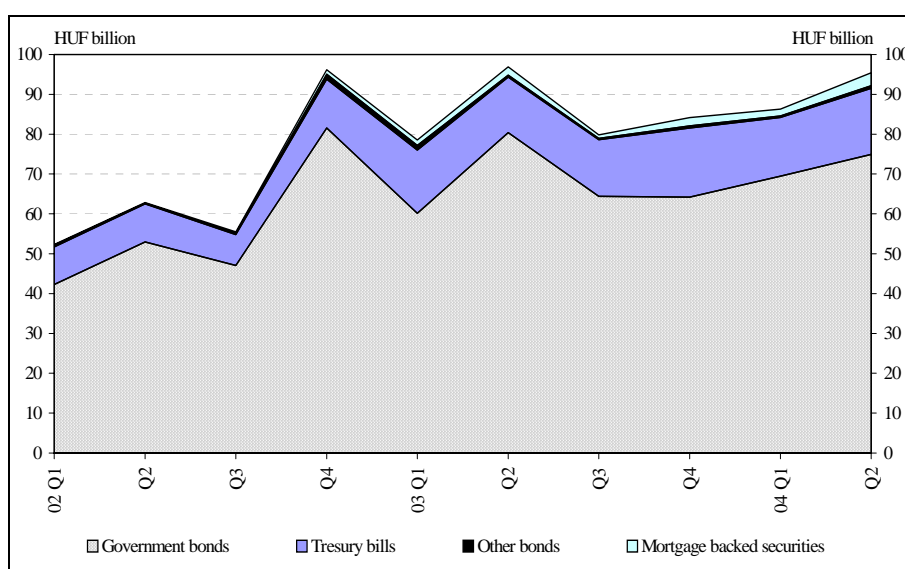
In half of the newly-joined countries trade in government securities also takes place on the OTC market. Among the markets in our region with significant turnover, it is only in Slovakia where secondary trading takes place as a stock exchange transaction, whereas similarly to Hungary the share of OTC transactions is practically 100% in the Czech Republic and Poland.

It is in the dealers' interest to maintain OTC trade as opposed to trade on the stock exchange, as this allows them to preserve anonymity and not to disclose their positions for each participant. In the case of the sale of a large number of items typical of the domestic market with a significant foreign share in the government securities market, this represents

a special advantage. Prominent market participants also prefer personalised trade over the counter to regulated trade on the stock exchange. Daily T+2 settlement is compulsory on the stock exchange and it is also widely used on the OTC market, but settlement can be shorter on the latter (T or T+1).

Turnover data confirm that government securities represent the largest segment of the debt securities market. In the second quarter of 2004 the share of government bonds and discount treasury bills still amounted to 97% of total turnover, despite a slight increase in the turnover of other segments of the credit market.<sup>14</sup> The increase in the turnover of debt securities other than government securities was initially due to the growth of other bonds and—since 2003—to that of mortgage bonds.

**Chart II.6 Instrument breakdown of the daily average turnover of the credit market (quarterly data)**

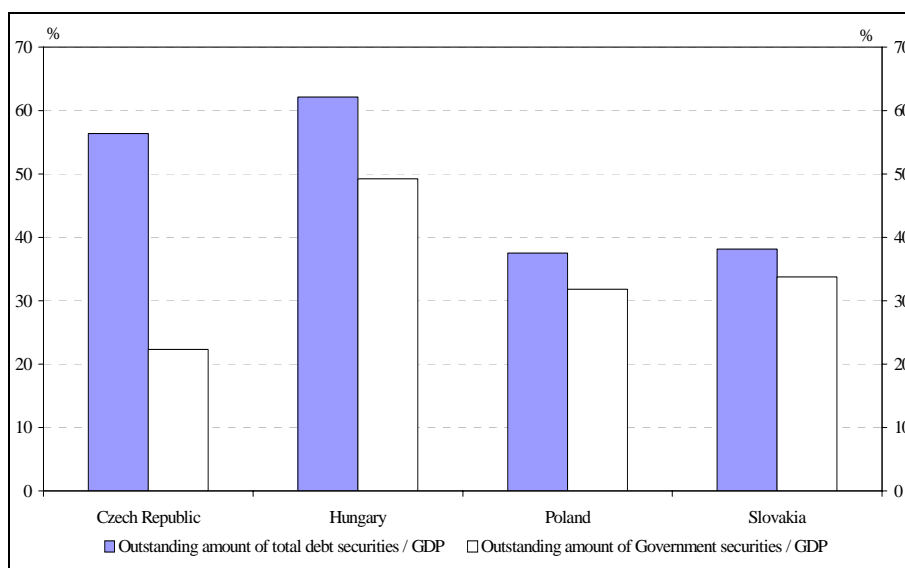


In mid-2004, the daily turnover of the dynamically growing government bond market was HUF 75 billion, while discount treasury bills increasing at a similar pace constitute about one-fifth of this amount. The turnover of mortgage bonds has increased significantly from a low base since end-2002, with the average daily turnover reaching HUF 2–3 billion, 25 times the original amount over the whole period.

Although due to the high level of government debt and the issuance of mortgage bonds the outstanding debt securities-to-GDP ratio is the highest in the region, the turnover of government securities suggests relatively low liquidity, despite robust growth in government securities turnover, especially compared with the Polish market.

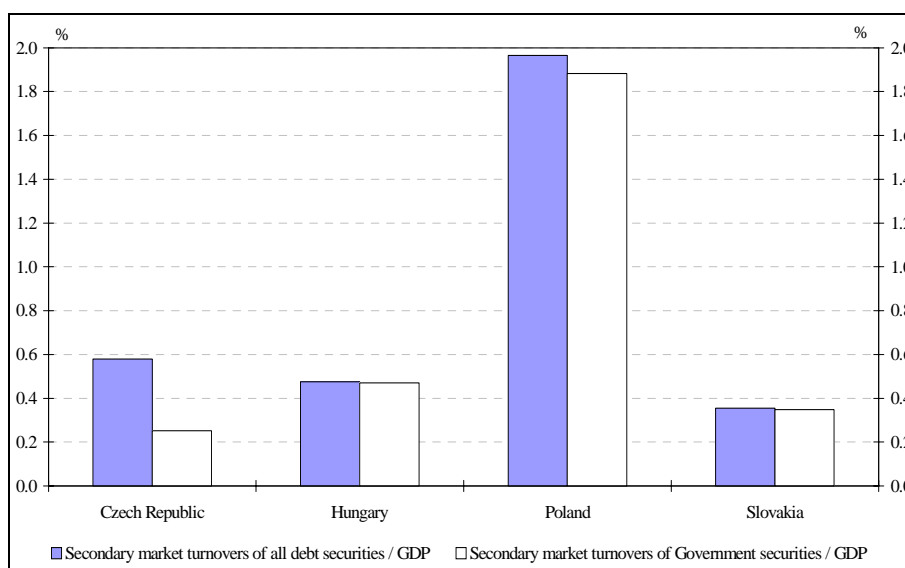
<sup>14</sup> Source: Custodian reports of Keler Rt and data issued by Budapest Stock Exchange regarding debt securities. OTC data do not include turnover handled by one custodian and thus represent the lowest estimate of the total secondary market turnover.

**Chart II.7 Total debt securities and outstanding government securities to GDP ratio, December 2003**



Source: ECB.

**Chart II.8 Average daily secondary market turnover of total debt securities and government securities (as a percentage of GDP, 2003)**



Source: ECB.

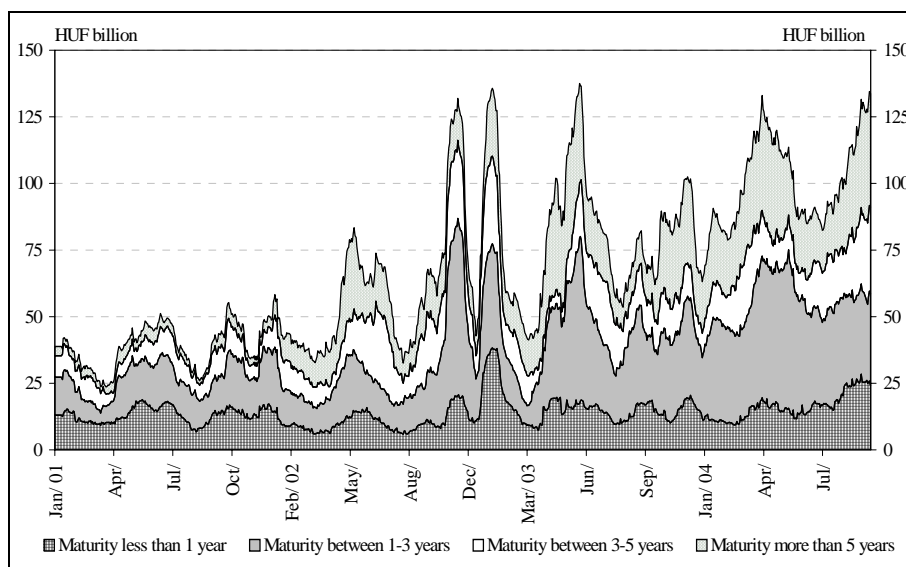
Although the MNB has no partner breakdown of turnover data at its disposal, a major part of government securities turnover is most likely represented by trading among domestic participants.<sup>15</sup> Foreign investors prefer to give buying instructions at auctions and often hold their securities for a longer period without making any transactions. It is only at times of significant market movements that they start to trade in greater volumes in the secondary market. We assume that the sudden increase in turnover at end-2002 and in the

<sup>15</sup> Based on the report of the Government Debt Management Agency required for primary dealers, primary dealers conducted 31% of their turnover with non-residents in the first half of 2004.

second quarter of 2003 was due to their more active participation. The former meant a wave of government securities buying, while the latter represented a wave of sales of government securities.

Within government securities the two segments with the largest turnover (bonds with the longest maturity of over five years and the short-term bonds with a maturity of 1 to 3 years) both have a share of 35% each, while the turnover of the other two segments (securities with a turnover of less than one year and securities with a maturity of 3 to 5 years) remains flat at around 15%.

**Chart II.9 Maturity breakdown of government securities turnover (20-day moving average)**



It is a special feature of the Hungarian government securities market that quoting takes place with regard to yields, which could be misleading when compared with European spreads. As far as the magnitude is concerned, similar OTC market spreads dominate there too, but since prices are quoted on the basis of the price this in fact means a significantly narrower spread especially in the case of long-term securities.

In Hungary, one of the main reasons for the low turnover of transactions conducted on the stock exchange is that primary dealers quote the securities using a spread with the maximum allowed value equalling 50 basis points in yields (for non-benchmark securities of fixed rate). Actual trade takes place on the OTC market, where dealers maintain a significantly lower spreads than this.

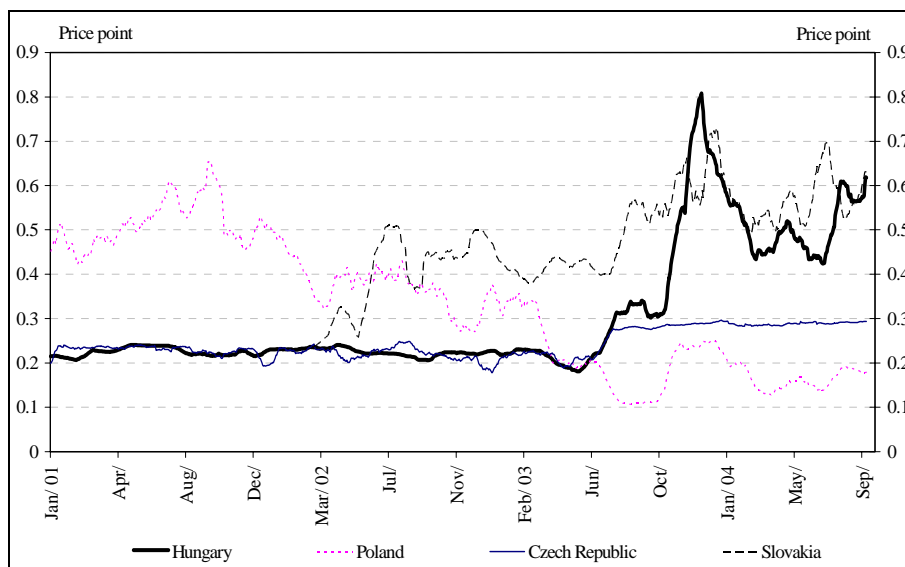
The bid-ask spread on the government securities market is an indicator of general market uncertainty and liquidity risks. The Hungarian market has relatively limited data on this spread, in our estimate it is around 5-10 basis points expressed in yields on the OTC market.

For a long time the Hungarian bond market was characterised by a spread equivalent to that of the Czech government securities market (around the value of 0.2 price points, i.e. the percentage points of the price<sup>16</sup>). Since summer 2003 this has increased due to market

<sup>16</sup> As mentioned above it is a characteristic feature of the Hungarian government securities market that quoting is done in yields. Nevertheless, spreads are easiest to compare on an international level when expressed in asset prices.

turbulence and following a relatively sudden peak stabilised at a value of 0.4–0.6 price points by the end of 2004 H1. This value is double the value seen on the most liquid Polish market and is about the same as the value on the Slovak market. In addition to the characteristic features of the market (non-electronic trade on bilateral basis and in yields), this could be explained by the fact that the volatility of government securities yields has increased markedly since 2002 only moderating in the course of 2004, still not reaching its former level.

**Chart II.10 Average bid-ask spreads of the Hungarian, Czech, Polish and Slovak government securities markets**



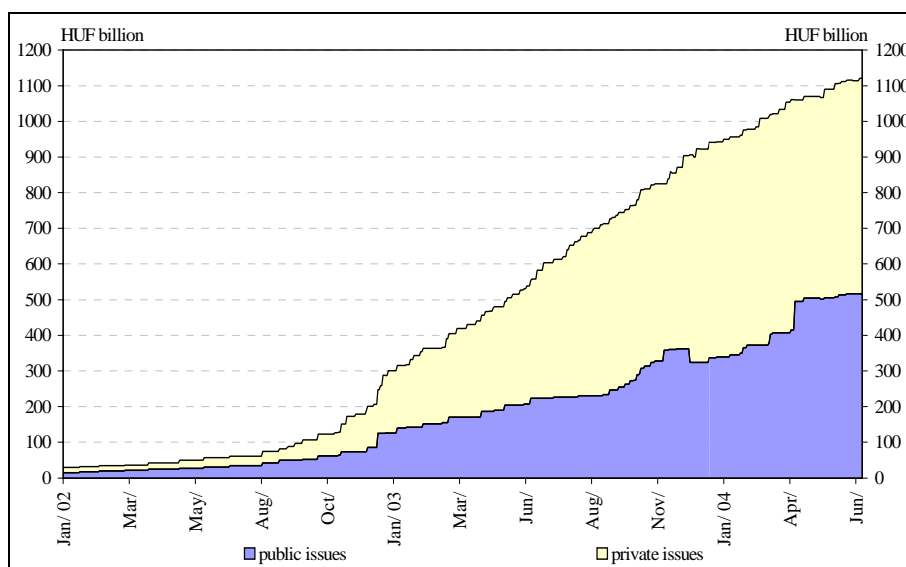
Source: DrKW Research.

Since—due to limited market liquidity—large-volume sales of government securities are only possible with significant price influence, it is not very likely that the amount of securities owned by foreign investors will suddenly decline as a reaction to an external shock. Due to the relatively low liquidity level, however, an individual large-volume transaction may lead to a significant change in yields, resulting in considerable yield volatility in a short period of time, as was the case in October 2003.

### II. 3. 2. The mortgage bond market

With regard to the amount of securities issued, the mortgage bond market is the second largest market after the domestic government securities market. At the end of 2004 Q2, the total nominal value of these securities was HUF 1,120 billion. There are three credit institutions issuing mortgage bonds on the market: FHB Land Credit and Mortgage Bank, OTP Mortgage Bank and HVB Mortgage Bank. The first impetus to the development of this market was given by the subsidy system introduced in 2001, followed by dynamic growth of the amount of mortgage bonds as a result of the modification of mortgage lending terms. The outstanding volume of securities started then to grow evenly by a monthly average of HUF 50 billion. Since spring 2004 monthly growth in volume has fallen to nearly half of the former level, due mainly to restrictions on housing loans.

Chart II.11 Outstanding volume of mortgage bonds by type of issue



Mortgage bonds are traded both on the stock exchange and off the exchange. Stock exchange turnover is low: the total value of transactions on the 40 securities listed on the Budapest Stock Exchange was HUF 6–7 billion on average per month during the last two years. Monthly turnover was of similar volume on the OTC market, with a monthly turnover of HUF 5–10 billion in 2004 H1, despite the fact that privately issued mortgage bonds are only traded on this market.

The turnover of mortgage bonds falls short of the turnover of government securities. The monthly turnover of discount treasury bills represents 25% and government bonds 60% of the total volume, while the same proportion is 2% when taking into account the volume of mortgage bonds sold on the market.<sup>17</sup> This value is exceptionally low by international standards: average monthly turnover on the Danish market, which is the second largest mortgage bond market in Europe, is 20% of the total volume.

The lack of liquidity on the domestic mortgage bond market is partly due to the fact that the size of series of securities listed on the stock exchange is exceptionally small, with an average value of HUF 14 billion. The sale of this type of securities owned by domestic banks could be problematic because of the low liquidity level of the market. This is, however, partly counterbalanced by the fact that under certain conditions banks may take up loans from the MNB using mortgage bonds as collateral, ensuring liquidity in this way when necessary.

Low secondary market turnover could also be explained by the fact that investors in publicly issued mortgage bonds are mainly real-money investors, typically domestic institutional and foreign investors. The portfolio structure of domestic institutional investors (insurance companies, investment funds, pension funds) is controlled by a number of regulations. These regulations on the proportion of investments refer in general to securities by one issuer. This was mainly the reason why since the end of 2003 issuers

<sup>17</sup> The volume sold on the market was defined as follows: mortgage bonds purchased by the OTP and issued by OTPJ and mortgage bonds purchased HVB and issued by HVBJ were deducted from the total volume of mortgage bonds.

turned to foreign investors, resulting in an increase in their share in the volume sold on the market from 5% in mid-2003 to 40% by the end of 2004 Q2.

## II. 4. The money market

### II. 4. 1. The unsecured interbank market

From a financial stability perspective, the most important role of the interbank money market is to ensure the effective distribution of the liquidity available to the whole banking system. On a well-functioning interbank market liquidity shocks appearing at the level of certain credit institutions do not cause problems in the liquidity of the whole banking system and do not influence the undisturbed operation of payment systems. This can be achieved if both the deposit and loan sides are characterised by high turnover, a large number of participants and low concentration. In addition to this, information needed to assess the structure and development of the interbank forint market can be gained from the examination of the frequency and concentration of the use of the central bank's monetary policy instruments. The less frequent and lower the use of the central bank's O/N instruments (at a given level of fluctuation of autonomous liquidity factors), the more likely it is that there is an effective and stable interbank market.

Turnover of the unsecured interbank market showed a marked increase in the last year and a half, with the average daily turnover reaching HUF 100–140 billion in 2004 H1 as opposed to HUF 70–90 billion in 2003 H1. The liquidity position following speculation directed at the strengthening of the forint caused a temporary decline in interbank turnover in the first two months of 2003. At this time, limited by the quantity restriction on the two week central bank deposit, most banks placed their significant liquidity surplus in overnight deposits directly at the central bank with a moderate level of interbank transactions. Following this, however, interbank turnover started to increase continuously and at an accelerating pace, with 70% growth in the course of one year from 2003 H1. The low usage levels of the central bank overnight deposit facility in 2003 H1 and in early 2004 probably also contributed to this significant growth in turnover, suggesting that banks made more and more use of the other segments of the money market to manage their liquidity problems.

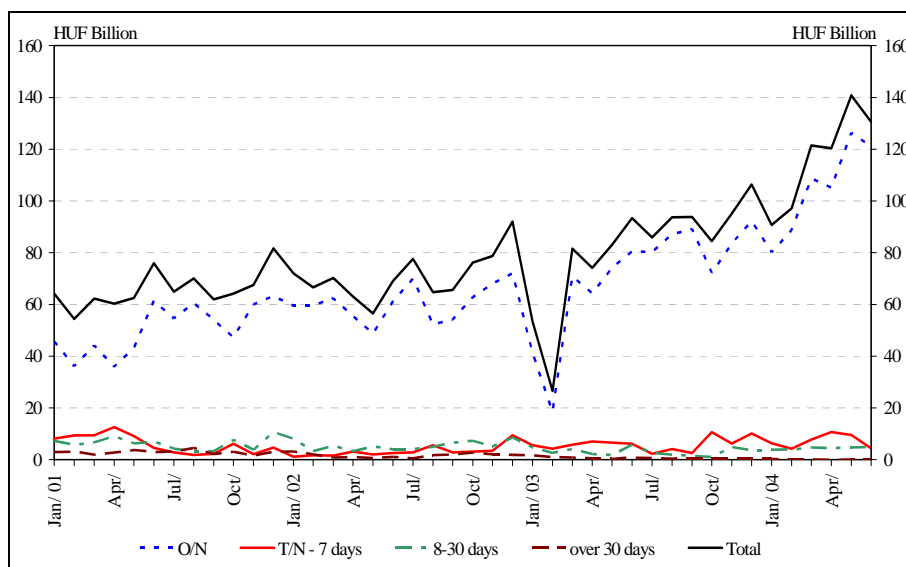
**Table II.2 Average daily turnover of the unsecured interbank market and the central bank overnight deposit (semi-annual data, HUF billions)**

	2002 H1	2002 H2	2003 H1	2003 H2	2004 H1
Interbank O/N deposit	57.7	63.3	58.2	84.0	105.2
Central bank O/N deposit	16.0	20.3	214.8	25.6	7.4

It is still a common practice, however, that a few small credit institutions manage their liquidity by making use of the central bank overnight deposit facility every day. Nevertheless, the turnover of secured central bank overnight loans started to increase gradually as opposed to the central bank deposit, with average daily borrowing exceeding the amount of deposits in 2004, similarly to the average size of transactions. This was due to the fact that during this period a number of maintenance periods ended, with the whole of the banking system remaining in a reserve deficit, and credit institutions could only fulfil their reserve requirements by taking up large loans from the central bank.

The fast growth in turnover in the unsecured interbank market was mainly reflected by the increase of the O/N maturity by over 80%. Consequently, the dominance of the O/N maturity, previously also typical of the unsecured interbank market, grew further, reaching 90% of the total turnover in 2004 H1, as opposed to 85% a year earlier. Practically all market participants are present on the O/N maturity and, in line with the length of the maturity of transactions, the number of participating banks is constantly falling.

**Chart II.12 Average daily turnover of the unsecured interbank market**



Although in 2002 interbank borrowing was clearly more concentrated than deposits, based on the data of the last year and a half the concentration of the two sides of unsecured transactions has become almost entirely balanced. Concentration indicators for the first half suggest strong competition on the interbank market. The concentration of the use of central bank instruments reflect clearly the liquidity surplus or deficit of certain market participants and the changes in the structural liquidity position of the whole of the banking system. The permanently higher concentration level of the loan side indicates that for the time being only a handful of banks are struggling with regular and sizeable liquidity deficits.

**Table II.3 Concentration of the money market**

		2003 H1	2003 H2	2004 H1
<b>Unsecured interbank loans</b>	Concentration rate (5)*	50%	53%	53%
	Concentration rate (10)	77%	78%	77%
	Herfindahl-index	718	825	775
<b>Unsecured interbank deposit</b>	Concentration rate (5)	45%	48%	48%
	Concentration rate (10)	67%	72%	69%
	Herfindahl-index	717	719	745
<b>O/N central bank deposit, filtered**</b>	Concentration rate (5)	69%	56%	70%
	Concentration rate (10)	86%	82%	86%
	Herfindahl-index	1 288	878	1 286
<b>Secured central bank loan</b>	Concentration rate (5)	72%	75%	74%
	Concentration rate (10)	92%	93%	93%
	Herfindahl-index	1,435	1,302	1,450

\* Concentration rate (5) and (10) indicates the total market turnover share of the five and ten largest market participants.

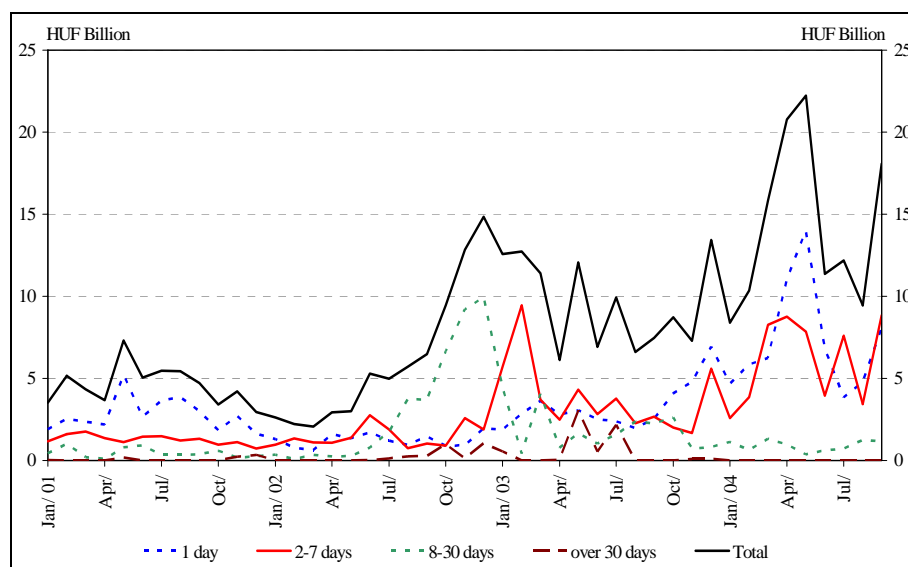
\*\* Excluding the three credit institutions most frequently placing regular daily deposits as these placements are independent of the liquidity position of the banking system.

#### II. 4. 2. The repo market

With regard to managing the liquidity of the banking system, unsecured and repo transactions of appropriate maturity are interchangeable, and it is the change in their combined turnover that is of special importance. From the perspective of stability, however, the possible growth of the repo market at the expense of unsecured loan and deposit transactions can be considered as a favourable development. Secured assets offer greater safety to participants, allowing them to manage liquidity shocks better on this market, as interbank limits are higher than those prevalent on the unsecured market.

Despite the above mentioned advantages, the turnover of the repo market and the number of market participants fall short of the unsecured money market. In 2003, the average daily turnover remained practically flat, fluctuating in a narrow band of HUF 8–11 billion. In 2004 H1, however, following a marked increase of 50% average daily turnover reached HUF 15 billion. This change was mainly due to the Treasury Account smoothing initiated by the Government Debt Management Agency (ÁKK). Since January 2004 within the framework of the smoothing operation the liquidity surplus or deficit of the Treasury Account (KESZ) has been managed by the ÁKK, with the help of repo transactions conducted by primary dealers. When starting this system a Master Agreement was signed which may further accelerate the development of the repo market serving as a model for contracts by market participants.

Chart II.13 Monthly changes in the average daily turnover of the repo market (by maturity)



For KESZ-smoothing the ÁKK typically uses repo transactions with the shortest maturity also reflected by the maturity breakdown of the total turnover: robust growth was characteristic of transactions with a maturity of one day and of less than a week (one day turnover nearly doubled), while the turnover of transactions with longer maturity has fallen. On the other hand, the ÁKK entered exclusively into delivery repos with primary dealers in the first half of the year also reflected in the increase of the turnover of delivery repos in 2004. Not taking into account repo transactions with the ÁKK the average daily turnover of market participants' transactions entered into among themselves has somewhat declined.

With regard to the concentration of the whole of the repo market an approximate estimate can be provided based on outstanding amount of repo transactions.<sup>18</sup> According to these data it seems that the five largest participants were responsible for all of the transactions in the last year and a half, while there were practically only three participants in the market in 2004 H1. While by end-2003 the concentration of reverse repos, used to raise funds, and repos, used to lend funds, was similar, the repo side became much more concentrated in 2004 H1: the Herfindahl-index, for example, came close to the value of 10,000 typical of a monopolistic market. (The lack of market participants on the lending side could be explained by the fact that the ÁKK was mainly interested in lending within the framework of Treasury Account smoothing.) On the whole, therefore, we can say that the repo market is excessively concentrated.

Within repo transactions the average transaction size of hold-in-custody repos increased to HUF 2.5 billion in early 2004 compared to a year earlier, while the size of delivery repos declined to EUR 1.9 billion. This has reversed the former order and we can assume that hold-in-custody repos have become more concentrated.

#### II. 4. 3. Forint interest rate derivatives

Although compared to the other market segments we have relatively limited information on the interest rate derivative segment of the forint market, similarly to foreign exchange

<sup>18</sup> In the absence of banks' turnover data we used the stock data reported monthly by banks. The indicators based on these end of the month snapshots probably overestimate actual concentration.

market derivative instruments these instruments may also allow for market participants to change their positions in a very short period of time. On the one hand, this could indirectly increase the liquidity of underlying asset (e.g. money market transactions, government bond transactions) as the security of being able to change positions easily could enhance the willingness to undertake larger exposure. On the other hand, however, this could also induce large-scale price movements on the market of the underlying assets.

In line with international trends, the two main instruments used on the market of interest rate derivatives are forward rate agreements (FRAs) and the interest rate swaps (IRSs). The former allows for opening positions related to the short end of the yield curve or managing risks typically through transactions with a maturity of less than one year. The interest rate swap allows for taking positions at the middle or longer parts of the yield curve for transactions with a maturity of 1 to 2 years or even 10 years.

In our estimate the average daily turnover of forward rate agreements is around HUF 20 billion in the domestic market, while the same figure is slightly lower in the case of interest rate swaps, at HUF 18 billion.<sup>19</sup> The relatively low level of the domestic interest rate derivative market could be attributed to the relatively low liquidity level of the domestic bond market. According to anecdotal evidence, however, the larger part of the forint denominated market of these two derivative instruments takes place abroad among foreign participants, and thus the global turnover could probably be significantly higher than these levels.

Domestic data indicate that Hungarian banks conduct their transactions mainly with foreign participants in the case of both these instruments. This is especially true of the interest rate swaps where in our estimate the turnover vis-à-vis foreigners represents 99% of total domestic turnover. In the case of forward rate agreements this figure is 80%.

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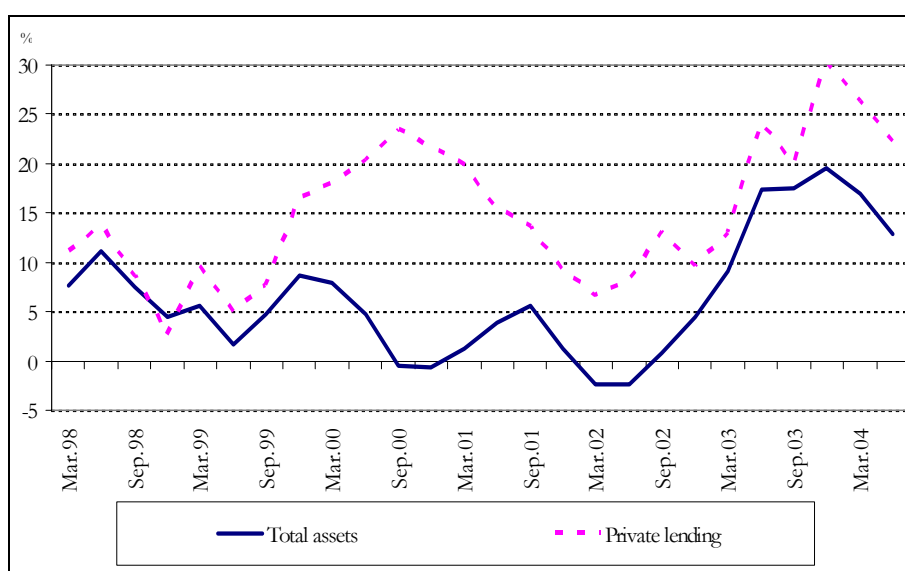
<sup>19</sup> Our estimate was based on the turnover assessed by the MNB in April 2004 prepared in the framework of the global foreign exchange and money market survey of BIS carried out every three years. Therefore, the figures can be considered undistorted in so far as this month is taken as a representative sample. Turnover data were prepared according to the total notional value of the contracts.

### III. Stability of the banking sector

#### III. 1. Introduction

The growth rates of the balance sheet total and the private sector loan portfolio of the Hungarian banking sector slowed down in 2004 H1 relative to end-2003. However, owing to an upswing in the global business cycle and borrowing by the private sector mostly domestically rather than abroad, the banking sector's assets continued to increase to an extent that outpaced the accelerating rate of domestic economic output growth. Accordingly, the depth of financial intermediation by the banking sector continued to increase.

Chart III.1 Main developments in the banking sector (real growth rates)



Note: basic seasonally adjusted data, nominal data deflated by GDP deflator.

Growth in non-financial corporations' demand for domestic loans exhibited a slower rate than in 2004 H1. Nevertheless, coupled with the ongoing manufacturing recovery and vigorous infrastructure development, this growth greatly contributed to a rise in the sector's outstanding borrowings from the banking sector, mainly due to continued strong demand for foreign currency loans by large enterprises. Furthermore, lending to SMEs picked up, the underlying reasons for which included the increasingly strong credit demand of the services sector sensitive on foreign demand and the suppliers of large companies, structural factors and greater credit supply by banks. A moderate slowdown in consumption led to a decline in the credit demand of the services sector, which is sensitive to changes in internal demand. Property development lending activity slumped, due to a downturn in the market of commercial property. The slowdown in household consumption and broadly strong, yet steadily decelerating household fixed investment dampened households' credit demand, in particular demand for subsidised loans to purchase used homes. However, owing to an increasingly wide selection of foreign currency bank loans, there was no significant slowdown in the growth of outstanding household borrowings.

Because of the modest rise in savings, the growth rate of households' net financial worth remained below that of the banking sector's balance sheet total. Simultaneously, the corporate sector's net borrowing requirement grew significantly. As a combined effect of these developments, banks' ability to raise forint financing continued to diminish, and their liquidity position tightened further in 2004 H1. Banks financed their increasingly strong lending to the non-financial sector by raising additional funds mainly from abroad. Although—as a consequence—banks' overall (on and off-balance sheet) foreign currency position doubled, their exposure remained low.

**Chart III.2 Net sector positions against the banking sector as a percentage of the balance sheet total**



*Note: Positive and negative values denote net lender's and net borrower's positions, respectively.*

Increasingly robust foreign currency lending resulted in a steadily widening gap in the non-financial corporate sector's net foreign currency position. In 2004 H1, the gap between forint and foreign currency interest rates opened up. This, combined with strong credit supply, may have led to a take-off in unhedged foreign currency lending to non-financial corporations. In the period under review, there was also a rise in foreign currency lending to households, mainly housing loans unhedged against exchange rate risk. In our opinion, however, this is attributable to the tightening of the housing loan subsidy scheme, strong supply pressure (i.e. the penetration of foreign currency bank loans) triggered by the limited availability of forint financing, the related easing of households' liquidity constraints and the sector's low risk awareness. We would consider any further rise in the private sectors' foreign currency loans unhedged against foreign exchange risk to be an unfavourable development from a stability perspective. We continue to accord high priority to undertaking monitoring and comprehensive analysis of these trends.<sup>20</sup>

Reducing the risks inherent in increasingly dynamic foreign currency lending is one of credit institutions' fundamental interests. It is in their interests to reduce additional risks implied in foreign currency lending through the adoption of prudent practices. This demands providing customers with satisfactory information, improving their risk awareness

<sup>20</sup> For a risk analysis of foreign currency lending, see *Current topics*.

(i.e. awareness of the existence and extent of interest and exchange rate risks), accurate pricing and better monitoring.

In addition to increasing exchange rate risks facing the private sector, the deterioration in non-financial corporations' loan portfolio is also an unfavourable development. A significant reduction in agriculture and construction profitability last year, increasingly tight corporate liquidity brought about by buoyant fixed investment activity, a gradual rise in SME lending and the sector's growing debt servicing costs all resulted in a steady rise in the proportion of non-performing loans within the entire portfolio. Looking ahead, manufacturing profitability may remain high due to rising productivity growth, despite increasing production costs. But unfavourable developments in the operating conditions of service sector firms, susceptible to internal demand, will cause a further deterioration in the corporate portfolio. Although the quality of the household loan portfolio has improved slightly, its ageing, consumers' decelerating real income growth and a slight increase in unemployment are expected to lead to some deterioration in this portfolio as well.

Consistent with the economic upswing and owing to more favourable financial market conditions, the banking sector's profitability was outstanding in 2004 H1. In addition to macro-economic factors, banks' pricing behaviour, in particular, and—to a lesser extent—improved efficiency also contributed to record-level profits in the banking sector. The growth rate of the private sector loan portfolio, and of non-financial corporations and households in particular, exceeded that of the balance sheet total. Within the household loan portfolio, the proportion of subsidised housing loans rose, as a result of the large number of new contracts at end-2003. This, in turn, further boosted banks' interest income through wide interest margins. As money and capital market turnover was quite strong, income from financial transactions and services also contributed significantly to high profitability. That the financial system was able to absorb market turbulences is clearly illustrated by the fact that profit-maximizing banks managed to reduce the impact of increased interest rate volatility on interest income by adopting appropriate pricing practices and restructuring their portfolios.

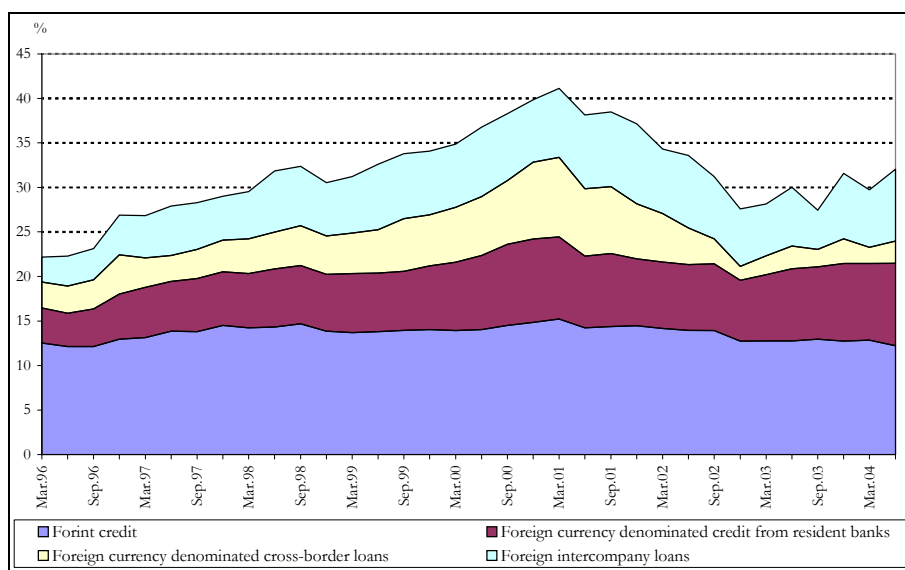
As interest rates fall and interest income diminishes due to keener competition, banks will only be able to respond to the resultant adverse impact by drastically reducing their operating costs. Thus, in the long run the high earnings potential of the banking sector can be maintained only through a significant improvement in efficiency.

## **III. 2. Risks in lending to non-financial corporations**

### **III. 2. 1. Financial position of non-financial corporations**

Increased external demand was associated with a steep rise in non-financial corporations' fixed capital formation in 2004 H1. By the end of 2004 Q2, firms' GDP-proportionate final accumulation had reached 17%, which represents a 4 percentage point rise compared to 2003 Q2. Dynamic fixed investment activity and growth in inventories further increased the sector's borrowing requirement. Non-financial corporations' GDP-proportionate net borrowing requirement stood at 6% in 2004 Q2, compared with a meagre 3% a year earlier.

**Chart III.3 Non-financial corporations' outstanding borrowings from banks and other institutions (as a percentage of GDP)**

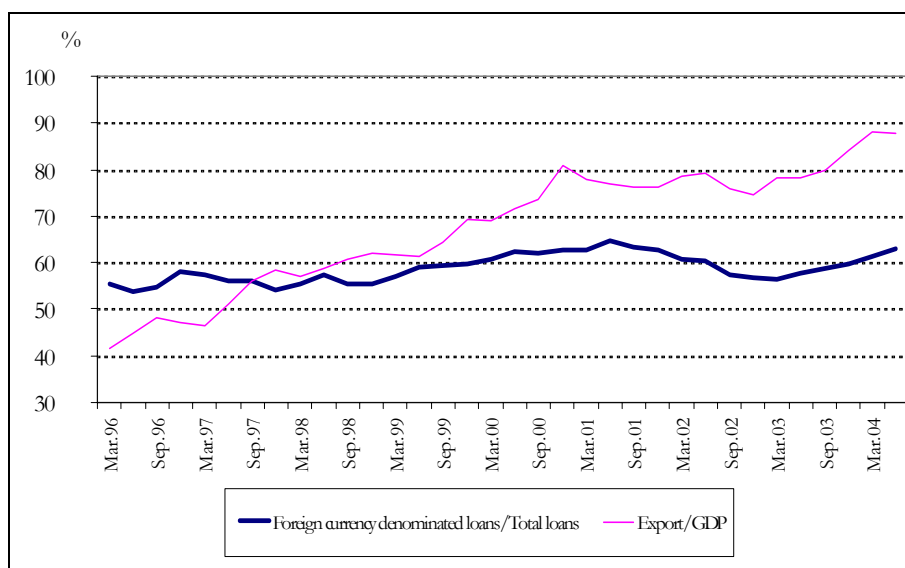


In 2004 Q2, non-financial corporations' outstanding borrowings grew 13% relative to the same period of the previous year. Firms succeeded in raising additional funds chiefly in the form of equity and credit. The global economic recovery and Hungary's accession to the EU in May further encouraged FDI inflows in the form of equity capital and inter-company loans. Borrowing from domestic and foreign banks, though it slowed down a little, remained brisk. Accordingly, non-financial corporations' leverage, i.e. their debt-to-equity ratio, amounted to 88% in June 2004, which is broadly the same as it was in the previous one and a half years.

The underlying reason for the increase in lending was a pick-up in long-term foreign and domestic foreign currency loans. As a consequence, within the loan portfolio of non-financial corporations, the proportion of foreign currency loans gradually increased in 2004 H1. Given domestic multinationals' strong exports driven by the upturn in the global business cycle and, over the longer term, the gradual integration of the Hungarian economy into the European economy, a minor slow shift in the proportion of foreign currency loans can be deemed a natural phenomenon.

Thriving business in the domestic corporate sector also strongly influenced developments in financial assets, the other side of the net financial position. During the period under review, financial assets grew by close to 11%. Regarding the overall portfolio, trade credit rose, while the proportion of liquid assets declined.

**Chart III.4 Relationship between the proportion of foreign currency loans and the openness of the country**



*Notes: basic export and GDP data at constant 2000 prices, loans at unchanged 2000 exchange rate*

In conclusion, non-financial corporations' increasing capital formation and the resulting rise in their borrowing requirement suggest that the income position of the corporate sector remained stable. A rapid improvement in productivity easily offset a sharp increase in ULC in the sector, which, in turn, points to rising manufacturing profitability. Service sector profitability remained unchanged or deteriorated marginally. Dwindling domestic demand and wage outflows consistent with the sector's profitability growth, as opposed to higher selling prices in response to rises in VAT, hindered an increase in services sector profitability.

With regard to non-financial corporations' future prospects, manufacturing profitability is likely to remain high as a result of the contrasting effects on income of rising operational costs and the slow improvement in productivity. Although, in a rapid response to domestic demand, the services sector is likely to reduce employment in order to lower wage costs, profitability is likely to become stuck at a low level owing to subdued productivity growth.

### **III. 2. 2. The commercial property business<sup>21</sup>**

Reviewing the business property market is pivotal to assessing the risk exposure of the financial system. Since businesses involved in the commercial property market have high leverage, the emergence of market imbalances and any potential decline in prices may prove to be significant risk factors.

In 2004 H1, the commercial property market recovered only slowly from its recent downturn. The market of warehouses and logistic centres was increasingly buoyant. No trend reversal in the office property market has, however, materialised as of yet. Currently, the retail outlet market is stable. However, projections are for negative trends in this segment.

<sup>21</sup> This section relies on the following sources: Developments in the property market business cycle, Hungary, GKI-Wallis Ingtatlan Rt., 2004 Q1 and Q2 and Property and Investment: Trend reversal in the office property market, 2004/ 17.

2004 H1 saw a strong upturn in the logistics market. A decline in prices last year and a pick-up in external demand encouraged a number of large corporations to purchase or rent new buildings. Accordingly, the vacancy rate in the logistics market was rather low (a mere 8%) compared with that in the office property market in 2004 H1. A new phenomenon after Hungary's accession to the EU is that several logistics service providers have set up their offices in Hungary in order to have an easier access to certain CEE countries. The anticipated economic growth and infrastructure development are likely to further invigorate the market.

Although a record number of office buildings were rented in 2004 H1, excess supply in the office market remains significant. In Budapest, the floor area of leased property space was close to 96,000 m<sup>2</sup>, compared with the 28,000 m<sup>2</sup> floor area of new property space. As a consequence, the rate of unused property space decreased from 20% to 18%. Because of permanent and only slightly diminishing excess supply, rents in the office property market remained unchanged in 2004 H1. Rent for highest quality (Category A) office space ranged from EUR 13 to 16 per m<sup>2</sup>, while in the case of lower quality (Category B) space, it was EUR 10–12.

SMEs' increasingly strong demand is clearly reflected in the shrinking size of offices let. Another favourable development that further boosts this market is that, owing to the government's cost reduction measures, budgetary units and institutions involved in auxiliary activities also rent increasingly small office space. However, demand for larger office space also increased, though slowly, the reason for which being that a few large corporations relocated some of their units to Budapest.

The approximately 60,000 to 80,000 m<sup>2</sup> floor area of new property space scheduled for construction in 2004 is likely to double in 2005, which clearly reflects property developers' optimism. However, this moderate optimism may be dampened by the fact that only few pre-lease contracts were concluded prior to construction in 2004. The relevance of this lies in the fact that banks stipulate roughly 40% pre-lease ratio as a pre-condition for granting project loans. Judging from office property market turnover and contractual terms and conditions, sales of office building are also subdued. Accordingly, it can be inferred that, although excess supply in the office property market moderated, it is still too early to talk about a trend reversal.

Regarding outlets, supply gradually outweighed demand in 2004 H1, owing to a steady slowdown in consumption and the recent widespread construction of shopping centres. As the market in Budapest became saturated in terms of shopping mall construction, major chains are now targeting the provinces as the destination of their expansion. All things considered, however, there is no significant excess supply yet in this market. A shift towards weaker effective demand and an anticipated rise in household savings both foreshadow a future downturn in the market.

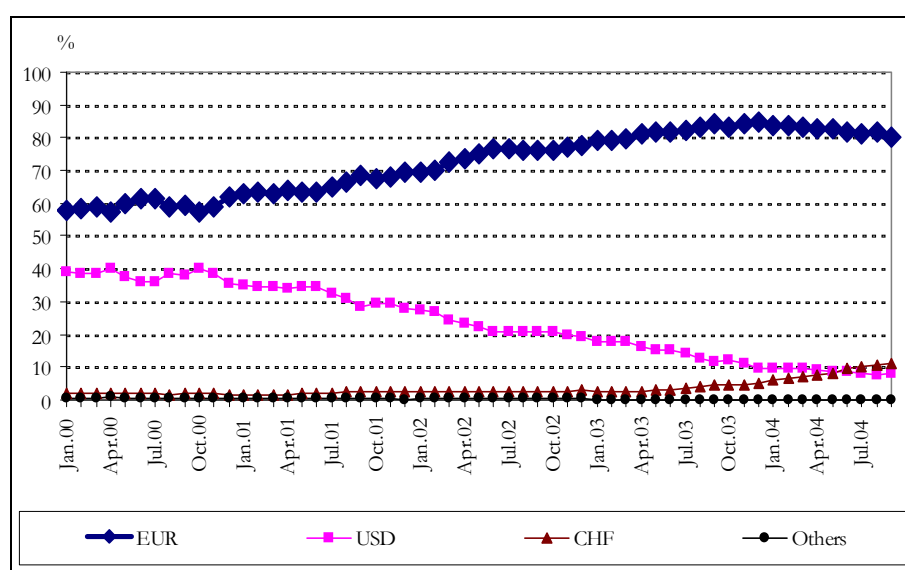
### **III. 2. 3. Domestic banks' non-financial corporate exposure**

Lending to non-financial corporations by domestic banks gradually decreased in 2004 H1. Credit portfolio growth fell to 15% in the first six months of 2004, after exceeding 23% at end-2003. Despite a dynamic increase in the corporate borrowing requirement (mainly in the manufacturing sector), there was a decline in new demand for domestic loans from domestic banks. This can be ascribed to both structural and market factors. During a business cycle, manufacturing firms borrow mainly from abroad, while the services sector, which relies heavily on domestic demand, borrows domestically. The underlying reason for

this is that large corporations in foreign ownership are dominant in manufacturing, whereas SMEs in domestic ownership are more common in the services sector, especially in the commercial sub-sectors. As a result of a rapid manufacturing response to the global recovery, during the period under review multinationals met their borrowing requirement with FDI in the form of inter-company loans and equity capital and, to a lesser extent, foreign currency loans from domestic banks. Due to decelerating household consumption, excess supply in the services sector led to a marked increase in commercial stocks in 2004 H1. Accordingly, the services sector—sensitive to changes in domestic demand—saw a drop in its demand for external financing, as its credit demand growth declined. Finally, excess supply in the retail and office space market significantly reduced growth in project loans for commercial property development, which also contributed to a slowdown in corporate lending.

In 2004 H1, the short-term (mainly working capital) loan portfolio remained broadly flat (actually falling by 0.4%), whereas the long-term (mainly investment) loan portfolio grew at a rate (28.7%) in excess of economic growth. It should be noted, however, that both short and long-term lending decelerated substantially.

**Chart III.5 Denomination composition of non-financial corporations' foreign currency loans from domestic banks**



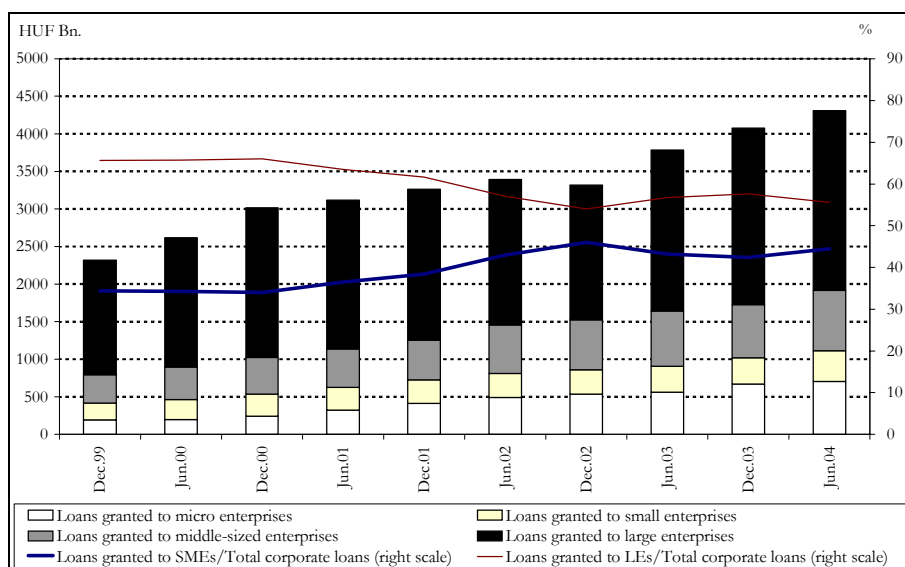
In the period under review, the denomination composition of corporate loans changed due mainly to transactions and, to a lesser extent, to exchange rate-related reasons. Forint and foreign currency corporate loans grew by 7.4% and 24.4%, respectively. Thus, consistent with the business cycle, the proportion of foreign currency loans within the overall corporate loan portfolio continued to rise. In late June 2004, forint and foreign currency loans to firms amounted to 57% and 43%, respectively, of the overall corporate portfolio of loans from domestic banks. Judging from regular surveys including credit institution managers, it can be assumed that the credit demand of not only large corporations, but also SMEs increased, although that of the latter to a small extent. A recent trend is that, owing to a positive gap between forint and foreign currency interest rates and increasingly strong pressure from foreign currency loan supply, the proportion of Swiss franc-based loans, in addition to EUR loans, is on the increase within foreign currency lending to companies. This indicates an increasing number of corporations with open net foreign exchange

position.<sup>22</sup> The proportion of Swiss franc loans within foreign currency loans rose from 3% to 6% in 2003; it approximated 10% at end-2004 H1 and reached 12% in 2004 Q3.

Credit transactions, exchange rate effects and cross-exchange rate effects accounted for 31 percentage points, -6 percentage points and -0.6 percentage points, respectively, of the increase in foreign currency loans. As, for business cycle-related reasons, the growth rate of long-term foreign currency loans (27.5%) exceeded that of short-term ones (18.8%), and the average maturity of foreign currency loans increased again.

Credit demand varies in the various categories of enterprise by size. Large corporations borrowed mainly abroad in the first half of 2004, in order to finance their operations. By contrast, SMEs borrowed domestically to an increasing extent. In 2004 H1, large-corporate and SME loans from domestic banks grew by 11.7% and 17.7%, respectively. As a result, large-corporate loans fell from 57% to 55.4%, while SME loans grew from 43% to 44.6% within the overall loan portfolio of domestic banks.

**Chart III.6 Loans to non-financial corporations by enterprise size**

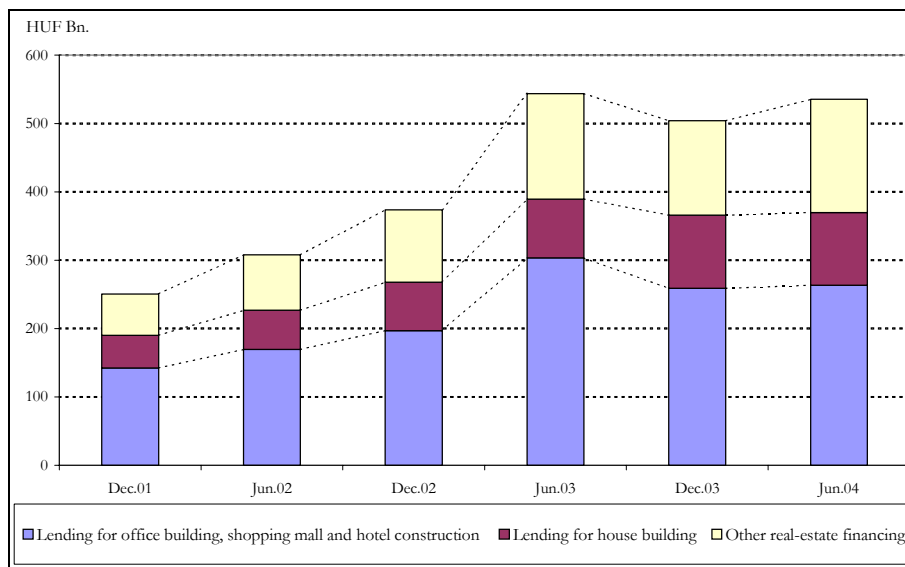


Banks' increasingly strong credit supply also contributed to a rapid increase in loans outstanding to SMEs. The Lending Survey reveals that the expansion of credit supply and greater willingness to lend are driven by increasingly intense competition for SMEs. Even so, competition in the market of large-corporate lending remains strong. There are two underlying reasons for this. One is that banks continue to compete for corporate clients despite low interest margins because they hope to earn profits from supplementary costs and fees in the long run. The other is that amidst increasingly fierce competition among banks' corporate clients may prove instrumental in the acquisition of such smaller enterprises as clients which belong to the relevant corporations' interest sphere. In the latter case, banks compete for SMEs indirectly, through large corporations, rather than

<sup>22</sup> The reason why it can be safely assumed is that, with regard to the Swiss franc, there is a significant difference between the foreign currency structure of exports and imports and the foreign currency composition of foreign currency loans from domestic banks. Based on data for year-end 2003, the euro and the dollar amounted to 85% and 10.3%, respectively, within the foreign currency composition of exports, while the Swiss franc only accounted for 0.3%. Corresponding proportions in the case of imports are 72.3%, 17.7% and 1%, respectively.

directly. It should be noted, however, that this competition strategy may exert the following contrasting impacts on financial stability. First, lending to SMEs linked to large corporations may increase the risk of concentration and diminish the impact of diversification. The failure of a large corporation may lead to the insolvency of an entire group. Second, however, financing the SME sector in this manner may reduce the informational asymmetry that may be the case upon lending.

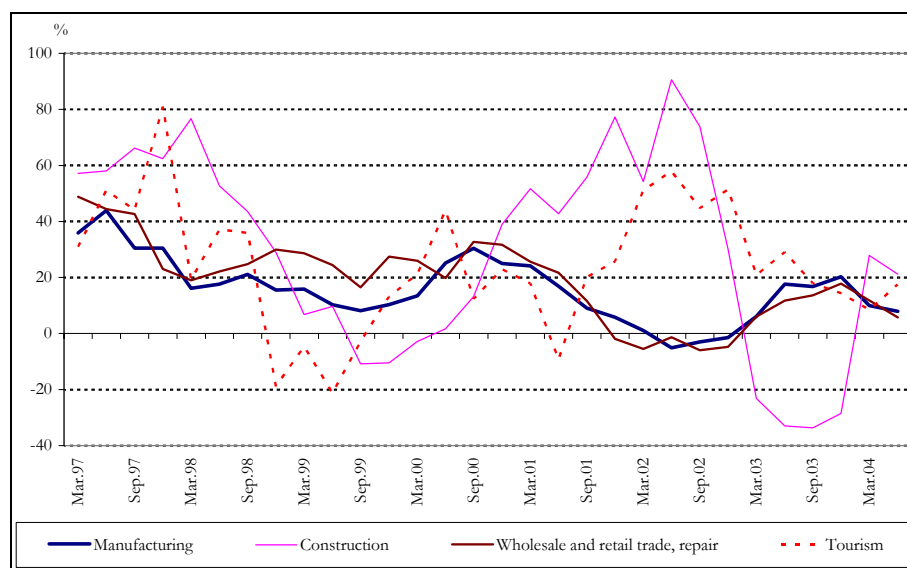
**Chart III.7 Project loans**



In 2004 H1, project lending lost momentum, and then fell off significantly. Following a vigorous 31% rise at year-end 2003, in June the project loan portfolio revealed an 8% rise relative to a year earlier. The proportion of foreign currency project loans within the overall loan portfolio amounted to 73%. Considering the current state of the market of commercial property, a nearly 13% decline in loans to finance office space, outlet or hotel construction is a favourable development. This favourable development is the combined result of limited credit supply and the tightening of lending standards. However, in an unfavourable trend, project lending by some large banks with a dominant weight in the banking sector further increased, which adds to concentration risk. Although the increase in the origination of project loans to finance the construction of block of flats has also slowed down, its growth rate of 23% is still high. This suggests that developers are moderately optimistic about the state of the housing market, owing to the entry into this market by foreign buyers, a smaller-than-expected slowdown in households' demand for housing loans and banks' rising credit supply. Overall, project loans to finance property development decreased by 2% in the period under review.

With respect to other project loans, those financing the development of the energy and telecommunications sectors fell by 10% and close to 20%, respectively. Only the portfolio of the project loans to finance infrastructure development increased, thanks to central and local government orders. Project loans related to transportation rose by over 20%, and those to finance the development of public utilities by 17%.

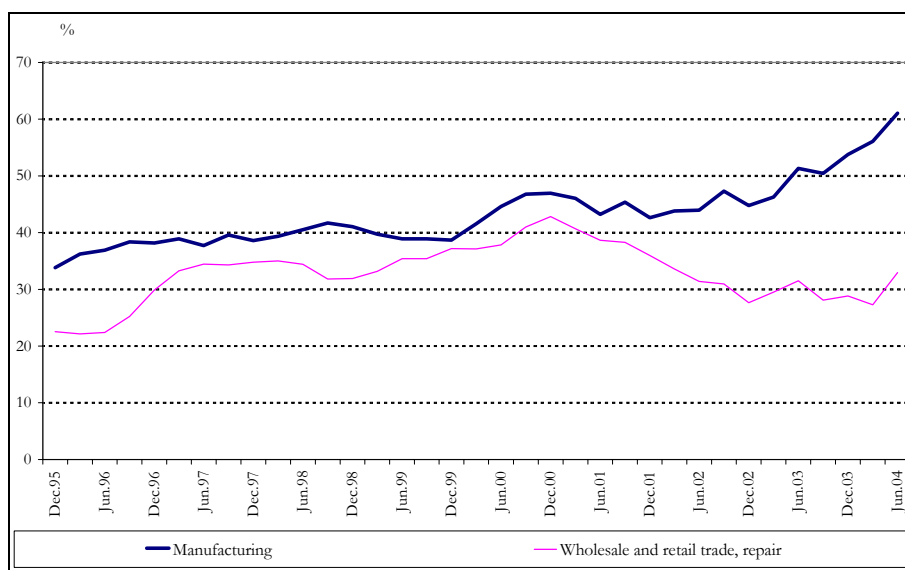
**Chart III.8 Annual rate of growth in lending to non-financial corporations by economic sector**



An analysis of the sectoral breakdown of lending to non-financial corporations reveals that the rate of growth in the loan portfolio declined in all sectors, except for construction and travel. In manufacturing it fell from 20% at end-2003 to 8% by end-2004 H1. The sharpest decline was experienced in light industry. The portfolio also shrank in machinery and equipment. Lending to food and chemical industry as well as metal manufacturing and metal processing remained high, despite its decelerating momentum. The momentum of lending fell even more in the services sector, plunging from 23% to 3%. The growth rate of lending to trade, which accounts for the largest share in the services sector, dropped from 18% to 6%. Lending to construction and hotels and restaurants rose heavily due to infrastructure development in the former and tourism-related fixed investment in the latter. Mining, construction, the energy sector and tourism continue to represent a concentration risk. As, however, the loan portfolios of these sectors account for only a small share in the overall portfolio, they do not pose any considerable endogenous risk to the financial intermediary system. The greatest risk remains lending to manufacturing with the largest share in the portfolio, trade, financial services, representing a smaller share, but medium-level concentration, and business services.

Owing to a substantial increase in the central bank base rate at end-2003 and its gradual lowering during the first half of 2004, banks adjusted their own customer interest rates on several occasions. Non-financial corporations' lending rates responded rapidly and to a large extent to the base rate. However, the interest rate spread rose consistently in the period under review. Considering that competition in the corporate market has not abated, nor has the proportion of costs changed, it can be inferred that banks priced rising risk in their interest rate spreads. As a result, the spread rose from 1 percentage point in early 2004 to 2 percentage points in June. Historically, this is high, and in international comparison it approximates euro area average. We deem this increase in the interest rate spread to be a favourable trend, since over the past couple of years the default rate has accelerated in the corporate sector, owing to worsening profitability in manufacturing (2002), agriculture and construction (2003). Furthermore, a fast expansion in lending to SMEs also justifies the pricing of increasing risks in the higher interest rate spread.

**Chart III.9 Share of foreign currency lending by domestic banks to manufacturing and trade, compared to overall sector loan portfolio**

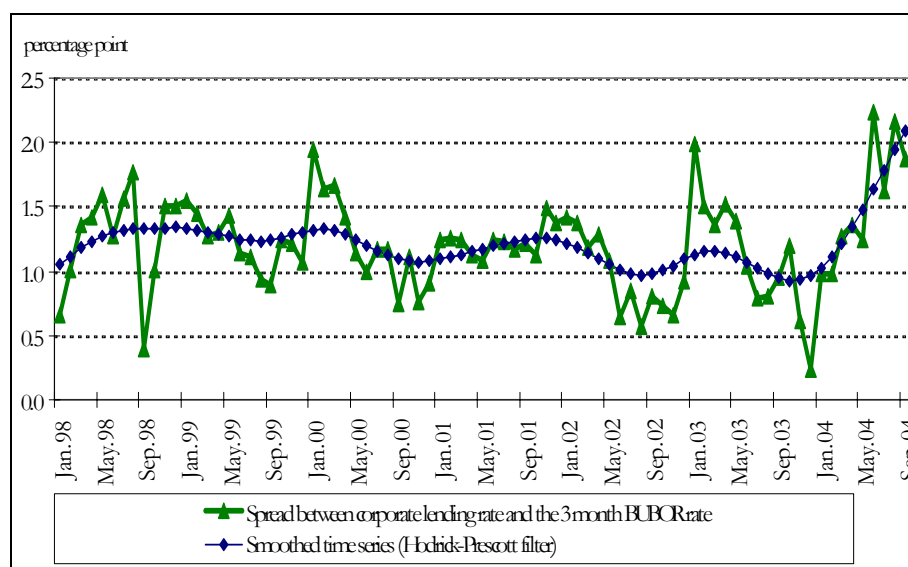


Thanks to the new interest rate statistics introduced in 2004, the interest rate spread on both small and large loans has become predictable. We assume that banks extend large loans mostly to large corporations to finance fixed investment. They extend smaller loans to SMEs and predominantly working capital loans to large corporations. Although the interest rate spread increased on both small and large loans in the period under review, in the case of the latter there was only a slight increase. Consequently, higher risk taking triggered by increasingly fierce competition fuelled the rise in interest rate spread on loans to SMEs. The Lending Survey also corroborated our hypothesis. We also believe that the higher interest margin can also be ascribed not only to banks' stronger propensity to establish prices that adequately reflect the risks that they take, but also to some kind of cross-substitution. It is highly probable that to a certain extent banks offset their shrinking liabilities-side interest margin, brought about by strong competition in the large-corporate market by widening the margin on loans to SMEs.

It is also probable that large corporations borrow in foreign currency from both foreign and domestic banks, whereas the SME sector mostly borrows in domestic currency primarily from domestic banks. Chart III-9 supports this hypothesis. It shows clearly that large manufacturing firms borrowed mainly in foreign currency, while SMEs borrowed mostly in domestic currency. In spite of high forint interest rates and interest margins, lending to SMEs did not lose momentum in 2004 H1 relative to 2003. The underlying reason for this, as confirmed by the Lending Survey, is that not only domestic currency, but also foreign currency lending increased. In addition, the credit demand of the services sector, sensitive to changes in external demand, and that of SMEs supplying large companies became increasingly strong. Furthermore, as a result of increasingly sharp competition, banks' propensity to lend to SMEs strengthened considerably. Robust lending to SMEs also has structural causes. The sector's relatively low responsiveness to interest rate changes is adequately illustrated by the fact that weakly capitalised firms accord priority to the issue of raising funds over the interest rate and the interest burden. Another important trend is that a number of SMEs replace trade credit with bank loans extended under better terms and conditions. Loans to micro-enterprises are predominantly subsidised or extended against bank guarantee, thus the interest burden of raising funds is

lower than that of market-priced loans. We feel that higher risk taking resulting from sharper competition is a threat to stability, as banks are likely to be able to price higher risks generated by sharper competition in the interest rate spread to a lesser extent.

**Chart III.10 Interest margin on loans to non-financial corporations**



### III. 3. Risks in lending to households

#### III. 3. 1. Income position, consumption, investment and financial savings

In 2004, households' consumption expenditure and fixed investment activity increased, with their net financial position considerably improving against the backdrop of a consistent increase in borrowing. As the rate of growth in real wage is low, the underlying reasons for this should include other types of income (e.g. interest income, dividend payments, gains on stock exchange prices and private entrepreneurs' income) that are growing dynamically.<sup>23</sup>

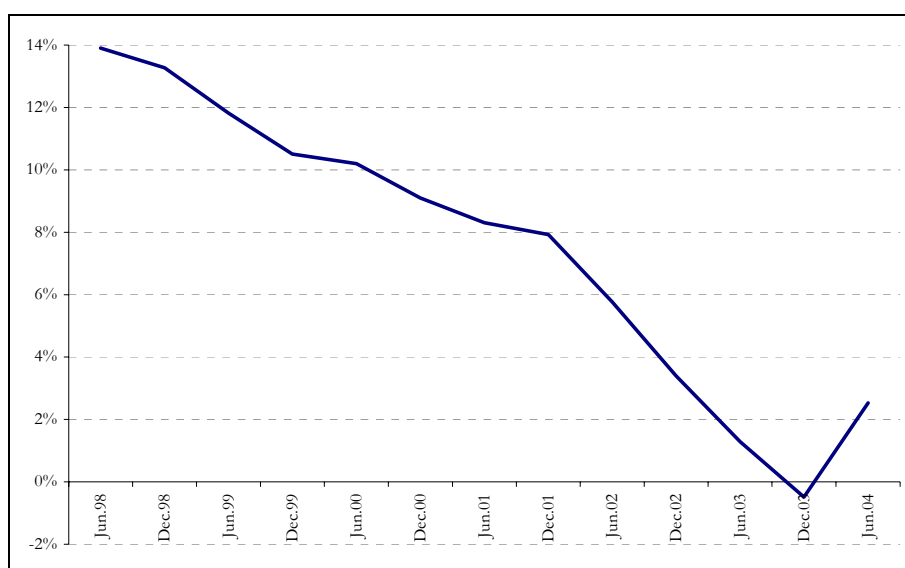
Households spent the bulk of their additional income on consumption. As a result, high consumption propensity only declined slightly.<sup>24</sup> Data released by the CSO for 2004 H1 suggest that consumption propensity growth is no longer as robust as it was in 2003, although it is still fairly dynamic. In the short run, households are expected to continue to take advantage of easing liquidity constraints.

Judging from the number of building permits granted in 2003 and in the first three quarters of 2004, household housing investment activity remained buoyant. It is only likely to slow down next year.

<sup>23</sup> For further details, see *Quarterly Report on Inflation*, November 2004.

<sup>24</sup> Households' disposable income comprises other income plus employee compensation less net paid transfers. Propensity to consume (rate) is expressed as a proportion of disposable income.

**Chart III.11 Households' net financial savings/net borrowing requirement as a per cent of disposable income**  
Seasonally adjusted data



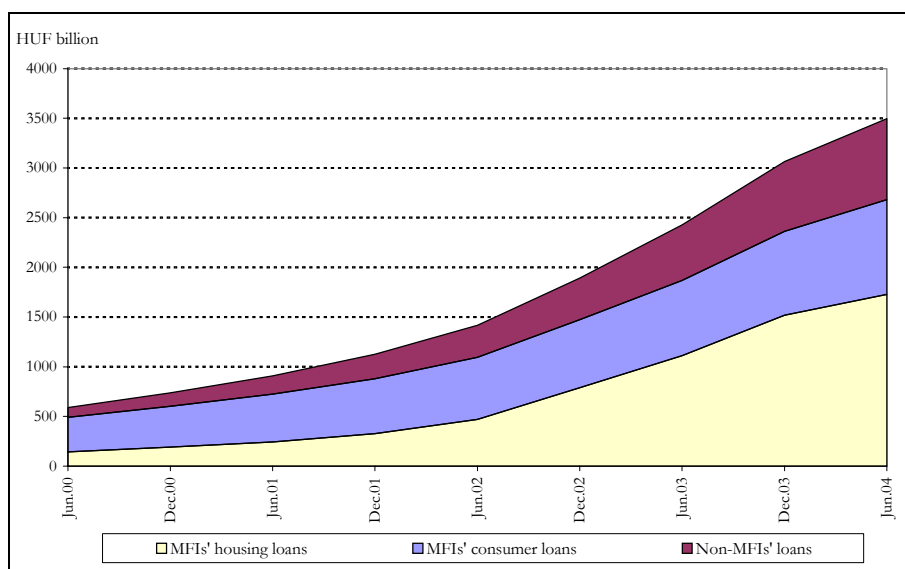
*Notes: As of 2003 disposable income, an MNB estimate.*

The tightening of the housing loan subsidy scheme and high returns transformed households' net borrowing requirement in 2003 H2 into net lending in 2004 H1. Although the rate of household indebtedness slowed somewhat, it is still significant, fuelled by foreign currency borrowing for house purchase and consumption. Even so, households increased their savings considerably. High forint yields exerted two contrasting effects on the net financial position. First, they were beneficial to savings-it was primarily forint deposits, treasury bills and net equity in pension funds that rose. Second, however, they also drove the spread of riskier foreign currency lending.

### **III. 3. 2. Total indebtedness**

As bank lending for house and car purchase lending tapered off, the rate of indebtedness fell markedly in 2004 H1, although it was still 14.5%. Growth in mortgage-backed loans and consumption credit extended by credit institutions and growth in predominantly consumption credit provided by non-banks were broadly similar (14%, 13% and 16%, respectively). In June 2004, financial enterprises' portfolio of outstanding consumption loans caught up with that of commercial banks, amounting to HUF 680 billion.

Chart III.12 Household indebtedness



Notes: Loans extended by financial enterprises account for the bulk of the loans provided by non-MFIs, with a share exceeding 80% in the past 2 years.

A GfK survey revealed that approximately 1.5 million people had some of kind of credit product in 2004. Indebtedness grew particularly markedly among higher income persons, which is a favourable trend in terms of risks. There are likely to be reasons underlying this shift on both the demand and supply sides. Household income as a whole increased at a slower pace in 2004 than in 2003. Income expectations deteriorated. Wage earners experienced broadly unchanged real income. By contrast, the income of those in a higher social status, drawing other income of significant amount, continued to rise vigorously. Thus, provided that the terms and conditions of lending are unchanged, only a small number of the persons in lower income brackets become creditworthy. Therefore, an overwhelming majority of loans continue to be provided to those already rated as creditworthy. In response to a consistently growing number of non-performing loans, mainly in the case of banks' financial enterprises, credit institutions are likely to re-focus and shift towards those in a higher social status. The correlation between the frequency of indebtedness, income position and wealth became stronger in 2004. Given the current market competition, however, we do not deem it to be a trend. Rather, we expect the depth of financial intermediation to increase further.

Over 20% of the entire household loans portfolio was foreign currency borrowings in June 2004. Major changes occurred in banks' lending policy in 2004. Most launched foreign currency credit products, targeting a broad customer base. Previously, banks' foreign currency lending was mainly confined to financing car purchases predominantly through their financial enterprises. Foreign currency lending activity at the banking sector level was only marginal, with the majority of foreign currency loans extended by only one or two banks. In early 2004, banks started fast product development. As a result, in 2004 Q2-Q3 even the commercial banks that had not offered foreign currency products before, launched such instruments in the market. In contrast with earlier practice, they now offer these services as mass products. As a result, in Q3 the share of foreign currency loans within the banking sector's total household loans rose to 11%, i.e. double the share as at year-end 2003. Within this, the proportion of Swiss franc lending increased from 11% to 58%. These changes can be attributed to the following factors:

- the tightening of the house purchase [subsidy](#) scheme, which directed the attention of parties on the supply side (due to declining profitability and pressure to increase sales volumes) and the demand side (as subsidised loan became considerably more expensive) to foreign currency lending;<sup>25</sup>
- it is likely that several banks have easier access to foreign currency funds under more favourable terms than to forint funds, owing to their parent bank ties and to the increasingly limited availability of forint funds;
- the significant differential between interest rates on forint, euro and Swiss franc loans;
- credit demand is likely to become price sensitive to an increasing extent, opting for Swiss franc loans with the lowest amount of instalments. Risks do not seem to be a major factor in credit applicants' decisions; and
- competition between banks in the household segment is fierce, with willingness to lend increasing steadily (see the Lending Survey).

Given the above situation, banks look to foreign currency lending for opportunities in order to increase their volume and profitability. In the future, foreign currency lending is likely to become even more common than it is currently. Exceptions to this are likely to include only few segments (e.g. hire purchase loans and overdraft facilities), where the products offered, owing to their very nature, would be difficult to use with foreign currency lending facilities.

If foreign currency lending becomes even more widespread, this may add to the vulnerability of the financial sector to shocks substantially. Banks' responsibility, with respect to financial stability, lies in their adoption of sound and prudent lending and pricing practices, whereby they can reduce the vulnerability of financial intermediaries to shocks.<sup>26</sup> Accordingly, banks should accord high priority to providing detailed information to their customers on the additional risks implied in foreign currency lending.

Essentially, the expansion of foreign currency lending may be contained in two different ways. One is through short-term negative experience as well as increase in the risk awareness of households and banks; the other is reduction in the differential between interest rates on forint and foreign currency loans, as a renewed momentum in the Hungarian convergence process in the long run.

From the perspective of financial stability, the first scenario poses risks in the event of a major depreciation of the forint. The resultant higher amounts of instalment payment would already affect a relatively wide section of the population, which, in turn, would enhance risk awareness. Simultaneous loan losses would reduce banks' willingness to lend in foreign currencies. From a macroeconomic perspective, an increasing burden of loan repayment may force households to cut down on their consumption expenditure. In the event that loan losses exceed a certain level, such expenditure may be further reduced through two more mechanisms. There may be a general decline in banks' credit supply, which would strengthen households' liquidity constraints. Any upsurge in the number of non-performing foreign currency housing loans could precipitate a property market slump, which, in turn, could easily lead to wealth losses.

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<sup>25</sup> See *Additional risks of foreign currency-based house purchase lending* in the *Report on Financial Stability*, June 2004, p.91.

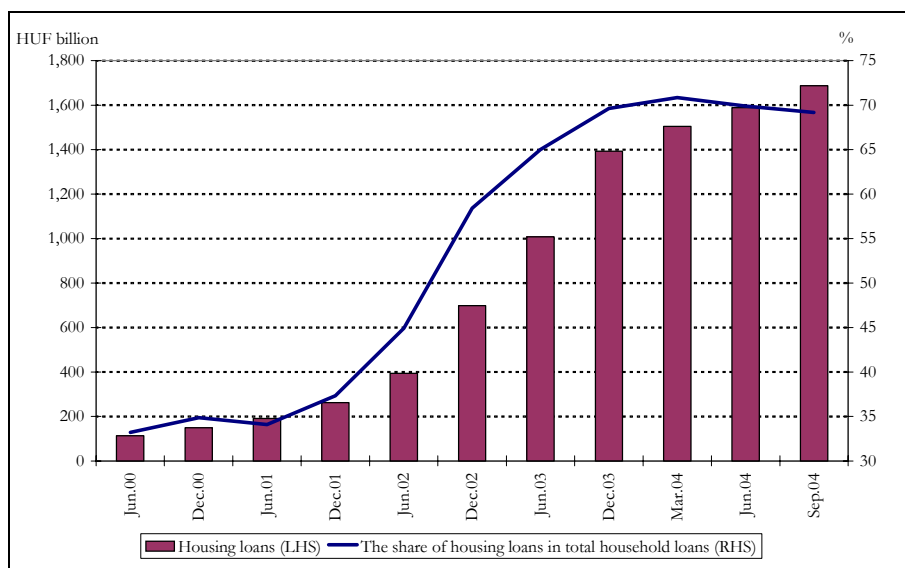
<sup>26</sup> Currently, the scoring system of banks does not differentiate between lending in forint and foreign currency. See related study by Czinege, Dávid and Szalay.

A positive turn in the convergence process in Hungary would increase trust in the economy, with a resultant decrease in the differential between forint and foreign currency interest rates. Declining long-term forint rates may cut demand for foreign currency lending, especially through subsidised loans.

### III. 3. 3. Banks' lending for house purchase

Despite the considerable tightening of the housing loan subsidy scheme, due to market trends households' housing loans-related indebtedness continues to increase, although at a slower pace. The housing loan portfolio grew by 21% prior to late September 2004. Owing to a large number of loan applications submitted to and accepted by banks at end-2003, growth data for the period between April and September better reflect the impact of the changes in the housing subsidy scheme, the growth rate was 12%. Consumption lending during the same period grew faster. Thus, following a peak in March, the share of housing loans within the overall household portfolio started to fall. The Lending Survey reveals that credit demand weakened markedly in 2004 Q1, because of the large number of loan applications brought forward at year-end 2003. From 2004 Q2, credit demand recovered with a shift towards foreign currency lending, and this is likely to have continued in H2. In 2004 H1, despite adverse changes, banks' willingness to lend as well as their credit supply increased.

Chart III.13 Housing loans and their share in household loans

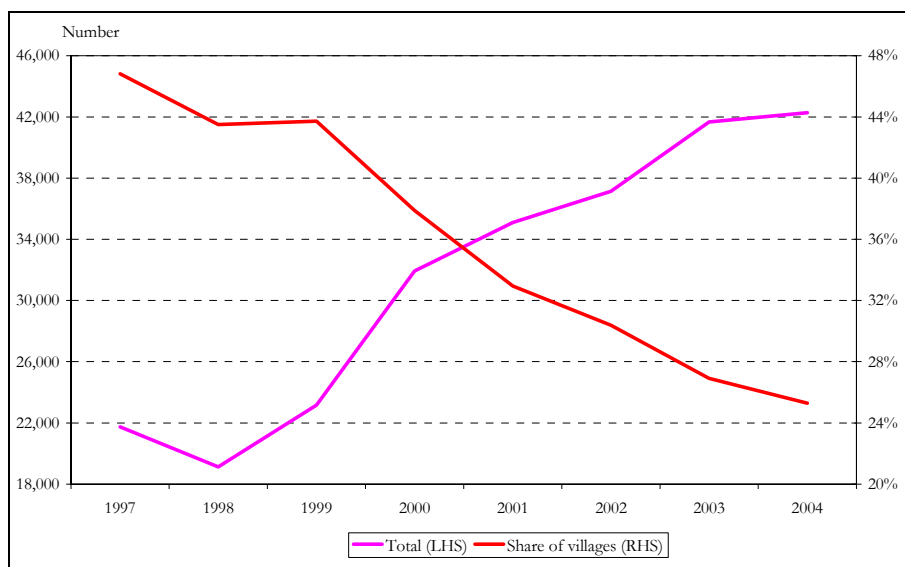


The combined effect of modifications in the housing loan subsidy scheme and rises in interest rates was that demand for subsidised loans to purchase existing dwellings fell sharply in 2004. The value of contracted amounts in the first nine months of 2004 fell to one third of the value in the corresponding period for 2003. Not only the number of loan applications, but also the average amount of loans decreased significantly, from HUF 4.7 million to HUF 3.9 million.<sup>27</sup> Owing to a large number of loan applications submitted to and accepted by banks at end-2003, its impact on the loan portfolio was first discernible as

<sup>27</sup> DEM Information and Economic Research Office.

late as 2004 Q2 and Q3, when growth fell to 9%. Consistent with expectations, the decrease in demand for subsidised loans for new construction was much less dramatic. They rose by 16% between April and September. As this type of loans is still affordable and represents less risk than its foreign currency counterparts; accordingly, its replacement with foreign currency loans is less frequent. Changes in volume are likely to be driven by households' housing investment activity in the future. Data for 2004 Q1–Q3 reveal that the increase in the number of building permits granted amounted to a mere 2% relative to a year earlier. A repeat of the record numbers in 2003 Q4 is unlikely to materialise in 2004. On the contrary, the number of the new permits issued may well decline, which will mark the end of an earlier upward trend. Households' fixed investment activity is more likely to become subdued, with a resultant decline in demand for loans for the purchase of new homes. Housing construction in settlements of smaller size (e.g. villages and small towns) declined not only in proportion, but also in absolute terms.

**Chart III.14 Total number of issued building permits and the share of villages**



Source: CSO.

As of 2005, the Government's housing subsidy scheme will take on a few new elements. Only members of the younger generation will be eligible for the new types of allowances (e.g. allowances for new homes and state guarantees). The price of homes to be purchased from subsidised loans will be maximised. Considering that the typical potential loan applicant<sup>28</sup> is younger and better off than the average, and that the requirement of the availability of own funds represents a significant barrier, the above measures will somewhat boost credit demand.

Generally, foreign currency loans are used to finance the purchase of existing homes. Lending in Swiss franc accounted for nearly half of the growth in the housing loan portfolio in Q3. As a result, the share of foreign currency loans within the housing loan portfolio rose from 1.3% at year-end 2003 to 5.4% in late September 2004. Within this, that of lending in Swiss franc soared from 1% to 77%. If general purpose mortgage-based loans are also included in the analysis, the share of foreign currency loans within household

<sup>28</sup> Hegedűs and Somogyi (2004): Housing lending, alternative subsidies and affordability. Városkutatás Kft.

loans secured on property increased from 2.5% to 8.5% before September 2004. Within this that of Swiss franc loans rose from 3% to 72%. In the short run, the above proportions are expected to grow.

The spread of and risks involved in foreign currency lending were highlighted already in the previous *Report*. Since then the supervisory authorities have put forth a number of regulatory proposals in order to reduce the additional risks implied in foreign currency lending. In order to raise customer risk awareness, credit institutions must draw attention to the additional risks of foreign currency lending. From 1 January 2005, credit institutions will have to disclose their APRs also for housing loans in order to help customers obtain more exact information.

Despite robust home construction, house prices increased somewhat, close to the rate of inflation in 2004. The banks included in the Lending Survey perceived house prices as higher in 2004 H1 than in 2003 H2. In their opinion, property prices grew significantly mainly in Budapest and its environs and large provincial cities. By contrast, they remained broadly flat in the provinces, in Eastern Hungary in particular. Real estate agents in Budapest experienced a rise in prices somewhat below the rate of inflation in 2004 Q1–Q3. Overall, banks expect a further moderate increase, at the rate of inflation, in house prices in 2004 H2. Housing construction, which remained robust in 2004, may generate supply pressure in 2005.

### **III. 3. 4. Banks' consumer loans**

In 2004, banks' consumer lending grew steadily, approximately by 13% in H1 and by 21% in Q1–Q3.<sup>29</sup> The increase in overdraft facilities, general purpose mortgage loans and credit-card debt was especially spectacular. Both supply and demand factors contributed to this sharp rise.

More affluent households' credit demand is likely to have remained strong in 2004. What is likely to drive credit demand further is the fact that the earlier crowding-out impact of subsidised loans tapered off and that robust housing construction in 2003 and 2004 may exert a pull effect on consumer lending. This is substantiated by the fact that the majority of the banks included in the Lending Survey reported vigorous demand in 2004 H1 and expected a further upswing in H2.

The Lending Survey suggests that—consistent with trends in 2003—banks' willingness to extend consumer loans edged up in 2004. Competition grew increasingly strong. Banks loosened their creditworthiness standards and terms of lending. This trend continued in 2004 H2.

Sharp competition also contributed to an expanding product range. In 2004, banks expanded their product portfolio to include mainly foreign currency and credit card products. Thus, their product portfolio was broadened to include, in addition to the long-standing car purchase loans, mainly foreign currency personal loans and general purpose mortgage credits. Owing to the rapid expansion of the latter, the share of foreign currency consumer lending rose from 14% in December 2003 to 18.5% in June 2004 and 22.5% in September. We expect this trend to persist, in addition to the interest rate differential, further amplified by customers' increased price sensitivity and competition. The latter has come to mean price competition to an increasing extent.

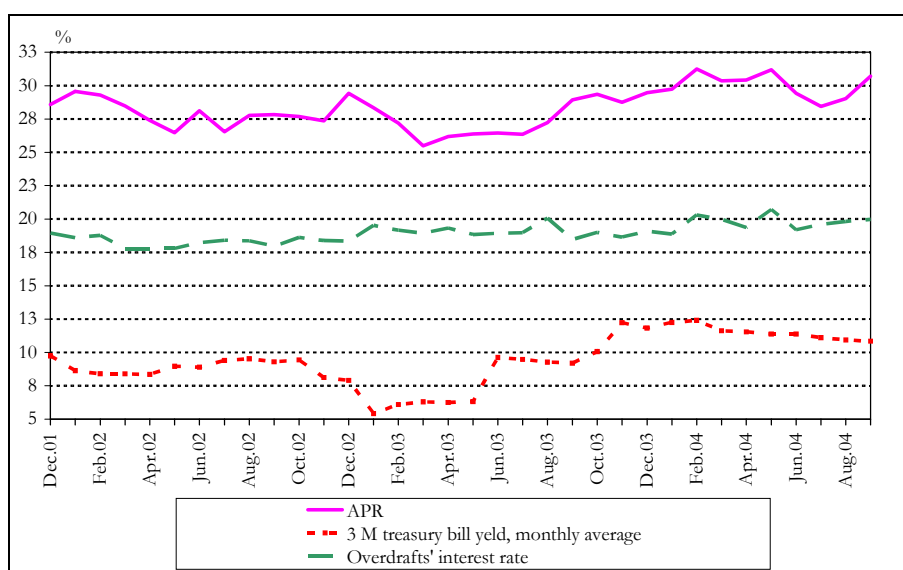
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<sup>29</sup> Corresponding figures of 2003 were 9% and 15%, respectively.

Bank sector data attest to low consumer credit losses, relative to margins and profitability. Loan losses are, however, likely to increase in the future as competition becomes stronger, lending standards and terms are loosened, markets mature and lending in foreign currency becomes more widespread.

Interest rate statistics primarily include APRs for small-amount forint consumer loans and interest rate on overdraft facilities. Similarly to earlier periods, spreads on these products remained extremely wide in 2004 as well. Wide spreads can be attributed to high operational costs, agent fees, loan losses and interest rate risks of fixed-interest loans as well as the market power of banks, which remains significant despite increasing competition.<sup>30</sup> The readjustment time of consumer lending rates to market rates points to banks' ostensive imperfect pricing behaviour.<sup>31</sup> The underlying reasons for this are twofold: one is banks' market strength and the other is households' low level of interest rate sensitivity. That credit demand became more sensitive to interest rates in 2004 is clearly reflected by the fact that in such market segments of consumer lending (e.g. personal loans and general purpose mortgage loans) where foreign currency products entered the segments, these new products accounted for the bulk of new loan agreements recently disbursed. Customers tend to opt for facilities with lower amounts of monthly instalments, without considering the risks involved.

**Chart III.15 APRs of new forint consumer loans, interest rates on overdraft facilities and yields on three-month discount treasury bills**



Notes: Monthly averages. APRs and interest rates weighted with contractual amounts.

<sup>30</sup> See Mór  and Nagy: Competition in the Hungarian banking market, MNB Working Paper 2004/9.

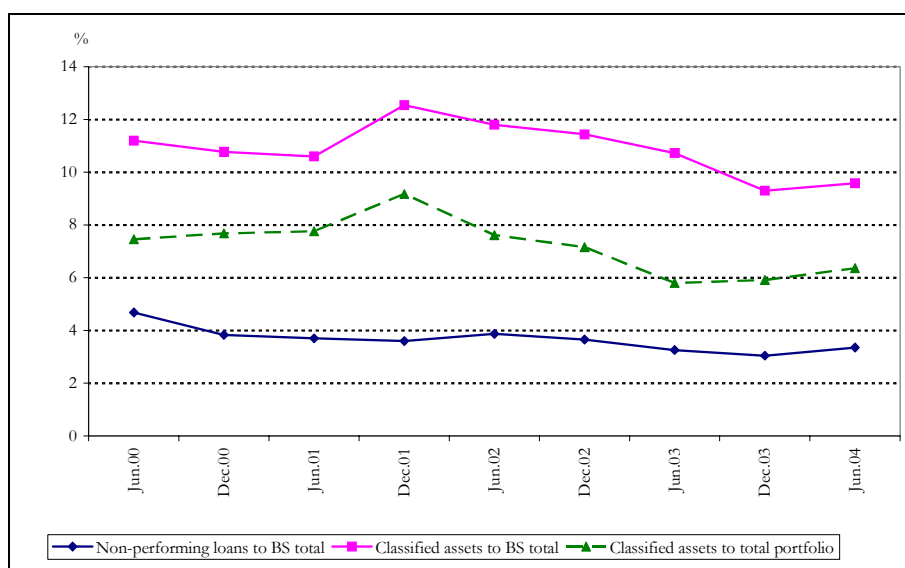
<sup>31</sup> Horv th, Krek  and Nasz di: Interest rate pass-through in Hungary, MNB Working Paper, 2004/8.

### III. 4. Portfolio quality

The overall loan portfolio to be classified increased by 8.3% within a span of one year, with an increase amounting to 7.1% in 2004 H1. Growth in the classified portfolio was more than double the growth in the portfolio to be classified.

The consistent improvement in portfolio quality experienced in previous years came to an end. In respect of on-balance sheet items, a turnaround occurred in 2004 Q1. As regards the overall portfolio, it started somewhat earlier. The main underlying reason for this is that the earlier increase in off-balance items with consistently good ratings (97% of such were problem-free in June 2004) came to an end by end-2003. And this volume effect was reflected in the deterioration in the overall portfolio quality at end-2003.

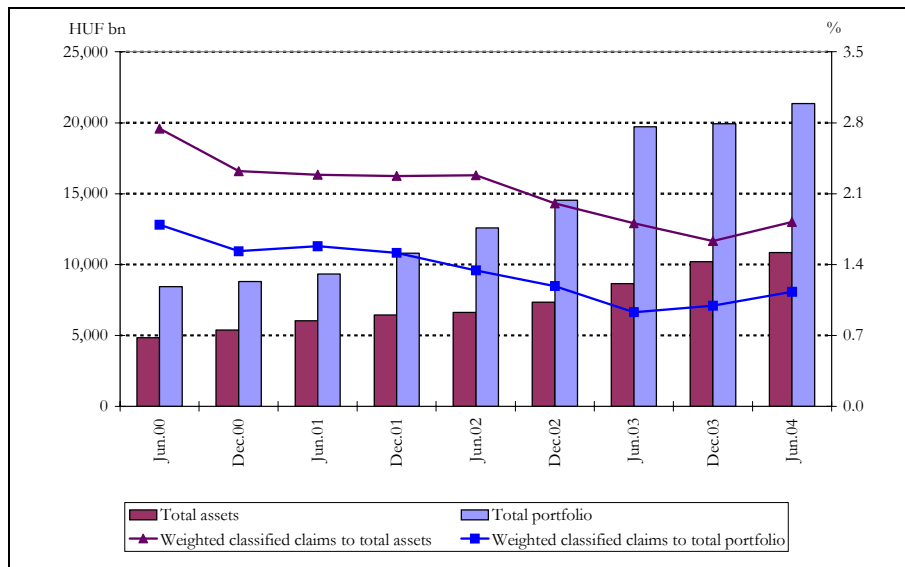
**Chart III.16 Portfolio quality in the banking sector**  
Unweighted ratios



The overall picture of changes in portfolio quality somewhat varies depending on the indicators employed. Based on the unweighted ratios of classified and non-performing items, the deterioration in portfolio quality looks less significant. However, these indicators ignore the structural changes within the individual portfolios. The ratio of the weighted value of the classified portfolio is a better indicator of changes in portfolio quality than changes in the volume of classified and non-performing items.<sup>32</sup> Chart III-17 reveals a more conspicuous deterioration in portfolio quality in respect of both on-balance sheet items and the overall portfolio.

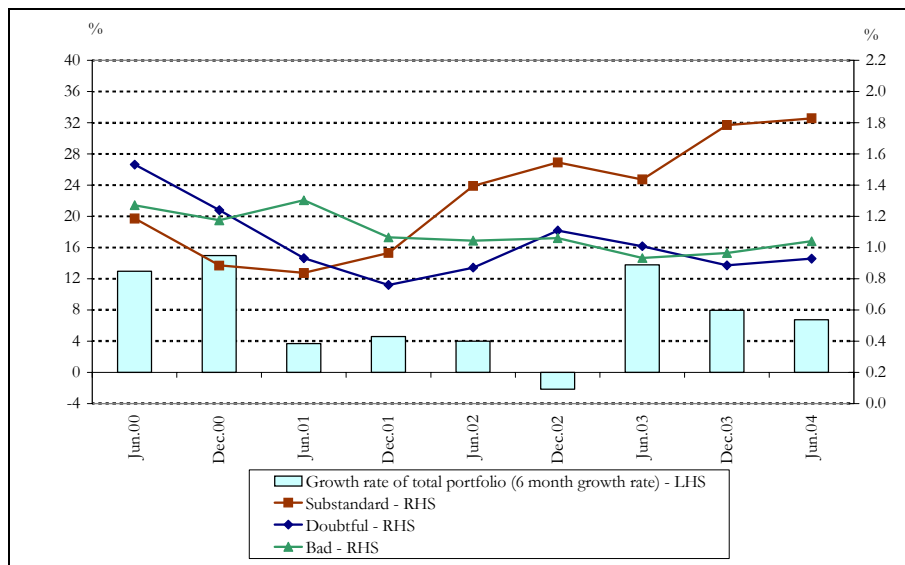
<sup>32</sup> The weights employed are the mean values of statutory provisions, i.e. problem-free: 0%, special-watch: 5%, sub-standard: 20%, doubtful: 50% and bad: 85%.

**Chart III.17 Portfolio quality in the banking sector**  
Weighted ratios



The expansion of the corporate portfolio was less rapid. The quality of the portfolio, 15.2% higher than in June 2003, deteriorated, with non-performing items rising from 3.4% to 3.8%.

**Chart III.18 Corporate portfolio quality**



A change in the order of doubtful and bad loans at year-end 2003 clearly reflects the impact of the rise in the default rate. It was the amount and proportion of sub-standard items that rose the most within the overall portfolio, which reflected the poorer profitability prospects of certain sub-sectors (construction and agriculture in 2003 and services in 2004) within the corporate sector. At the same time, however, this can also be ascribed to certain banks' improved risk management systems and heavier provisioning despite exceptionally high profitability.

Changes in the amount and proportion of the items past due in fewer than 90 days are a suitable indicator to forecast future portfolio quality, as certain items are not or not necessarily included in current classified portfolios.

In respect of items past due in fewer than 90 days, there was a significant rise, relative to a year earlier and year-end 2003. Furthermore, their share within total outstanding loans also rose sharply. The situation had improved somewhat by September. Still, the HUF 34 billion portfolio still exceeded any earlier benchmark value.

**Table III.1 Claims on non-financial corporations as per the number of days overdue**

Date	December 2002		June 2003		December 2003		June 2004	
Number of days past due	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent
0-30	15,330	0.5%	11,990	0.3%	17,761	0.4%	28,461	0.7%
31-90	7,882	0.2%	18,638	0.5%	7,891	0.2%	1,496	0.3%
0-90	<b>23,212</b>	<b>0.7%</b>	<b>30,628</b>	<b>0.8%</b>	<b>25,652</b>	<b>0.6%</b>	<b>39,957</b>	<b>0.9%</b>

The increase is particularly striking if we include all exposures in the category of the claims overdue for the longest period of time. Based on this, in late June 2004, 8% of all corporate exposures were attributable to clients with outstanding borrowings overdue for no more than 90 days. This proportion grew further, reaching 9.4% by September.

**Table III.2 All exposures to non-financial corporations with outstanding borrowings overdue for 1 to 90 days**

Date	December 2002		June 2003		December 2003		June 2004	
Number of days past due	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent	Portfolio value in HUF millions	Share as a per cent
0-30	84,208	2.5%	152,263	4.0%	247,789	6.1%	302,587	7.0%
31-90	17,432	0.5%	18,599	0.5%	17,035	0.4%	45,554	1.0%
0-90	<b>101,640</b>	<b>3.1%</b>	<b>170,862</b>	<b>4.5%</b>	<b>264,824</b>	<b>6.5%</b>	<b>348,141</b>	<b>8.0%</b>

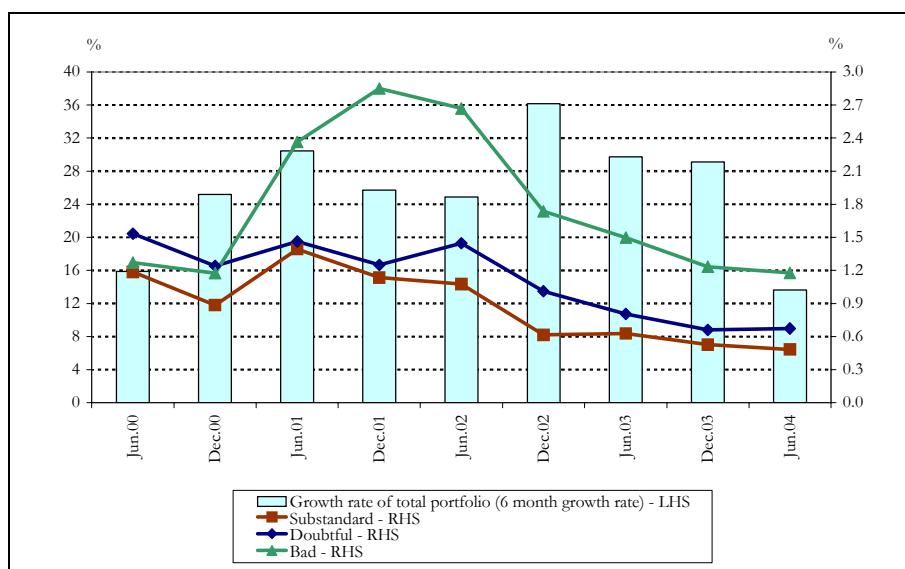
Eight banks experienced an increase in claims past due in 2003 H2, compared with 16 banks in 2004 H1. The reason that there was a sector-level rise in loans 30 days overdue was the introduction by one of the banks of a credit monitoring system, which allowed for the possibility of recording, monitoring and rating risks that had not been measured or managed before. From a stability perspective, this is a favourable trend. The stronger increase in 2004 H1 cannot be ascribed to a similar one-off effect. Several corporate clients at other banks also failed to meet their contractual obligations whereas these companies had never had such troubles before. At the same time, the total exposure of banks to these clients also increased.

There may be a number of underlying reasons for this striking rise in defaults. The business cycle affected the individual sectors differently. Some corporations may have experienced liquidity problems owing to exceptionally feverish fixed investment activity and a sharp rise in inventories in manufacturing and construction. In the services sector, including SMEs

holding short-term forint debts and unable to switch to borrowing in foreign currency, liquidity shortage may be blamed, in addition to the bleaker outlook for profitability, on the increased interest burden. The reason for this is that there was only a short delay in banks' incorporating the impact of increase in the central bank base rate in their own lending rates. However, the services sector, being inflexible to interest rates, was unable to respond rapidly enough. The gradual reduction in the central bank base rate as of March 2004 seems to take a long time to exert an impact, owing to the downward rigidity of lending rates. As a consequence, it remains to be seen whether or not this is a transient phenomenon. It will require further research to establish the causes and possible consequences of liquidity constraints.

Although the expansion of the household loan portfolio decelerated significantly in response to a slowdown in housing lending, the portfolio still exceeded the June 2003 level by 46.8%. Accordingly, its quality improved further, although at a decelerating rate. The volume of non-performing loans grew by a little less than one-third or 16.8%, with an increase materialising in 2004. Their proportion declined from 2.9% to 2.3% within the space of one year. September, however, saw a turnaround in this trend, with the proportion edging up to 2.7%. Even so, data reflect much better portfolio quality compared with the worst data for the period prior to the pick-up in housing lending. The proportion of bad loans alone was higher in December 2001 than that of the total portfolio of non-performing loans in September 2004.

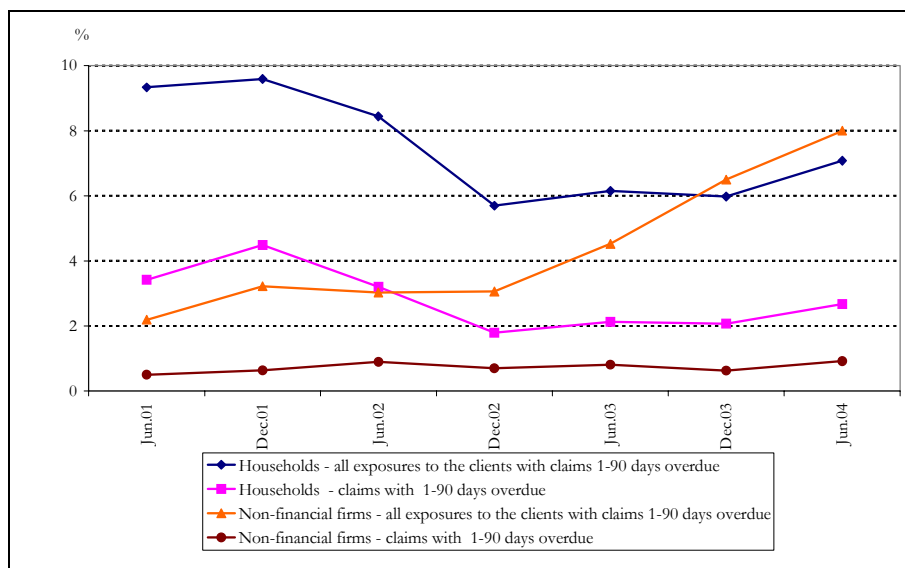
**Chart III.19 Household portfolio quality**



In 2003 H1, there was a discernible rise in the volume of loans to households past due no longer than 90 days. One year later, their proportion also started to increase. By comparison, both their volume and proportion were broadly flat in earlier years. Steady growth in overdue loans points to the onset of the first wave of default on housing loans, affecting, in particular, subsidised loans re-priced annually.

Since a deterioration in quality is a necessary ramification of a maturing portfolio, further minor deterioration is expected to occur. However, neither volume nor proportion carries an upside risk to systemic stability.

**Chart III.20 Indicators of loans to non-financial corporations and households defaulted for no longer than 90 days**

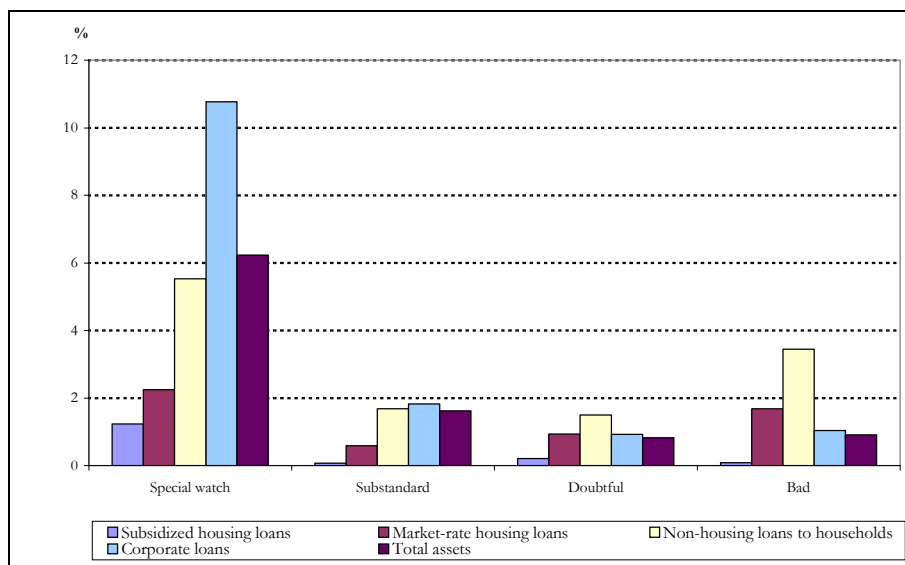


The individual segments of the household portfolio are rather different. Non-housing loans (i.e. overdraft facilities, personal, car purchase, hire purchase and securities loans, etc.) represent the highest share of non-performing loans, amounting to 5.8%. Except for loans for purchases of goods or other, mortgages secured on property, these loans are much riskier than housing loans. The reasons for this include the very features of these credit products and the availability and enforceability of collateral agreements.

The proportion of non-performing housing loans is rather low, representing a mere 0.8%. This carries no systemic risks for the time being, and banks can manage it. Data on default and/or payments in arrears reveal that banks include items in the individual categories of ranking on the basis of payments in arrears (e.g. the category of ‘bad loans’ includes loans overdue more than 360 days). The quality of market-priced and subsidised loans is rather different. While the proportion of non-performing subsidised loans is 0.4%, that of non-performing market-priced loans is 3.2%, close to the 3.4% proportion characterising on-balance sheet items as a whole. Compared with subsidised loans, the poorer quality of market-priced loans within the individual categories of rating is offset by a higher degree of coverage. Although this proportion is relatively low, amounting to only one-eighth of the overall housing loan portfolio, what is a major concern is that the proportion of doubtful and bad loans exceeds the comparable ratios of on-balance sheet items and corporate loans. Poor quality cannot be ascribed to the higher risks associated with foreign currency lending for house purchase, which started to accelerate less than a year ago, since such loans only amounted to one-sixth of market-priced loans despite fast expansion, and there was no adverse exchange rate impact during this period. Nor can the difference be attributed to the loan-to-value (LTV) ratio, as it was better for market priced loans in June 2004 than for subsidised loans. Considering the overall portfolio of outstanding loans, the LTV was below 50% for 59.9% of market-priced loans and for 43.4% of subsidised loans. In comparison, it was 66.8% and 59.7%, respectively, in the case of new loan agreements in 2004 Q2. Such a marked difference stems from differences in the legal enforceability of collateral agreements. Unless loan and mortgage agreements are enshrined in public deeds mandatorily, foreclosure on housing properties can only be implemented in court ruling-

based, long-drawn-out foreclosure proceedings. The chances of fully recovering claims are slim, due to the accumulation of penalty interest.

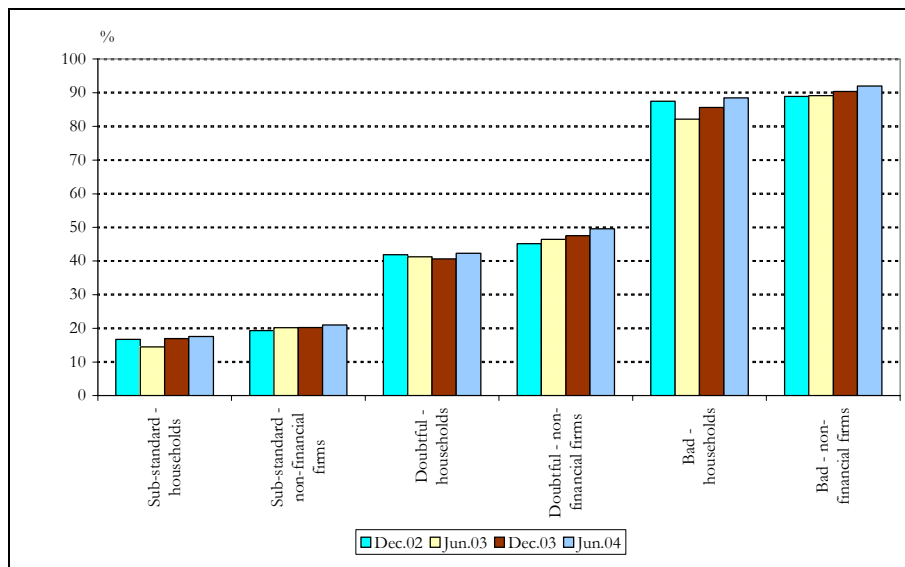
**Chart III.21 Proportion of classified items in the balance sheet, the corporate portfolio and the individual segments of the household portfolio**



Compared with the previous *Report*, a favourable change seems to take place in banks' provisioning. In all non-performing categories, the loan loss coverage ratio for both the corporate and the household portfolios increased relative to not only a year earlier, but also end-2003. This is all the more important, as—in the wake of the relevant auditing processes—compared with preliminary data, coverage ratios rose even in the final months of 2003. A similar improvement is discernible in all categories of loans to households. It was especially spectacular in the case of bad loans, the coverage ratio of which not only approximated, but also well exceeded the mean value of the category (85%). As the rate at which coverage increased was faster than that of the deterioration in portfolio quality, the outstanding profitability of banks—which continued to grow relative to a year earlier—seems to be able to allow for the possibility that banks can smooth their income over time even under the currently effective accounting regulations.<sup>33</sup> There is no doubt that this trend is beneficial from the perspective of financial stability.

<sup>33</sup> Neither currently effective legal regulations nor International Financial Reporting Standards (IFRS) allow provisioning for expected future losses, in addition for provisioning for losses incurred, which is a major cause of banks' pro-cyclical behaviour. Auditors seem to be able, without prejudice, to comply with their statutory responsibilities to attest, in line with accounting and other legal regulations, to businesses' providing a true and fair picture of their performance and oversee compliance with provisions enshrined in the law and other prudential regulations under the Act on Credit Institutions and Financial Enterprises, to grant banks some room for manoeuvre to smooth their income, whereby they can respond less pro-cyclically.

**Chart III.22 Ratio of loan impairment to gross asset value**

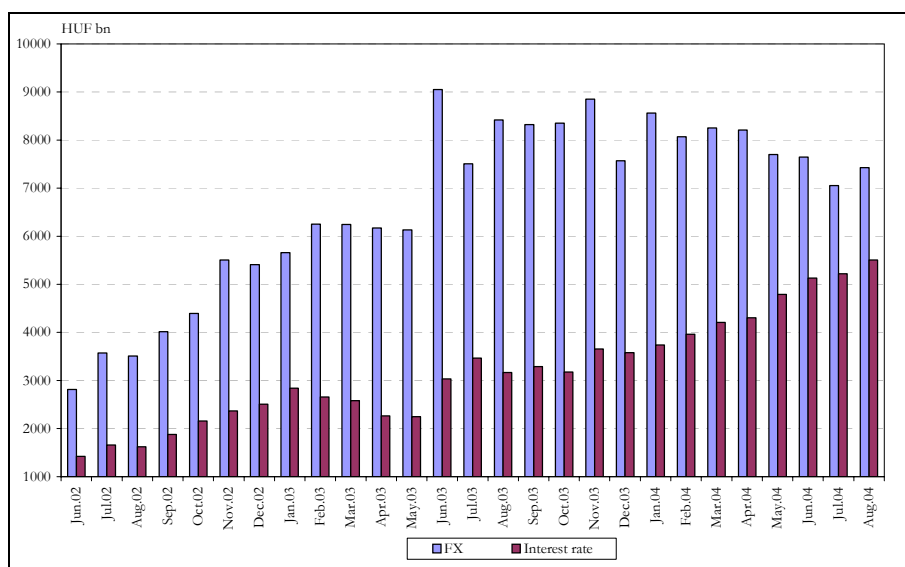


### III. 5. Banks' derivative activity and market risks

#### III. 5. 1. Banks' derivative activity

There were major changes in the derivatives market transactions conducted by banks in 2004. While foreign exchange transactions were dominant in 2002 and 2003—mainly in response to the turmoil in the forint market—the contractual value of interest rate derivative transactions increased by close to 60% in 2004. By contrast, there was practically no change in the nominal contractual value of foreign exchange derivative transactions in the first 9 months of 2004. The aggregate derivatives portfolio as a proportion of the balance sheet total remained unchanged at its level at end-2003 (87%), compared with the fast expansion experienced in 2002 and 2003. The effects discussed above also led to a shift in the proportion of transactions, with the share of foreign exchange transactions falling from 70% at year-end 2003 to 60%.

Chart III.23 Major derivatives at contractual value



As exchange rate and interest rate volatility decreased, derivatives became less hectic relative to a year earlier. With their share of 60%–70%, swap transactions remained dominant. Foreign exchange options continued to keep a rather low profile.

The reason for the sharp rise in the contractual value of interest rate derivatives is the heightened activity of participants already in the market rather than entry by new ones. Concentration remains exceptionally high, with the market share of the three and five major participants amounting to 90% and above 96%, respectively. Nearly all of the increase in the portfolio was accounted for by the five largest participants. Although this change in the structure of derivatives transactions was significant, it left counterparty risk exposure unaffected. Since the pick-up in the portfolio in 2002, the weighted value of derivative transactions has reached a meagre 1%–2% of overall risk-weighted assets. Major fluctuations only occurred in written options with a 100% weight. Low counterparty risk can be attributed to the fact that over 90% of the counterparties of banks are credit institutions with a weight of 20%. A similar conclusion can be drawn from April turnover data. In 2004 the BIS, in co-operation with the MNB, conducted a survey (Triennial Survey) on turnover with special regard to the major instruments and counterparties.<sup>34</sup> Banks active in the derivatives market continue to have a higher-than-average ratio of capital adequacy. However, due to the derivatives transactions that they conduct, their leverage is also higher.

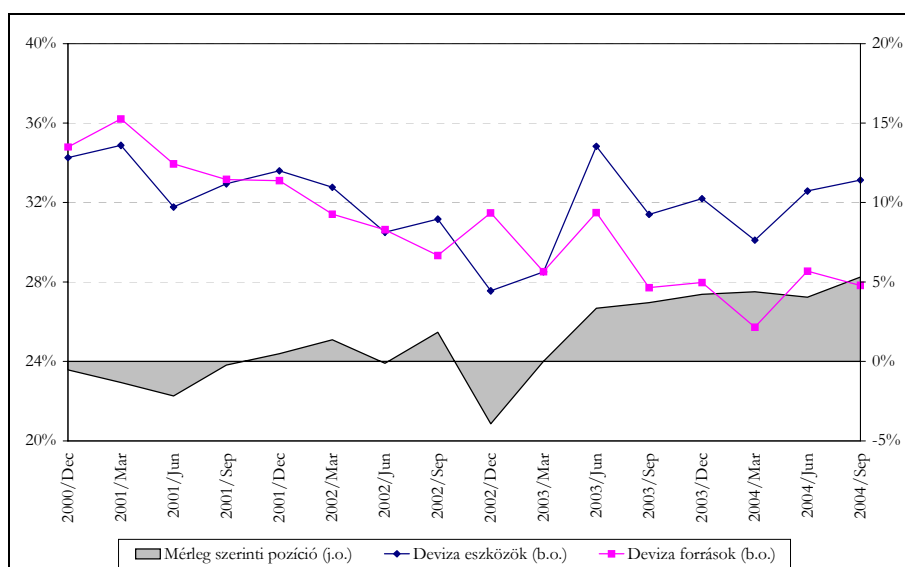
### III. 5. 2. Exchange rate risk

The share of on-balance sheet foreign currency-denominated items continued to grow in 2004. As the increase was faster in assets than in liabilities, banks' net on balance sheet position opened up further, already exceeding 5% of the balance sheet total by end-2004 Q3. The increase on the assets side was the combined effect of several factors, including lending in foreign currency to non-bank financial intermediaries, rapid expansion in corporate lending and foreign currency lending to households. No change occurred in the

<sup>34</sup> Survey on the derivatives market and OTC derivatives transactions (based on April 2004 data), MNB press release.

denominational structure. The proportion of items denominated in euros was 57% and 66% on the assets and liabilities sides, respectively. However, one new development was that the share of Swiss franc loans increased significantly relative to earlier years.

**Chart III.24 Ratio of FX items and open on-balance sheet positions**

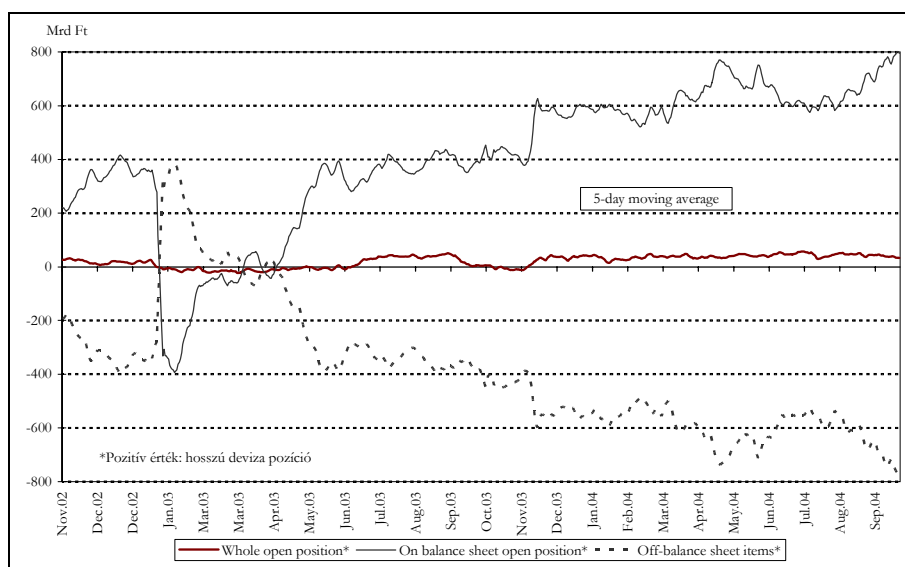


Similarly to earlier years, the banking sector continued to hold a small fraction of the further opening on-balance sheet position. Generally, banks hedged their on-balance sheet position by OTC derivatives.<sup>35</sup> The total open position (on-balance sheet and off-balance sheet items combined) varied in the range of HUF +30-50 billion, compared to HUF +/- 10 billion in 2003. In principle, owing to increased risk-taking, fluctuations in the exchange rate of the forint may generate higher losses than earlier. Even so, they are below 1% of the core capital (see stress test results). Overall, despite an increase, banks' foreign exchange rate risk exposure is not significant, relative to the banking sector's ability to absorb stress losses and the amount of foreign exchange rate risk provisions. Under the regulations pertaining to trading books,<sup>36</sup> exchange rate risk provisions rose from HUF 3.5 billion in 2003 to HUF 6.5 billion in 2004. Although their value nearly doubled, this does not indicate excess direct exchange rate risk exposure. Since the banking sector's foreign currency interest rate risk exposure is relatively closed (+/-1.0%–2.0% as a proportion of the balance sheet total), there is no considerable mismatch between the maturities of the hedging positions and the underlying transactions. Based on this, banks are unlikely to transform significant exchange rate risks into interest rate risks.

<sup>35</sup> As of 1 November 2003, PM Decree 41/1996 of the Finance Minister, restricting the amount of banks' short and long foreign exchange positions to 30% of the regulatory capital, was repealed.

<sup>36</sup> Government Decree 2002/291 imposes an 8% capital requirement on banks' foreign exchange risk exposure in excess of 2% of the regulatory capital, specified by prudential regulations, where the exposure is the larger of the absolute values of aggregate long and short foreign exchange positions.

Chart III.25 Foreign currency position of the banking sector



Nevertheless the build-up of on-balance sheet long-term foreign currency positions has consequences for financial stability.

As banks are risk averse, it is essentially domestic economic sectors that assume foreign exchange rate risk (i.e. indirect exchange rate risks), which may lead to an increase in expected losses in the case of households and SMEs with no natural hedge. If this is reflected in higher credit risk premia, expected losses will not, in principle, increase. However, sharp competition may influence this significantly.

Although—due to the relatively low level of open bank positions—increasing exchange rate volatility had no major direct adverse effect on profitability, occasional unfavourable developments in forint financing and the derivatives market may raise the banking sector's foreign currency borrowing requirement. This type of 'hunger for funding' and exposure may pose challenges in periods of market turbulence, when a rise in the cost of borrowing in foreign currency can exert a significant impact on profitability.

### III. 5. 3. Interest rate risk

Essentially, banks can assume interest rate risk either in their banking or trading book. The following section analyses interest rate risks in banking book, which is tantamount to the assessment of the risks implied by the banks' maturity transformation.

Banking book interest rate exposure stems from differences in the maturities and re-pricing period of assets and liabilities. Banks engaged in traditional banking transform short-term liabilities into longer-term assets. In the maturity table this appears as negative values in the short maturity buckets and positive ones in longer maturities.<sup>37</sup> The cumulative forint gap

<sup>37</sup> The maturity gap method captures the risk of changes in net interest income, whereas the duration gap method captures the risk of equity revaluation. The duration method studies what impacts one-off changes in interest rates exert on the present value of future incomes. This definition also highlights the connection between the two methods. According to the standard practice, the mean values of the individual maturity buckets are an efficient tool of approximating the average remaining maturities of the individual positions.

shown in table below clearly shows, however, that the banking sector uses short-term forint financing and performs actual maturity transformation only in the case of forint items. As regards foreign currency denominated items, despite last year's rapid expansion in the portfolio, no increase in maturity transformation and thus no rise in banking book interest rate risk was seen.

**Table III.3 Banking sector's 90-day cumulative re-pricing/maturity gaps**

HUF billions

	2003				2004	
	Q1	Q2	Q3	Q4	Q1	Q2
Cumulative forint gap*	-700.8	-837.4	-876.0	-1327.2	-1577.8	-1386.1
Cumulative forint gap**	1047.3	1019.7	991	751.2	249.8	506
Cumulative EUR gap	-170.9	97.5	21.4	-75.8	54.1	-6.3
Cumulative USD gap	-216.9	10.8	8.4	184.7	165.1	80.0
Cumulative CHF gap	N/A	N/A	N/A	N/A	46.0	26.5

\*Immediate re-pricing upon maturity is assumed.

\*\* It is assumed, that sight and current account deposits are repriced with a 90-day lag (cumulative forint gap excluding sight and current account deposits).

With respect to forint items, interest-bearing liabilities of short duration have been playing an increasingly important role in financing since early 2003. In principle, opening negative forint maturity gaps consistently pose increasingly high interest rate risks to the profitability of the banking sector. Expansion in lending, in particular that of long-term housing loans, has contributed to the opening of the maturity/re-pricing gap. Although housing lending is financed mainly through the issuance of mortgage bonds with maturities similar to those of housing loans, liabilities with short maturity or short duration (e.g. sight deposits and short-term time deposits) also played an important role.

The cumulative forint gap points to significant interest rate exposure in the banking sector. If, however, the adjusted cumulative forint gap is also taken into consideration, there does not seem to be a considerable interest rate risk. Depending on the pricing behaviour of banks, the effective (actual) cumulative forint gap may, in fact, vary between the two extreme scenarios shown in the table.<sup>38</sup> When interest rates rise, for instance, banks close their maturity gaps or transform its value into a positive one through a delayed and partial re-pricing of short-term time deposits and sight, current account deposits, which respond relatively inflexibly to changes in interest rates. Under this scenario, banks establish their respective actual re-pricing gaps in a manner that they can approximate the adjusted cumulative forint gap to the largest possible degree. Banks respond to falling interest rates by doing just the opposite, i.e. approximating their individual effective gaps to the interest rate gap resulting from assumed immediate re-pricing. In this case, a rapid re-pricing of liabilities may lead to excess income. However, the amount of such income is not outstanding, because interest on sight and current account deposits is sticky downwards,

<sup>38</sup> We do not address the issue of any potential lag in the re-pricing of assets.

owing to its very low level. Overall, banks smooth the impact of market rate volatility on interest income, balancing between the two extreme scenarios. There has been no trend-like shift in foreign exchange maturity/re-pricing gaps, thus, with respect to interest rate risks, lending in foreign currency is practically risk-free. In this business line, the role that the banking sector plays in transformation is confined to intermediation between the rest of the world and domestic economic sectors.

It can be easily seen that the duration and maturity gap methods can provide actual information on banking book interest rate exposure and any potential profitability outcome only if we accept the assumption as true that banks re-price their assets and liabilities at the actual date of re-pricing (e.g. maturities are effective maturities) and to an extent that is identical to that of the changes in the benchmark interest rate. The following section provides a more detailed discussion of these impacts by examining the unchanged spread assumption of the maturity gap method and estimates for embedded options in the context of interest rate risks.

#### *Impact of banks' pricing behaviour on interest rate risks*

Pricing influences actual interest rate risk exposure significantly. The reason for this is that, depending on the level of competition, banks can influence the potential adverse impact of market rate fluctuations by 'putting off' the date of re-pricing and establishing the extent of re-pricing. In periods of rising market rates pricing of liabilities play a leading role. When market rates fall, asset side adjustment takes over. This phenomenon is clearly reflected in recent changes in spreads. Falling interest rates open credit spreads,<sup>39</sup> while rising ones are first reflected in deposit spreads. Thus, lending rates are rigid downwards, while deposit rates are rigid upwards.<sup>40</sup> Consequently, the constant spread assumption of the maturity gap method results in significant distortion in the assessment of interest rate risk. In the wake of major forint yield fluctuations in 2003, competition—on the whole—was likely to have allowed profit-maximising banks to alter temporarily spreads in order to lower the adverse impacts of interest rate movements. The increasingly high volatility of spreads over BUBOR suggests that it is mainly the household deposit market where the adverse impact of interest rate risks can be mitigated the most. The chart below shows that given a 5% rise in interest rates, a 3-month lag in the re-pricing of liabilities can make potential losses 'disappear'. There are, of course, a number of items among interest-bearing liabilities, the re-pricing of which cannot be delayed for contractual or other reasons. Furthermore, there may be significant differences among banks, depending on considerations of fund raising vs. profitability objectives. Sensing a chance of market acquisition and fund raising, banks with a low share of the deposit market respond to increase in market rates more rapidly than those with a larger household deposit portfolio, for which profitability is a primary concern. Individual interest rate exposures also reflect banks' differing objectives. Those with a larger household sight deposit portfolio hold seemingly higher interest rate exposures than does the entire banking sector.

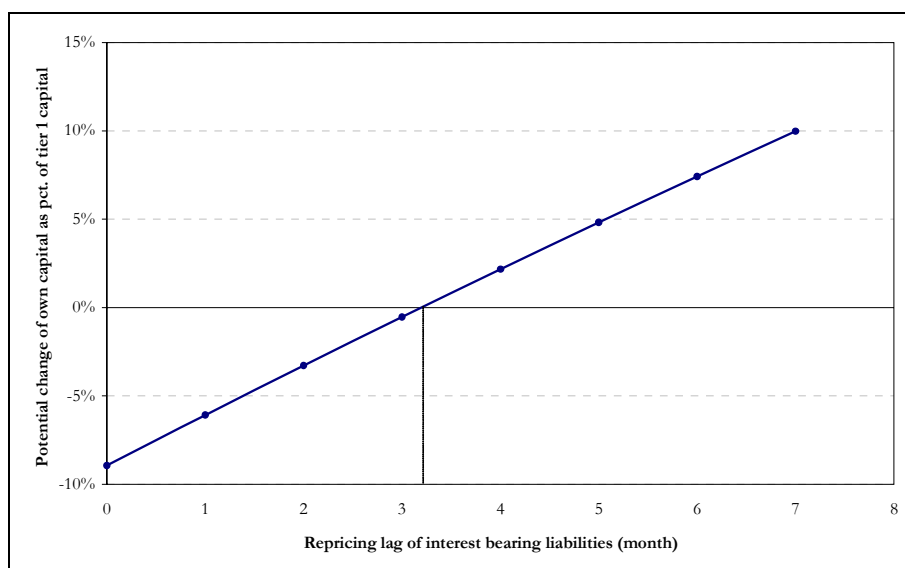
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<sup>39</sup> Naturally, changes in credit risk premia also contribute to changes in credit spreads markedly.

<sup>40</sup> For a detailed discussion of the issue, see Horváth, Krekó and Naszódi: Interest rate pass-through in Hungary, MNB Working Paper, 2004/8.

**Chart III.26 Impact of a (5 percentage point) increase in forint interest rates based on lags in the re-pricing of liabilities**

June 2004



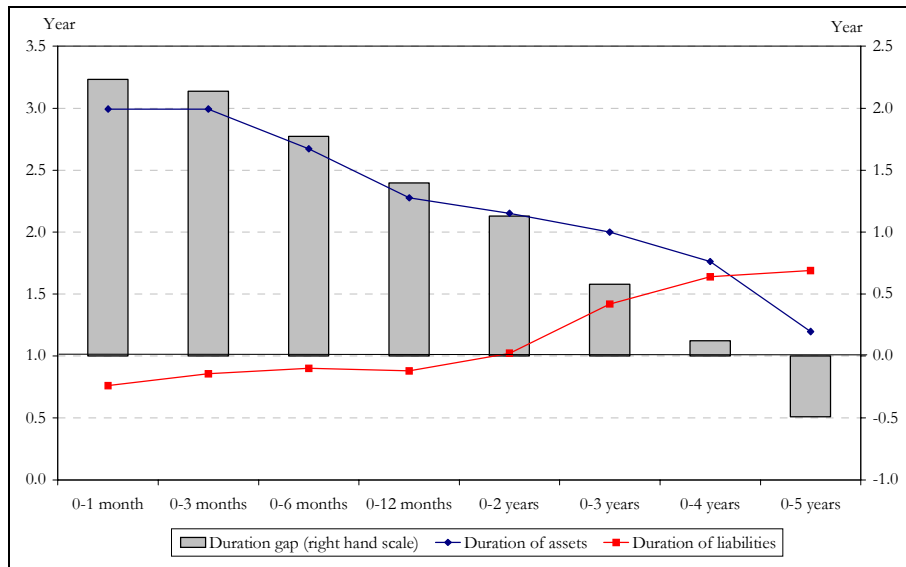
*Impact of embedded options on interest rate risks*

There are certain items among both assets and liabilities, the maturities of which are uncertain, depending on the value of a given option. They include loans with a right of early repayment and sight deposits without agreed maturities on the assets and liabilities sides respectively. The assumption on re-pricing/maturity of these items may alter interest rate exposures significantly. Actual maturities depend on the values of underlying embedded options in both cases. Preliminary assumptions on their actual maturity are based on historical experience and statistical methods. Under the conservative approach, the remotest possible point in time (no early repayment allowed) must be taken into consideration on the assets side, while the earliest possible date<sup>41</sup> (no deposit renewal) must be allowed for on the liabilities side. Interest on long-term housing loans with a right of early repayment, granted under the former housing subsidy scheme, is low even in international comparison. Thus, as no early repayment is expected to occur on a massive scale, the impact of early repayment is unlikely to be of importance.<sup>42</sup> Therefore, for the time being, we have excluded this from our analysis. Option fees equal the pre-payment charges on the assets side, and the spread between market and sight deposit rates on the liabilities side. The chart below shows the duration gap in the banking sector on the basis of the assumed dates of exercising the options. According to this, if the maturities of sight deposits are evenly spread out over the next 4 to 5 years, forint interest exposure may, in practice, disappear, since the positive duration gap sinks down to close to zero. Under standard market conditions, the assumption of deposits with maturities evenly spread out over the next 4 to 5 years may not be far-fetched.

<sup>41</sup> This means the 0–30-day time bucket in the case of sight deposits.

<sup>42</sup> The decision of individual households on prepayment may, of course, depend on various other factors.

**Chart III.27 Duration gap depending on assumptions for maturities on sight deposits**

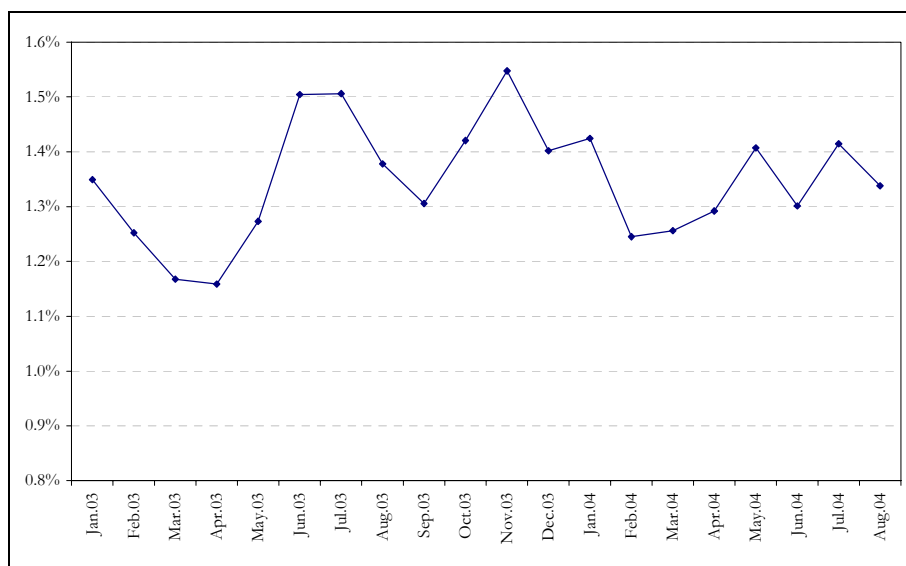


\* Maturities of sight deposits evenly spread out over the time spans indicated.

### III. 5. 4. Market risks in the trading book

Risks in the trading book, the bulk of which stem from interest rate risks, did not rise significantly in 2004 either, similarly to 2003. The amount of risk provisions varied between a meagre 1.0 to 1.5% of the regulatory capital of the banking sector. Low risk exposure was due to the rather short duration of the government securities portfolio. The proportion of capital allocated to trading book risks did not rise significantly even at the time of higher market and interest rate volatility. Nor are any trend-like changes discernible in the positions taken.

**Chart III.28 Capital allocated to trading book risks as a share of regulatory capital**



### III. 5. 5. Ability to absorb market stress losses

Relying on the exposures identified above, we now go on to analyse the resilience of the banking sector to market stresses. We only consider interest and exchange rate risks, because other (e.g. equity or commodity) risk exposures are not significant. Similarly to earlier years, sensitivity analysis is conducted to gauge the ability to absorb stress. The shocks that we examine include a +500 and -500-basis point parallel shift in the domestic yield curve, a 40% appreciation and depreciation of spot foreign exchange rates and 200-basis point shifts in foreign interest rates. We capture impacts as potential changes in the value of equity,<sup>43</sup> comparing them to banks' core capital. Changes in exposures also attest to the fact that the greatest risks are posed by forint items. However, it should be pointed out once again that, because of the factors discussed earlier, effective interest rate exposures may depart from theoretical exposures. The potential losses that we calculate will materialise if, for some reason (e.g. strong competition or material stresses), banks decide not to postpone re-pricing, or if deposit holders decide not to roll over their deposits upon maturity.<sup>44</sup> In our opinion, these assumptions, which may sound rather extreme, may also be interpreted as worst case scenarios. As such, they are, in essence, consistent with the philosophy of stress tests. Undoubtedly, assumptions for deposit stability are pivotal to interest rate risk stress tests.

**Table III.4 Duration-weighted aggregate interest rate risk exposures**

HUF billions

	HUF+	EUR+	USD+	HUF-	EUR-	USD-
June 2003	2 032.4	481.9	211.1	-255.8	-206.0	-129.3
June 2004	2 366.7	275.0	40.4	-353.1	-105.3	-22.3

**Table III.5 Exchange rate risk exposures**

HUF billions

	EUR+	USD+	CHF+	EUR-	USD-	CHF-
June 2003	1.23	0.97	0.29	-5.44	-0.3	-0.05
June 2004	8.76	2.65	1.08	-10.58	-0.57	-0.06

Potential losses reach the highest level, amounting to even 10% of the core capital, when there is an extreme shift in the forint yield curve. The value impact of other stresses, by contrast, hardly amounts to 1% of the core capital. Even the adverse impact of rising interest rates is not systemic, due to the high level of capital at the affected banks. Major shifts in the capital adequacy ratio would only occur at a few 'outlier' banks. Maximum loss would be incurred if there were a simultaneous upward shift in all yield curves.

<sup>43</sup> Calculating the impact on incomes could be an alternative method.

<sup>44</sup> Or if no early repayment of significant amount would occur. For reasons discussed above, we do not address this issue here.

**Table III.6 Potential changes in value<sup>45</sup> and their impact on banks' capital adequacy**

	Changes in core capital value		Number of banks according to CAR					
	Gains	Losses	<8%	>8%<9%	>9%<10%	>10%<11%	>11%<12%	>12%
Original			1	3	5	4	2	21
Interest (+)								
HUF	6.4%	-14.9%	4	2	3	3	2	22
EUR	0.6%	-0.8%	1	3	5	4	2	21
USD	0.1%	-0.2%	1	3	5	4	2	21
CHF	0.0%	-0.3%	1	3	5	4	2	21
Exchange rate (-)								
EUR	0.6%	-1.0%	1	3	5	4	2	21
USD	0.1%	-0.1%	1	3	5	5	1	21
CHF	0.05%	-0.01%	1	3	5	4	2	21

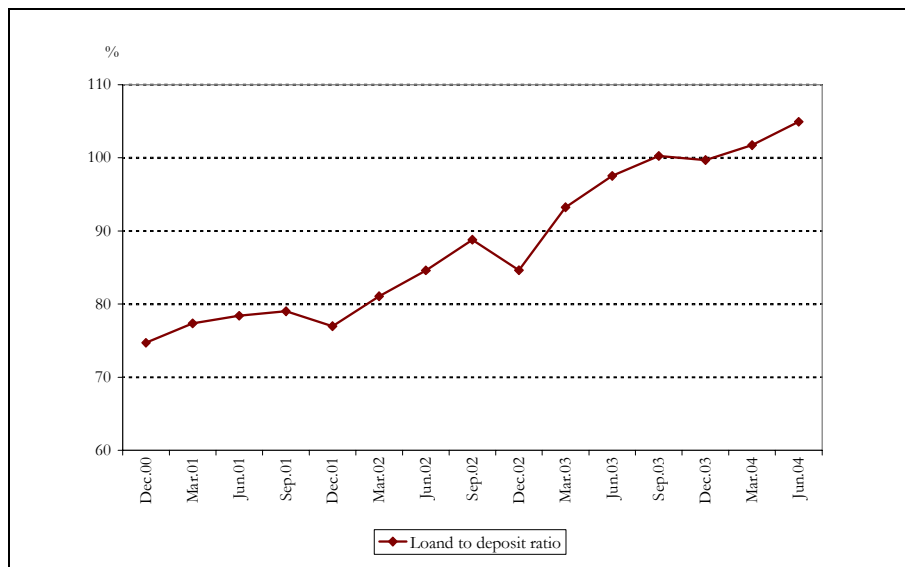
### III. 6. Banking sector liquidity

Consistent with trends in earlier years, the rate of growth in lending continued to exceed that in deposit taking. In June 2004, the annual growth rate of loans exceeded 60%. By contrast, the corresponding expansion in the deposit portfolio hardly exceeded 30%. As a result, the loan-to-deposit ratio remained above 100% in 2004. The steady increase in the ratio, an ongoing trend for 2 years now, can be ascribed to households' unwillingness to save. With regard to assets, financing through mortgage bonds and borrowing abroad are gaining in importance.<sup>46</sup>

<sup>45</sup> The table below shows the impact of upward interest rate shifts and the depreciation of the forint vis-à-vis foreign currencies.

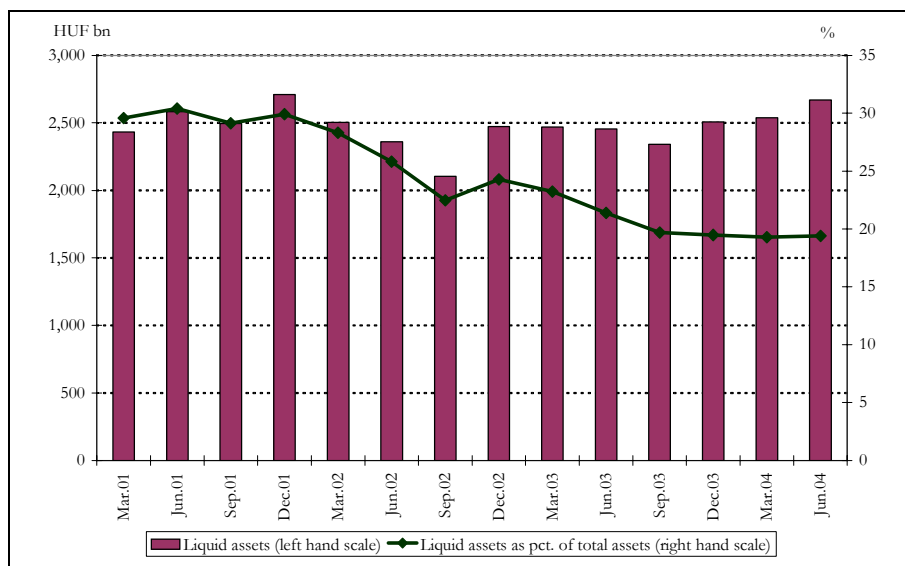
<sup>46</sup> The issuance of mortgage bonds was an increasingly available source of funds for the banking sector in 2004.

**Chart III.29 Loan-to-deposit ratio of the banking sector**



Against the consistent rise in loan-to-deposit ratio, however, it was a favourable development that the ratio of liquid assets stopped declining in 2004. In fact, the nominal value of liquid assets even edged up, in contrast to 2003, when, owing to a widespread shortage of funds, the banking sector financed lending by tapping such assets heavily. The distribution of liquidity across the banking sector continues to exhibit a marked asymmetry, although the spread of 30-day cumulative net basis positions slightly declined in 2004. This, however, was mainly the result of easing excess liquidity at certain banks.

**Chart III.30 Liquid asset ratio**



As a combined effect of the factors discussed above, the importance of foreign funding increased further in the banking sector in 2004. Nevertheless, we deem it to be a favourable development that the maturity of foreign liabilities increased significantly. This increase can be ascribed to issuance of mortgage bonds abroad in particular, which contributed greatly to a rise in the proportion of long-term liabilities. However, foreign liabilities replacing

domestic deposits may, in principle, increase the vulnerability of the banking sector to foreign shocks.

### III. 7. Financial position and capital adequacy

Based on preliminary data, in 2003 the banking sector solvency ratio was 11.9%, a mere 0.1 percentage point lower than a year earlier, and 0.4 percentage point below the audited 2003 value. All banks met the statutory minimum requirement for the ratio, i.e. 8%.

The sector's capital adequacy ratio decreased from 11.6% in June 2003 to 11.5% in 2004.<sup>47</sup> The capital adequacy ratio of nine banks failed to reach 10%. For three of these banks it was between 8% and 9%, and for one it was below 8%. Seven of the ten largest banks and three of the five largest are among the banks with a strained capital adequacy ratio.

Banking sector regulatory capital was 20% or HUF 177 billion higher in June 2004 compared to a year earlier.

Both the volume and the proportion of internal capital accumulation were high, with the proportion of reinvested earnings, also including general provisioning, reaching 79%, compared to the 70% projected in our June *Report*. Though it falls short of the 86% in 2002, it is a clear indication that owners intend to maintain a high level of internal capital accumulation even when outstanding profits could tempt them to establish a higher proportion of dividend payment. From a stability perspective, financing risk taking through core rather than supplementary capital is a favourable development.

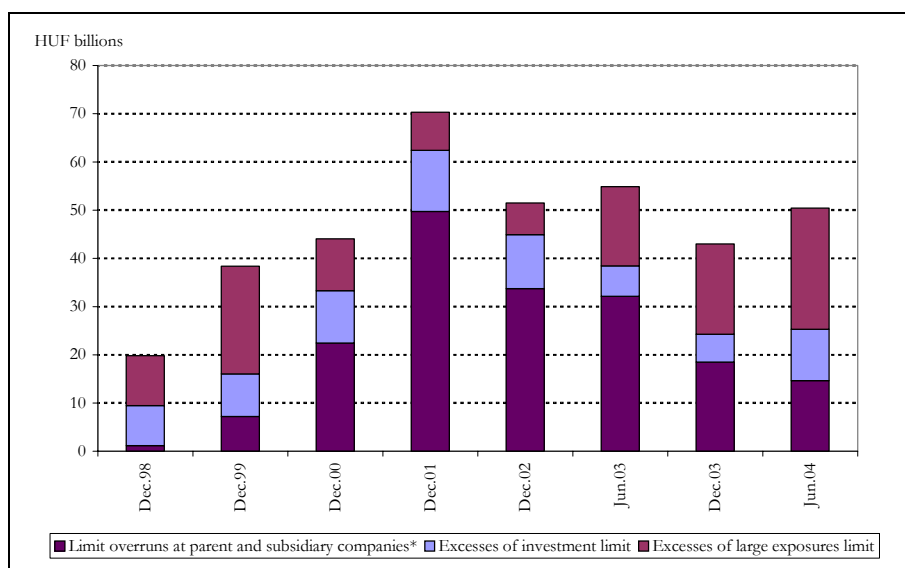
In June 2004, banks' regulatory capital was 12% higher, compared to year-end 2003. External financing, in the form of owners' capital injection and the growth of received subordinated loan capital, was a major contributor to the bulk of this growth in regulatory capital. Interim auditing also allowed for the possibility of internal capital accumulation.

A decrease in the number of deductions also contributed to the increase in regulatory capital. Of such deductions, those related to investments in financial institutions, investment undertakings and insurance corporations and the subordinated loans granted to such declined. So did items related to country risk capital requirement. However, limit excesses rose. Developments in the structure of limit excesses were in line with our earlier expectations. Both the amount and proportion of limit excesses in related companies decreased further. By contrast, they grew significantly in investments and risk taking vis-à-vis clients. A trend-like decline in CAR seems to further underpin the fact that, for a significant proportion of banks which are dominant from a systemic risk perspective, the growth of regulatory capital can effectively hinder the growth of risk-taking, and these banks need increasingly more external capital despite the relatively high level of their ability to accumulate internal funds.

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<sup>47</sup> Under the relevant statutory provisions, capital requirement for exchange rate, commodity and trading book risks is excluded from calculations. Thus, the measures to be taken in the case of non-compliance with the ratio do not apply either; therefore, for purposes of temporal comparability, we use the capital adequacy ratio with a content in force prior to 2002 in order to study compliance with capital requirements for risks other than credit risks.

**Chart III.31 Limit excesses under the Act on Credit Institutions and Financial Enterprises (Hpt.)**



\* As of 1 January 2001, limit excesses under § 79 (7) of Hpt.

A major regulatory change occurred at year-end 2003, which also affected regulatory capital. As of 1 January 2004, pursuant to the Act on Accounting, certain institutions are allowed to use the fair value method to measure their financial assets and liabilities. If certain conditions are met, they were allowed to do so already in preparing their respective financial statements for 2003. Five banks at year-end 2003 and eight<sup>48</sup> in June 2004 already used this method of valuation, despite the fact that the application of this accounting alternative is likely to run into strong opposition, due to the procedural rules for business tax establishment.

In terms of volume, the largest impact of fair value measurement stems from the recognition of unrealised profit on assets held for trading. The positive valuation differences of assets available for sale is recorded in capital, i.e. fair value reserve. Similar to valuation reserve for value adjustment, fair value reserve is a component of supplementary capital. Based on June data, this left regulatory capital unaffected, amounting to only a mere 0.6% of such capital. The majority of assets, including derivatives, to which fair valuation is applied, are held for trading. As interim preliminary profit is not allowed to be recognized in regulatory capital, only year-end audited data can provide a reliable clue to the impact of this method on changes in capital volatility.

The adjusted balance sheet total and the balance sheet total continue to converge. An increase in the amount of written options of 100% weight is likely to have been only a temporary discontinuation in the rise of the proportion of weighted on-balance sheet items within the adjusted balance sheet total.<sup>49</sup>

<sup>48</sup> Our survey reveals that a further nine banks are planning the adoption of the method in the coming 1–2 years.

<sup>49</sup> The value of written options of 100% weight was HUF 70 billion, HUF 62 billion, HUF 130 billion and HUF 26 billion in June 2003, at end-2003, in June 2004 and September 2004, respectively. The number of option writer banks varies between 4 and 6, with 3 of them consistently active.

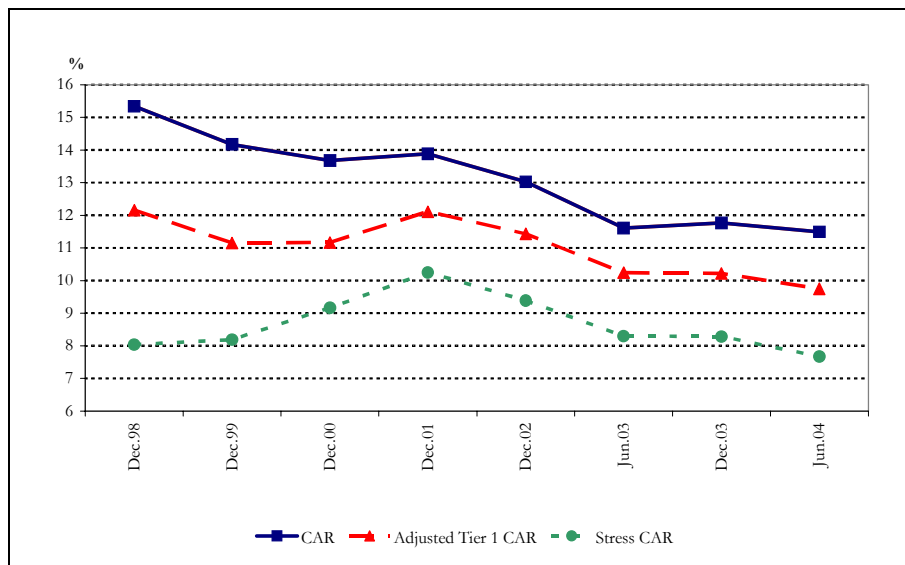
**Table III.7 Adjusted balance sheet total components**

Assets with weighted values (%)	30 June 2003	30 June 2004	2004/2003*
Assets with 20% weight	3.9%	4.3%	1.31
Assets with 50% weight	6.0%	8.7%	1.75
Assets with 100% weight	71.0%	68.1%	1.16
Sum total of weighted on-balance sheet items	80.9%	81.0%	1.21
Weighted value of contingent and other future liabilities	18.0%	17.4%	1.17
Weighted value of maturing liabilities	1.0%	1.6%	1.88
Risk-adjusted balance sheet total (in HUF billions) = 100%	7,470	9,051	1.21

\* Indices calculated from increase in the number of underlying data.

Compared to data in June 2003, the adjusted Tier 1 capital adequacy ratio (after deductions, remaining for covering credit risks) fell by 0.5 percentage point in the whole sector, representing a more significant fall than that in the capital adequacy ratio.<sup>50</sup> As a result of the deterioration in the portfolio, the decrease in the value of the stress-CAR<sup>51</sup> was even higher, at 0.6 percentage point, sinking below the regulatory minimum, i.e. 7.7%. The average stress-CAR of the ten largest banks fell from 7.1% in June 2003 to 6.9% in June 2004. Considering the extreme nature of the scenario, this indicates an acceptable level of stability, both with respect to the banking sector and in terms of the average of the largest banks.

**Chart III.32 CAR, adjusted Tier 1 CAR and stress-CAR values**

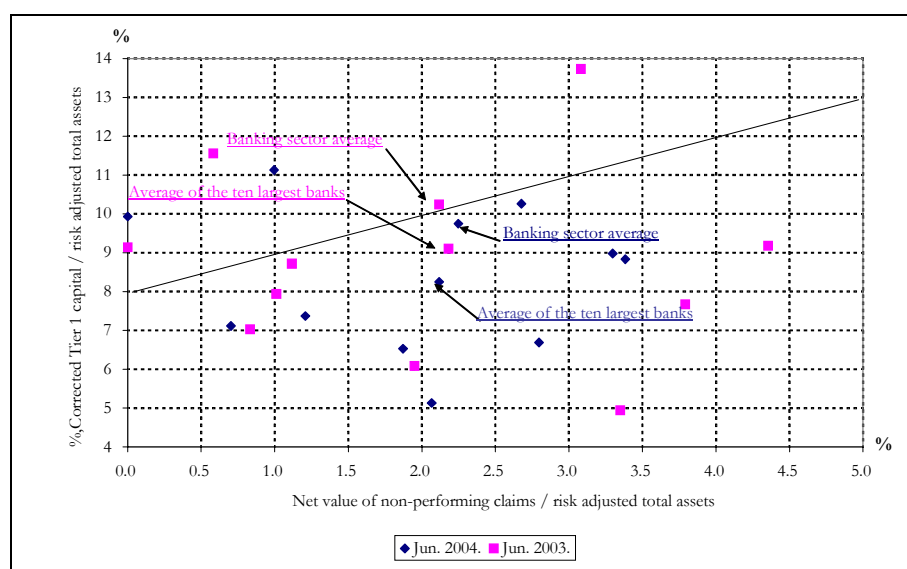


<sup>50</sup> Adjusted Tier 1 capital adequacy ratio = (Tier 1 capital after deductions – capital requirements for trading book, exchange rate and commodity risks)/risk-adjusted balance sheet total.

<sup>51</sup> Stress capital adequacy ratio = (Tier 1 capital after deductions - capital requirements for trading book, exchange rate and commodity risks -- net value of non-performing balance sheet items)/( risk-adjusted balance sheet total - net value of non-performing balance sheet items).

The ability of the ten largest banks to absorb stress deteriorated. Simultaneously, owing to a higher level of reserves, the maximum value at loss fell both in terms of banks' average and on the level of the individual banks. Chart III-33 clearly indicates the decline in differences between banks. Synthetic risk indicators suggest that major banks are becoming homogenous in spite of the fact that there are sharp differences in their individual risk profiles. If assumed maximum value at loss materialised, the Tier 1 capital-based stress CAR would reach at least 8% only in the case of 3 banks. Had such an extreme scenario become reality, the two banks with the worst ratio would have found themselves in a dire situation in 2004, even though—based on the ratio—their capital position did not deteriorate relative to a year earlier.

**Chart III.33 Banks with the 10 largest balance sheet totals, their average capital position, banking sector average capital position and risks measured by maximum value at loss on non-performing loans as at June 2003 and June 2004**



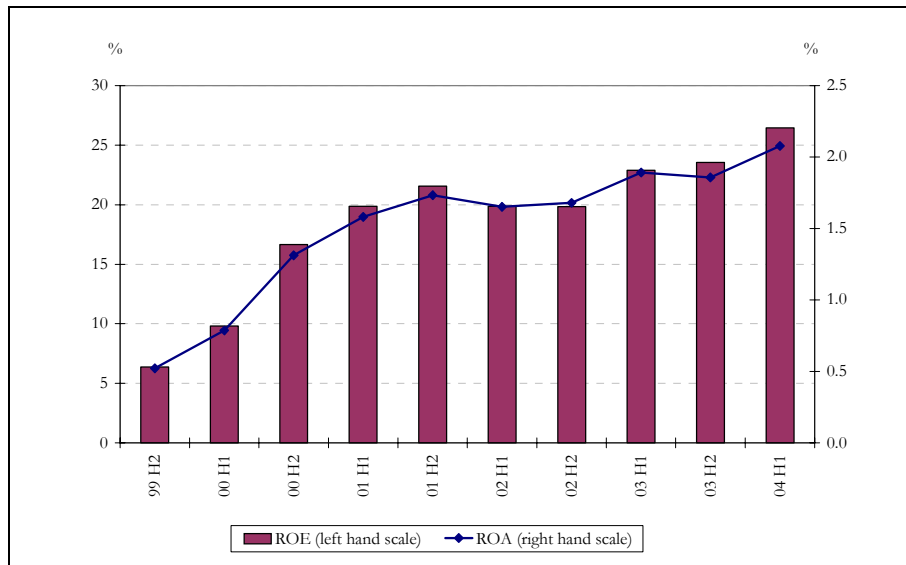
### III. 8. Profitability

In 2004 H1, profitability grew nearly as fast as last year.<sup>52</sup> The pre-tax profit of HUF 168 billion was 43.15% higher than in 2003 H1. In the period under review, there was an outstanding improvement in both ROA and ROE profitability.<sup>53</sup> A major contributor to profitability growth was interest income, which can be attributed to, *inter alia*, pricing, the increase in the housing loan portfolio over last year's volume and higher earnings on derivatives transactions.

<sup>52</sup> Due to changes in corporate tax, we rely on pre-tax rather than post-tax data. For reasons of comparability, indicators were revised retrospectively.

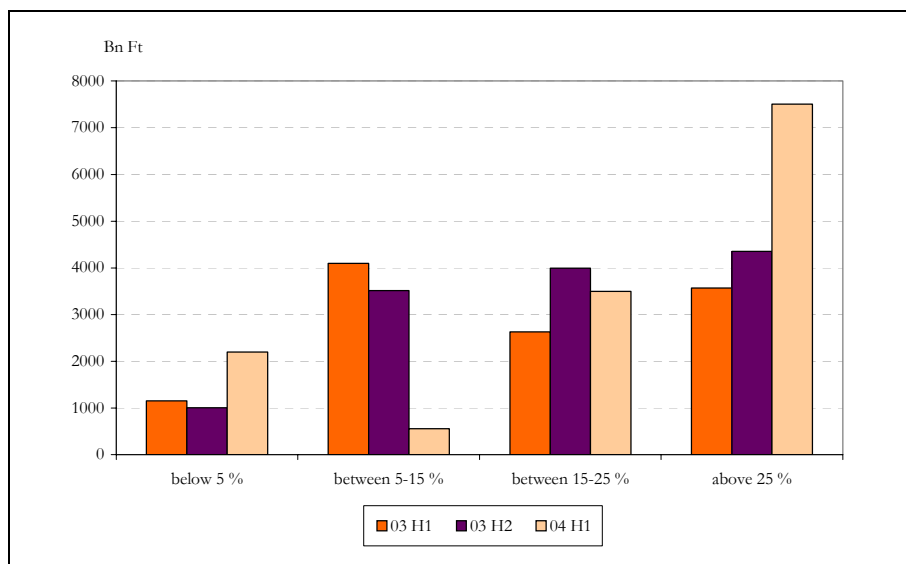
<sup>53</sup> Both ROA and ROE data are for the past two half years as a whole.

**Chart III.34 Banking sector ROE and ROA**



In respect of banks operating in both 2003 H1 and 2004 H1, the number of loss-making banks remained unchanged (8), with their common market share continuing to be very low (5%).<sup>54</sup> From the point of view of systemic stability, this is a favourable development. The gap between the most profitable banks and those with average profitability increased further. It is, however, a positive turn that the proportion of banks with above-average ROE rose significantly. Mortgage bank ROE remained high at 43.11% on average, thus this type of bank represented the most profitable group of banks. Banks specialising in consumer lending can also boast of a higher-than-average ROE.

**Chart III.35 Banks as per their respective ROEs (balance sheet totals of banks in the individual categories)**



<sup>54</sup> Postabank excluded, the market share of the seven loss-making banks is 2%.

The difference in income between 2003 H1 and 2004 H1 can be attributed predominantly to an increase in interest income.

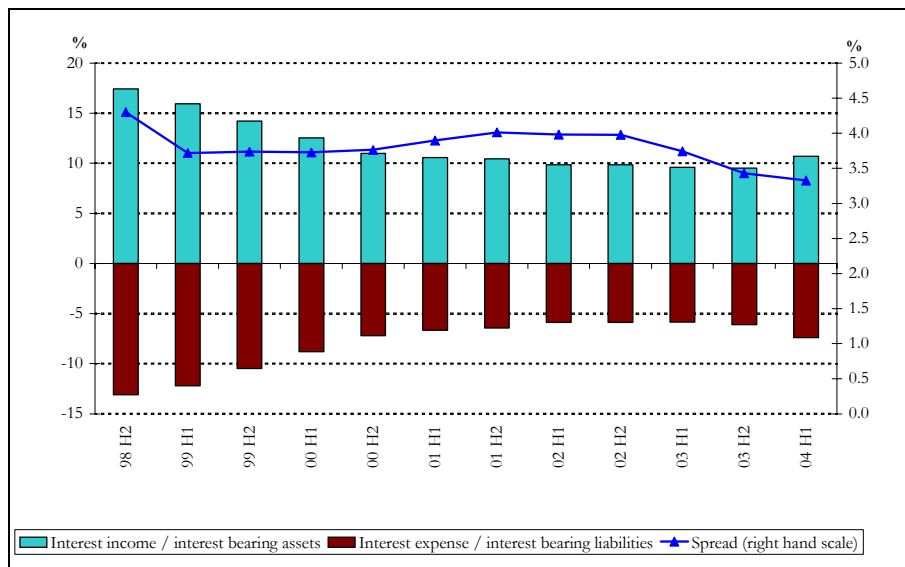
Simultaneously with decelerating housing lending, income on commissions and fees also fell compared to operating income. Yet, these items generated significant income. In 2004 H1, within income on commissions and fees, income on guarantees and sureties grew by 74.25%, representing slightly lower, but nevertheless robust growth. Other types of commissions and fees, however, declined. The rise in income on guarantees and sureties can be ascribed mainly to a vigorous pick-up in infrastructure investment activity. Within the category of expenses on commission-based financial and investment services, those on investment services fell.

**Table III.8 Banking sector profits**

	June 2003	June 2004	Change	
	HUF billions	HUF billions	HUF billions	Index
Net interest income	209.614	267.281	57.7	127.5%
Dividend received	11.288	11.052	-0.2	97.9%
Net fee and commission income	79.646	90.144	10.5	113.2%
Net profit on financial operations	25.769	39.326	13.6	152.6%
Other income/loss	-13.271	-4.717	8.6	35.5%
Operating costs	181.228	200.829	19.6	110.8%
Change in value adjustments and provisions	-13.538	-34.457	-20.9	254.5%
Profit on ordinary activities	118.28	167.8	49.5	141.9%
Extraordinary profit	-0.952	0.158	1.1	-16.6%
Pre-tax profit	117.328	167.958	50.6	143.2%
After-tax profit	103.596	150.645	47.0	145.4%

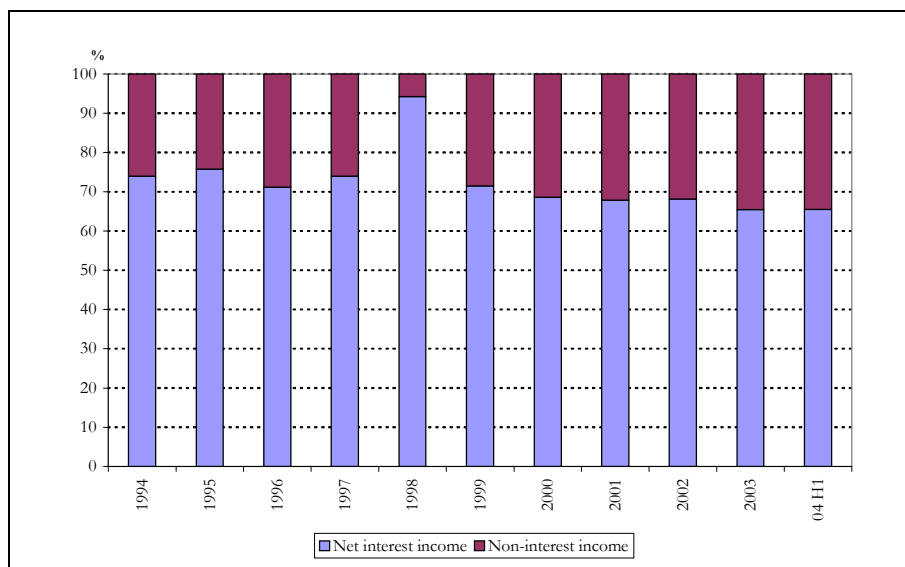
The spread between average return on interest-bearing assets and expenses on interest-bearing liabilities has been shrinking gradually over the past one and a half years. In 2004 H1, it was 42 basis points lower than in 2003. However, due to higher interest rates, average interest income on interest-bearing assets and average interest expense on interest-bearing liabilities grew, which points to trends running counter to previous ones. The shrinking spread suggests that growth in average interest on liabilities exceeded that on assets. This may be attributed to increasingly sharp competition for deposits.

Chart III.36 Spread and its components <sup>55</sup>



Although non-interest income as a proportion of gross operating income did not change compared to year-end 2003, its structure did change. Dividend income, which was outstanding in 2003 H1, decreased by 2%. Within the category of non-interest income, net operating income grew by a spectacular 52.6%. This growth is attributable exclusively to the fact that exchange rate gains doubled. The impact of this was dampened, however, by net profit turning into losses on financial investments and investment securities.

Chart III.37 Net interest and non-interest income as a proportion of gross operating income



In 2004 H1, net provisions rose significantly, by a factor of 2.5, which was nearly identical to its rate of growth a year earlier.

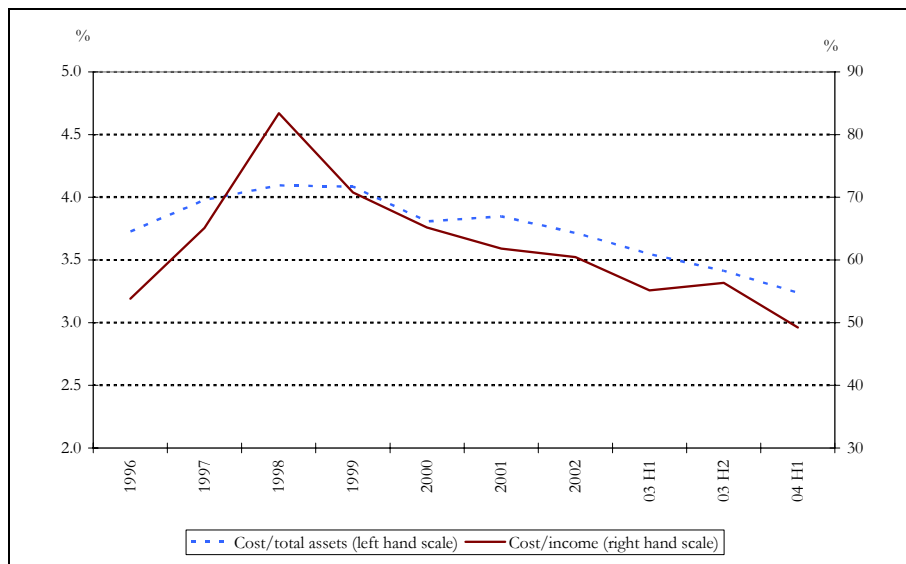
<sup>55</sup> Data on spread apply to the whole of the past half years.

Compared to the base period, the increase in banking sector operating costs (10.82%) exceeded inflation. Essentially, this increase in costs, nearly identical to 2003, stemmed from increases in personnel costs. In real terms, other expenses remained unchanged. The bulk of the 18% increase in personnel costs was attributable to efficiency measures in the banking sector. On the one hand, a few large banks underwent reorganisation, rationalisation and staff reduction, which—due to severance payments—added to the wage bill markedly. On the other hand, there was an increase in numbers employed at several smaller banks, with an identical outcome. Furthermore, a few smaller and medium-size banks increased wages to an extent well in excess of changes in numbers employed, thereby adding to wages per person.

As expenses rose to a lesser extent than income (profit on ordinary business activity), the cost-to-income ratio showed a significant improvement. It fell from 55.14% to 49.21%. As the increase in profit on ordinary business activity was partly attributable to the utilisation of market strength, the cost-to-income ratio does not conclusively suggest a clear-cut improvement in efficiency. By contrast, the improvement in the cost-to-balance sheet total ratio (from 3.55% to 3.24%) does point to actual improvement in efficiency, since it suggests that with financial intermediation deepening (i.e. the balance sheet total increasing), expenses grew to a lesser degree. Therefore, economies of scale also exerted a gradual impact on the banking sector.

From a financial stability perspective, the continuation of streamlining is indispensable. Current conditions under which high profitability can be achieved are expected to change over the long term. If interest rates fall and competition becomes sharper, banks will only be able to offset resulting lower profitability by significantly improving efficiency. This is also needed for maintaining competitiveness, as Hungarian banks fall short of both regional and EU averages in terms of efficiency despite their exceptionally high profitability.

**Chart III.38 Operating costs as a proportion of total assets and the cost/income ratio**



### III. 8. 1. Components of net interest income

As the banking sector uses short-term liabilities to finance longer term assets, in principle, the increase in market interest rates should, *ceteris paribus*, lead to a decrease in interest income. Our calculations suggest that if banks had incorporated the impact of the change in the interest rate in December 2003 in the pricing of both their assets and liabilities, interest income in 2004 H1 would have been HUF 30 billion less than in the base period with an unchanged portfolio.

Although the HUF 57.7 billion increase in interest income is attributable to a rise in other types of interest income in particular, the increase in interest income on securities, a moderate adjustment of interest on current account and sight deposits and short-term household deposits were also major contributors.

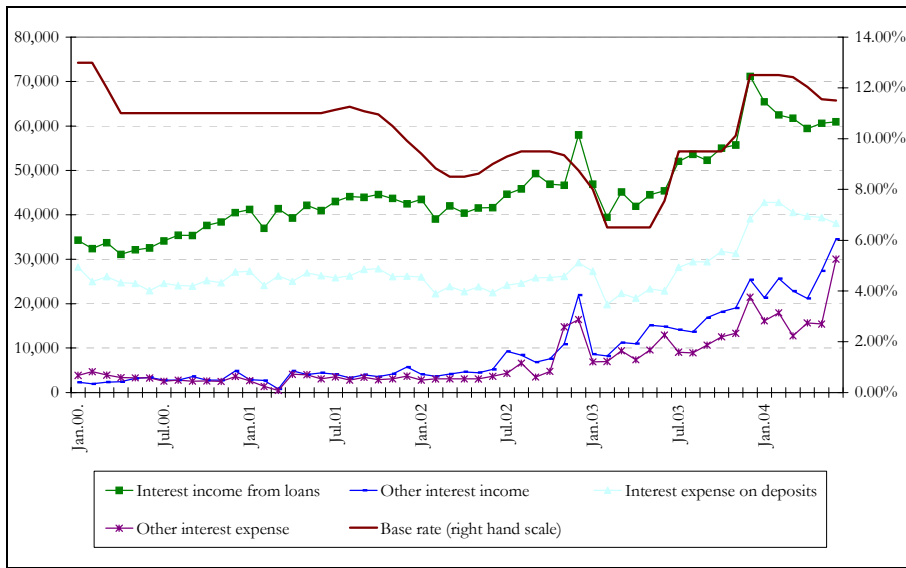
As regards liabilities, the current account and sight deposit interest rate differential grew considerably in the wake of the interest rate increase in December 2003. Interest on household current account deposits was 11 and 8.5 percentage points lower in December 2003 and June 2004 respectively than the 3-month BUBOR. Corresponding data for corporate current account deposits were 9.58 and 8.17 percentage points, respectively. The short-term household deposit and market interest rate differential also rose. In 2003 H1, it was less than 2 percentage points. In 2004 H1, it gradually slipped from 3.25 to 1.9 percentage points. Current account and sight deposits as well as short-term household deposits account for approximately 60% of the overall deposit portfolio.

Within the category of interest income on securities, interest income on publicly issued debt securities of credit institutions was earned by two banks. Excluding the interest income on securities of those banks, profit earned on securities would have fallen, relative to a year earlier.

As regards the increase in interest income, other interest and interest-related income represented the largest item. Here, it is mainly profit on derivatives transactions that is recorded, and this profit exhibited close to-trend growth over the past periods. It was around 10% at year-end 2003, and edged up to 18.6 in 2004 H1, i.e. its proportion within the category of net interest income nearly doubled.

From a stability perspective, the fact that banking sector interest rates income did not fall in the wake of the interest increase, and that banks were able to eliminate its adverse impact can be deemed as a positive development. As regards factors adding to profitability, slow and incomplete adjustment of interest on deposits stems, in part, from structure of the market and, in part, from the fact that interest on current account and sight deposits is traditionally low and responds to changes in market rates rather rigidly. The bulk of the profit on securities is a one-off increase in income, and as such it is irrelevant to systemic stability. Ultimately, the increase in interest income was primarily attributable to other interest or interest-related income from hedging transactions. Its full impact on profit cannot, however, be assessed, since the products underlying derivative transactions are recorded elsewhere in the profit and loss account.

Chart III.39 Monthly developments in interest income components



## **IV. Current topics**

### **IV. 1. Household foreign currency borrowing in Hungary and in the new EU Member States of Central and Eastern Europe**

Private sector foreign currency debts have come to the focus of attention in the past few months in Hungary, due mainly to the upswing in foreign currency lending to households.

In order to find out the reasons behind this development and its potential consequences, it is worth examining the trends and fundamental determinants of household foreign currency borrowing during recent years. In addition, a comparison with the other converging Central and Eastern European (CEE) countries may indicate whether the Hungarian market can be regarded as unique or whether it has common features with other convergence countries.

#### **IV. 1. 1. Factors potentially determining household foreign currency borrowing in CEE countries**

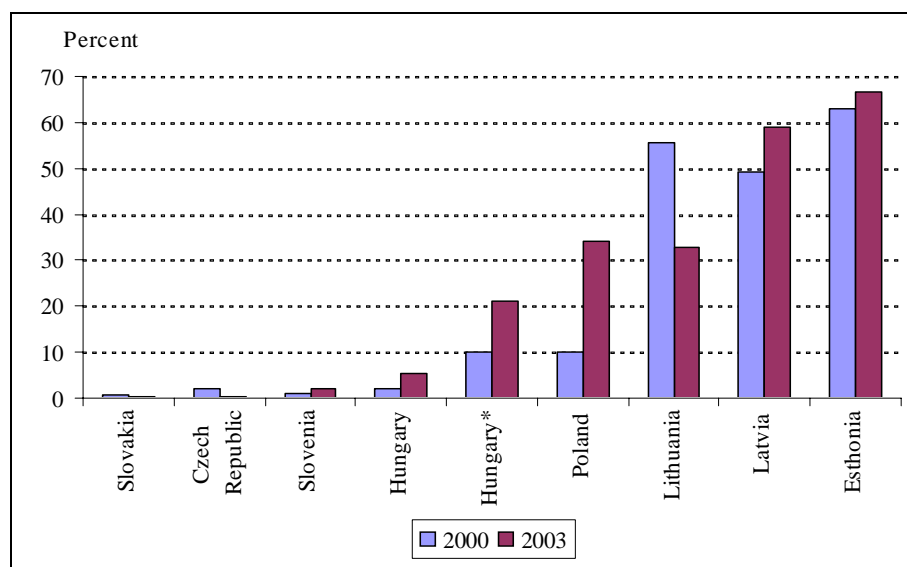
One general feature of CEE countries has been the dynamic rise in household borrowing during recent years. Similarly to the more developed countries, housing loans are also predominant within household credit in the case of the convergence countries. Simultaneously with the general trend of growing household indebtedness, in the CEE countries the weight of foreign currency debt within the total household lending portfolio is highly variable (see Chart IV-1). This heterogeneity can be attributed to several factors. The most prominent factors in the case of convergence countries are (i) yields differentials; (ii) price sensitivity and risk awareness of households; (iii) institutional characteristics, i.e. housing subsidy scheme regulations, the financial sector and foreign currency lending activities; as well as (iv) credit supply and bank competition, i.e. willingness to lend.

Owing to their convergence status, a positive risk premium is characteristic of most of the newly joined CEE countries, which results in a difference between both domestic and foreign (euro, Swiss franc) interest rates at short and long maturities. The size of the yield differential is mainly subject to progress with the convergence process and the success of economic policy, but it also depends on the flexibility of the exchange rate regime in place.

Household credit demand is becoming more and more price sensitive in the context of increasing market competition. The risk awareness of households is lower than that of the corporate sector. Presumably, during an upswing in foreign currency lending, even with volatile exchange rates, households do not consider whether the gain on the difference between domestic and foreign interest rates compensates for the potential loss which may arise from exchange rate risk. Owing mainly to long-term housing loans, there may be a high demand for foreign currency products even in the case of a small interest rate differential and a relatively more stable exchange rate. At the same time, even in the case of a more volatile exchange rate, a sizeable interest rate differential may boost the demand for foreign currency loans, particularly if the domestic currency has previously been appreciating. Therefore, in principle foreign currency lending may appear in any foreign exchange regime, independently of monetary policy. With the increasing popularity of

foreign currency lending and with a more mature portfolio, the negative experiences of a potential exchange rate shock may increase risk awareness across a wide spectrum of the population.

**Chart IV.1 Ratio of foreign exchange debt to total household portfolio**



\* Within financial sector loans (credit institutions and financial enterprises together).

As concerns banks, the provision of foreign currency products to households requires significant product development and a revision of the whole lending process, which entails high costs.<sup>56</sup> Therefore, banks are only inclined to develop these activities with rising competition and strong willingness to lend. Thanks to their special ownership structure, banking sectors in CEE countries have abundant cheap sources of foreign currency funds from their banking parents, which gives an incentive to foreign currency lending.

Of the institutional factors, the government housing subsidy scheme is most notable (generally tied to domestic currency lending), which may considerably contribute to household indebtedness and influence its currency structure. It is a characteristic of household lending that cross-border services represent an insignificant share in both the new and the old EU Member States. Therefore, in order to limit foreign currency lending in this field, national supervisory authorities could be able to make discretionary measures without causing competitive disadvantages. However, we cannot find such factors restraining foreign currency lending in CEE countries.

We will first analyse the role and development of Hungarian household foreign currency lending in total lending, examining the various types of loans separately. Then we will examine the general characteristics of foreign currency lending in CEE countries.

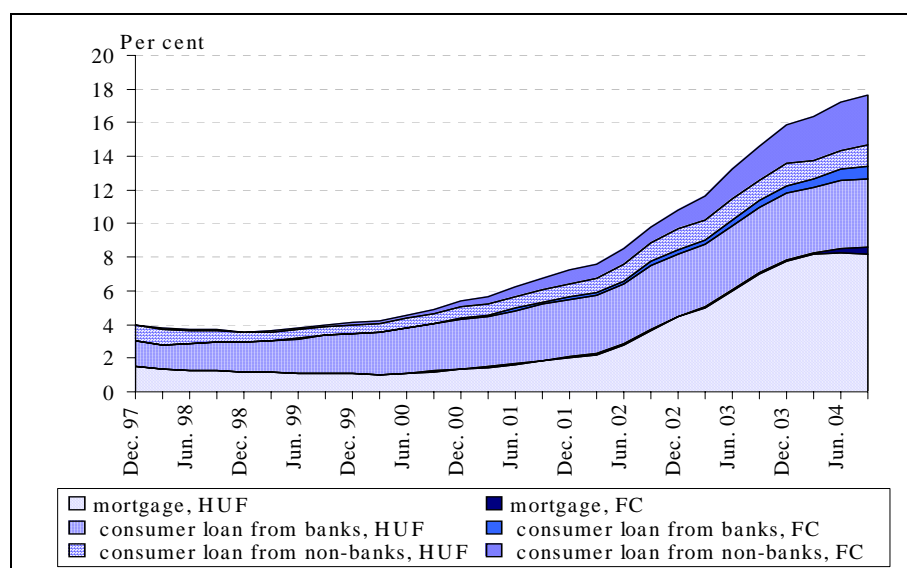
#### **IV. 1. 2. Household foreign currency debt in Hungary**

Similarly to the other new EU member countries, in Hungary the period starting in 1999 was characterised by rapidly rising household indebtedness. From end-1999 to 2004 Q3 the total household credit portfolio expanded from 4% to 18% of GDP (see Table IV-1).

<sup>56</sup> Explained by the treatment of fluctuating monthly instalments, determining the capital requirement, monitoring the varying LTV ratio in the case of housing loans, as well as different risk management and process control, etc.

Household indebtedness, however, still lags far behind the level of the euro area (51% of GDP in 2003). Of the various credit categories, mortgage estate lending grew most strongly relative to the beginning of the period (from 1.1% to 8.5% of GDP), amounting to half of the total portfolio in 2004. As mentioned earlier, the prominence of mortgage loans is characteristic of both developed and transition countries, but their relatively strong expansion in Hungary can be attributed mainly to government subsidised forint-denominated mortgage loans. Consumer credit also grew markedly, but at a slower pace than mortgage loans (see Table IV-1).

**Chart IV.2 Household forint and foreign currency borrowing as a proportion of GDP**



**Table IV.1 Household forint and foreign currency borrowing to GDP (at end of period, %)**

	1999	2000	2001	2002	2003	2004 Q3
Mortgage, forint	1.1	1.4	2.1	4.4	7.8	8.4
Mortgage, foreign currency	0.0	0.0	0.0	0.1	0.1	0.4
MFI sector, consumer, forint	2.4	2.9	3.4	3.7	3.9	4.1
MFI sector, consumer, foreign currency	0.0	0.0	0.2	0.2	0.4	0.8
Non-MFIs, forint	0.5	0.6	0.8	1.2	1.1	1.3
Non-MFIs, foreign currency	0.1	0.4	0.8	1.1	2.3	3.0
Total foreign currency	0.2	0.4	1.0	1.4	3.0	4.2
Total	4.1	5.4	7.2	10.8	15.9	18.0

Within the category of household credit, foreign currency loans in general may be characterised by low stock and a faster growth rates in the past six-month period. Household foreign currency lending started in 1998, and since then the ratio of foreign currency loans to the total has been rising continuously (see Chart IV-2).

Chart IV.3 Ratio of foreign currency loans to household total loans

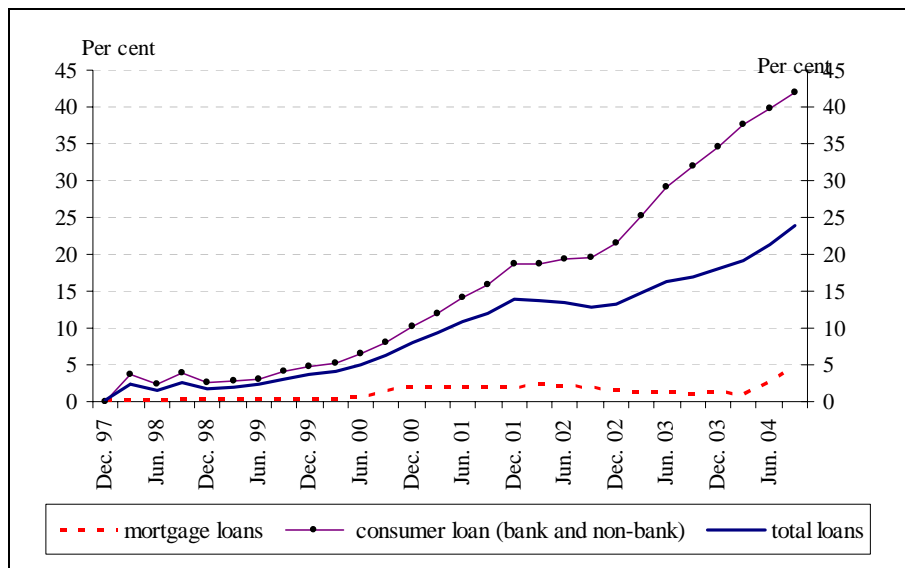
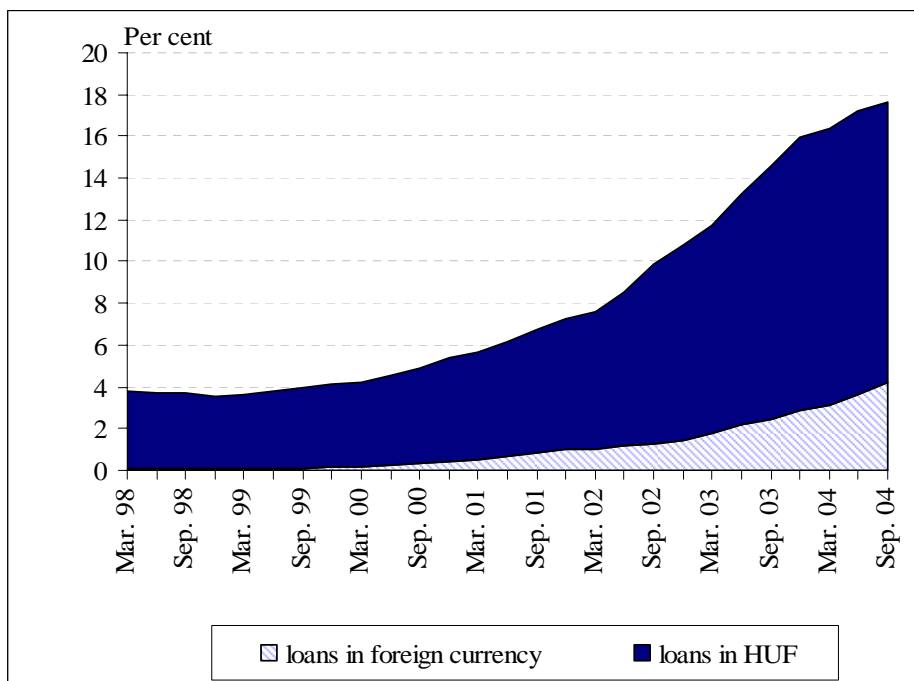


Chart IV.4 Household forint and foreign currency debt as a proportion of GDP



Along with a sustained rise in its share of the total, the growth rate of foreign currency lending has been uneven in the past few years. Examining the contribution of the individual credit categories to growth in the total portfolio, it can be seen that the significance of foreign currency loans grew strongly in 2004: while in 2000–2003 forint loans contributed more to growth, in 2004 the increase in foreign currency lending accounted for the most of the entire increase (see Table IV-2). In 2004, the accelerated expansion of foreign currency lending was the combined result of two factors: in addition to robust growth in foreign currency lending, the slowing growth rate of the total portfolio, and the forint portfolio in particular, i.e. primarily subsidised forint mortgage loans driven by regulatory changes, also caused the foreign currency ratio to rise.

**Table IV.2 Contribution by loan type to the growth of the total lending portfolio**

Increase as a proportion of GDP, percentage points

	Annualised					Quarter/quarter
	2000	2001	2002	2003	2004 Q3	2004 Q3
Mortgage, forint	7	13	33	31	9	2
Mortgage, foreign currency	1	0	0	0	2	5
MFI, consumer, forint	14	8	4	2	1	1
MFI, consumer, foreign currency	1	2	1	2	3	4
Non-MFIs, forint	2	2	7	1	0	3
Non-MFIs, foreign currency	6	8	5	11	7	5
Total foreign currency	7	10	9	11	12	13
Total lending	30	34	50	47	24	19

In the following, we examine the various credit categories. The level and growth of the ratio of foreign currency loans within the individual categories may differ, as well as their combined growth rate, since various factors have had an impact on the individual components.

#### *Mortgage lending*

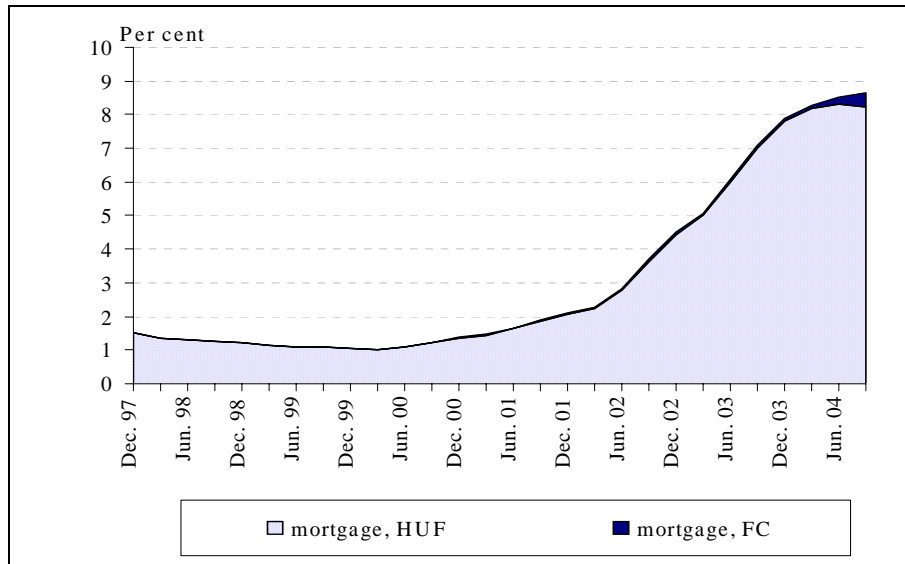
Developments in mortgage lending in the past few years have been influenced mainly by regulatory changes in government subsidised housing loans. Consequently, the growth dynamics of this category significantly differs from that of the MFI consumer and non-MFIs lending.

Mortgage lending began to boom in 2001, with the launch of government subsidy scheme for purchasing new dwellings. This upward trend gathered momentum in 2002, when the subsidy was extended to cover existing dwellings as well. As a result of the introduction of the scheme for large interest rate subsidies, the portfolio of forint-denominated housing loans to GDP has risen from 1% to 8% since end-2000, which well exceeded that in other types of household credit. As the government subsidy only covered forint loans and considerably lowered client interest rates relative to market rates, while earning a significant profit for banks, foreign currency lending remained negligible within mortgage loans until the end of 2003, with a stagnating portfolio amounting to much less than 1% of total mortgage lending.

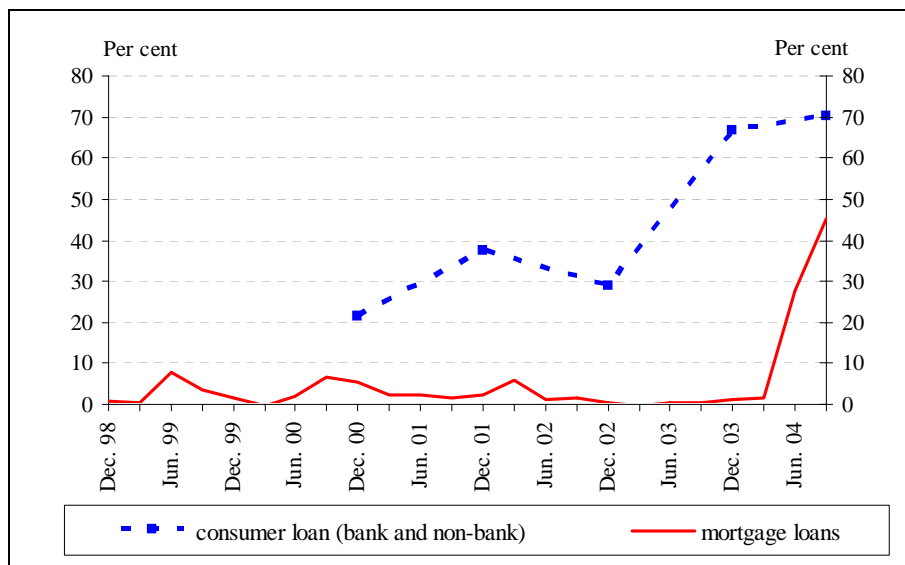
Growth in foreign currency mortgage lending picked up in 2004, following the introduction of dramatically tighter conditions for government subsidies and simultaneously with the decline in the growth rate of forint loans. Despite the strong dynamics of foreign currency housing loans (they grew by over 400% as a proportion of GDP between December 2003 and September 2004 and their share in the new business of mortgage loans increased close to 50%), foreign currency loans remained relatively small (0.44% of GDP), due to the very low base. They amount to 4% of total mortgage loans, which is the lowest ratio of foreign currency portfolio to household credits. The regulatory changes in forint housing loans caused an interest rate shock in the household sector, and therefore it is not surprising that after a significant, 4–5 percentage point increase in forint client interest rates, there was an upsurge in demand for foreign currency loans. At the same time, the supply-side pressure by banks also contributed to the upswing in foreign currency loans in 2004: the mass appearance of foreign currency facilities targeted to a wide

customer base was a reaction to the regulatory changes. Such strong growth in the portfolio may have been caused by capacities built for subsidised forint lending and attempts at maintaining high profitability.

**Chart IV.5 Mortgage loans as a proportion of GDP**



**Chart IV.6 Foreign currency loans as a proportion of transactions\***



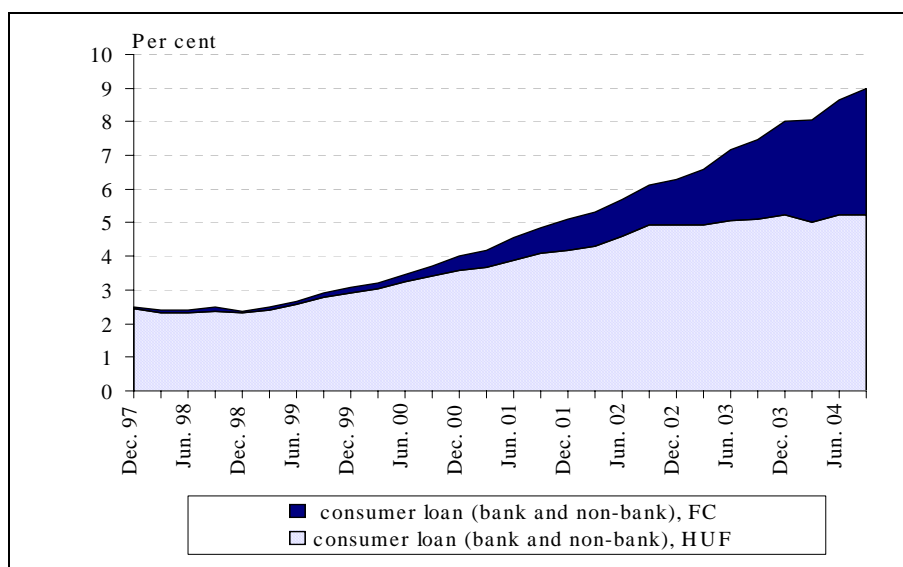
*Note: In the case of consumer lending by non-credit institutions, we only have relatively reliable figures for certain periods, the source of which being the questionnaire-based survey on financial enterprises conducted by the Hungarian Financial Supervisory Authority. The highlighted dots in the chart show the foreign currency loans-to-transactions ratio of the past 12 months.*

### *Consumer lending by banks and non-banks*

The almost uninterrupted rise in foreign currency consumer lending by banks and non-banking entities started in 2000, earlier than that in real estate and foreign currency lending. By now the share of foreign currency loans has increased considerably, to around 42%.

Although foreign currency lending started earlier in the case of consumer loans than in the case of real estate loans, with a sharp upturn in the foreign currency ratio in 2003, the share of consumer foreign currency loans continued to rise in 2004, in spite of the fact that there were no regulatory change in this field. Simultaneously with this, the share of forint loans declined gradually, and despite a much higher portfolio, their contribution fell well below that of foreign currency loans by 2004 Q3, the proportion of consumer loans to foreign currency loans exceeding 70%. In this segment, the pick-up in the share of foreign currency consumer credit shows that in the strengthening supply and demand other factors, i.e. the much lower interest rates of foreign currency credits also play an important role, in addition to regulatory changes.

**Chart IV.7 Consumer loans as a proportion of GDP**



It is notable that the increase in household foreign currency lending in 2004 can be attributed mainly to loans denominated in Swiss francs. Swiss franc interest rates are lower than euro or dollar rates, therefore, it means a cheaper source of funds for banks and a lower interest rate for clients than euro or dollar-denominated loans.

The robust expansion of foreign currency lending reflects households' low risk awareness and/or risk sensitivity. The high interest rate differential reflects the risks arising from exchange rate uncertainty; and households are not willing to pay the price of this risk premium.

#### **IV. 1. 3. Household foreign currency lending in the new EU member CEE countries<sup>57</sup>**

Data on new Member States show that Hungary is in the middle range regarding the ratio of foreign currency loans to total household sector loans. The 24% share of foreign currency loans does not seem to be outstanding in a range varying between 0%–67%. It is notable that in Hungary financial enterprises have a much larger foreign currency loan portfolio than banks, therefore, lending by non-banks has been included in the analysis.<sup>58</sup>

##### *The Baltic States*

The ratio of foreign currency loans to total household loans is the highest in the Baltic States with currency board arrangements. Foreign currency loans have a predominant share in total loans to households. Pegged and therefore increasingly reliable exchange rates encourage demand for foreign currency loans. In addition to the factor noted above, the supply side has also largely contributed to the outstandingly high proportion of foreign currency lending in the Baltic States; and the regulatory authorities do not raise hurdles for the expansion of foreign currency lending. Banks have cheap foreign currency sources of funding from their banking parents representing a significant share of their sources, and as they do not wish to undertake exchange rate risk, they are interested in foreign currency lending.

##### *CEE-5 countries*

Of the CEE-5 countries, household foreign currency lending is high in Poland and Hungary, while in Slovenia, the Czech Republic and Slovakia this type of loan practically does not exist.

At the beginning of the 2000s, the Polish monetary authorities maintained a high interest rate differential, which boosted foreign currency borrowing, despite increased exchange rate volatility. Household foreign currency lending grew robustly. In 2003, however, the

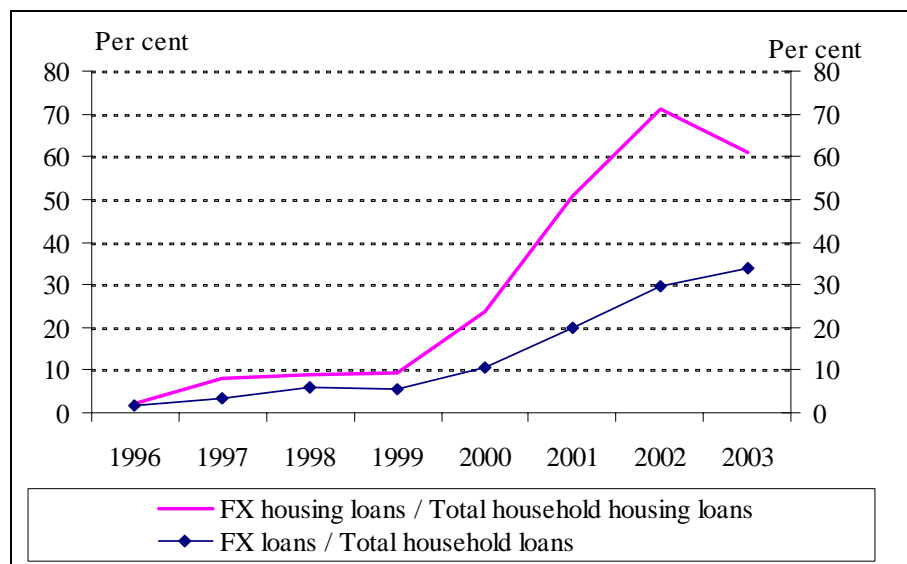
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<sup>57</sup> Low harmonisation of figures makes international comparison difficult. Several CEE countries have not yet started to compile financial account statistics. Therefore, the analysis is primarily based on aggregate commercial banking data of the individual countries. The credit cooperative sector has not been included in the analysis. This is due to the fact that, with the exception of Hungary and Poland, in CEE countries the credit cooperative sector plays an insignificant role in financial intermediations, and in Hungary the regulations in effect do not allow credit cooperatives to provide foreign currency loans.

<sup>58</sup> In addition to Hungary, household lending activities of financial enterprises are also strong in Estonia. Since in Estonia foreign currency lending as a proportion of GDP is the highest, the picture would not change much even if financial enterprises were considered in the analysis.

Polish zloty weakened by 17% relative to the euro (and by a similar measure relative to the Swiss franc), which depressed demand for foreign currency loans, and for mortgage loans in particular. This is a good example of the fact that a negative exchange rate shock, if it affects a relatively wide range of population, may raise borrowers' risk awareness.

**Chart IV.8 Household foreign currency loans as a proportion of total loans in Poland**



Similarly to the Baltic States, in Poland foreign currency housing loans account for a significant share; we do not know whether there is a government housing loan subsidy scheme in place. The higher level of government housing loan subsidy in Hungary and in part in the Czech Republic, which is tied to borrowings denominated in the domestic currency, has crowded out market-based foreign currency lending.<sup>59</sup> In Slovakia, a new housing loan subsidy scheme was launched in mid-2003, which coincided with an expansion of credit supply, thus generating significant growth in Slovak koruna-denominated housing loans.

In Poland, bank lending to the household sector has increased significantly during the past few years, creating a wide range of foreign exchange products. The supply side must have played an important role in the Polish processes, similarly to the Hungarian experience in 2004. Slovakia is a good example of a weak credit supply: after completion of banking sector consolidation and privatisation, banks only turned to the household segment in 2003. Previously no market-based foreign currency lending developed, despite the lack of a major housing loan subsidy scheme and the high interest rate differential. Currently, simultaneously with an expansion of credit supply, foreign currency lending is expected to pick up, due to the interest rate differential and the appreciation of the Slovak koruna. This may be hindered by the fact that the housing loan subsidy scheme is tied to koruna-denominated loans.

#### **IV. 1. 4. Macroeconomic risks**

The macroeconomic risks of household foreign currency borrowing are primarily reflected by changes in consumption expenditure. The extent of this is subject to the size of foreign

<sup>59</sup> The government housing loan subsidy scheme in the Czech Republic did not come close to the generosity of the Hungarian one. Even so, the Czech conditions have been tightened in the recent past as well.

currency borrowing and its distribution across households. In the case of a large and broadly-based foreign currency lending, an external shock (exchange rate or interest rate) increases the debt burden on a wide range of households, which may lead to a slowdown in aggregate consumption. Above a certain level of bank losses, two additional mechanisms may also contribute to the decline in consumption. First, banks in general may reduce the supply of credit to households, adding to the sector's liquidity constraints. The sudden potential upturn in non-performing foreign currency loans may lead to a slump in the real estate market through the rising number of forced sales, which may have a negative wealth effect.

Household lending seems to be very low in the new EU Member States relative to the old Members. The two household sectors (i.e. the Hungarian and the Estonian) with the highest loans as a proportion of GDP hardly account for one-half of household sector loans in Italy, one of the old EU Member States, and they do not even reach one-third of the euro area average. This difference is slightly lower if loans are measured as a proportion of disposable income.<sup>60</sup> Of the new EU Members, household sector foreign currency loans in Estonia, Latvia, Poland and Hungary may have a considerable macroeconomic effect, as 18%–66% of the total debt in foreign currency loans. In the old EU Member States, the general level of burden on debt amounts to 13% of disposable income (2001). Consequently, the debt burden on household sector foreign currency borrowings in the new EU Members continues to be low.<sup>61</sup> Therefore, a potential rapid rise in foreign currency loans probably would not cause a significant decline in household consumption.

**Table IV.3 Financial intermediation in the household sector**

	2003	
	Total household loans / GDP	Household foreign currency loans / GDP
Slovakia	7.8%	0.0%
Czech Republic	9.8%	0.1%
Slovenia	10.3%	0.2%
Poland	10.8%	3.7%
Hungary	12.7%	0.5%
Hungary*	16.4%	3.0%
Lithuania	3.4%	1.1%
Latvia	12.0%	7.1%
Estonia	15.3%	10.2%
Italy (2002)	29.7%	
Euro area (2003)	51.6%	

\* *Credit institutions and financial enterprises combined.*

In summary, in the new EU Member States household sector foreign currency loans as a proportion of the outstanding total are widely dispersed; and Hungary is in the middle range of this group.

<sup>60</sup> As a consequence of the lower wages in the new EU Member States and for other reasons, in Hungary, for instance, the debt-to-disposable income ratio is 28% (2003), while in Italy it is 36% (2001).

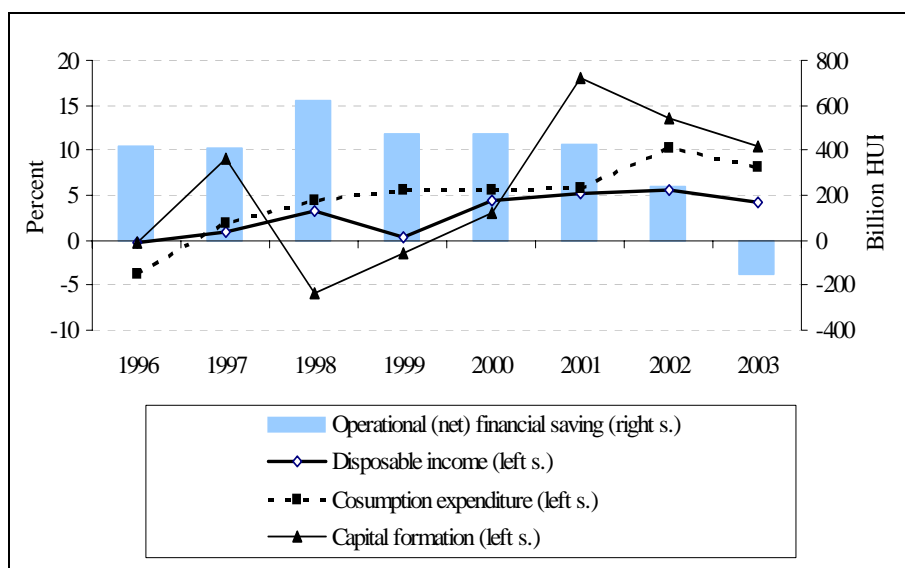
<sup>61</sup> Based on rough estimates, which suppose that the debt burden on the borrowings in the old Members and on foreign currency borrowings in the new Member States are almost identical. This way the debt burden is around 1 percentage point in Hungary and Poland, while it is approximately 2–3 percentage points in Latvia and Estonia.

Most of the currencies of the converging CEE countries have an interest rate premium over the euro or the Swiss franc. As a consequence of the low risk awareness of households and the lack of negative experiences, the size of monthly instalments may drive demand for borrowings. Therefore, banks may engage in significant foreign currency lending, independently of the exchange rate regime and monetary policy. However, Poland's experience shows that a massive depreciation of the exchange rate, that is, the materialisation of exchange rate risk, may strengthen households' risk awareness. The existence and quality of a government housing loan subsidy scheme is of key importance, as it may have a positive influence on borrowing in the domestic currency, while the lack of such may encourage foreign currency borrowing. Another key factor is the strength of competition among banks for the household sector. A weak credit supply may also prevent foreign currency borrowing. In the case of a low level of housing loan subsidy scheme and a highly competitive market, the denomination of household debt is more sensitive to exchange rate and interest rate developments. In the new EU Member States, debt service costs of household foreign currency loans is considered low. Consequently, a potential upswing in such loans probably would not lead to a significant decline in household consumption.

#### **IV. 2. Changes in household consumption and saving behaviour in the 2000s**

In the period between 2001 and 2003, consumption and investment expenditure rose, significantly exceeding the rate of income growth, in conjunction with a sharp decline in financial savings. As a result of this process, Hungarian households approached more closely the level of industrialised countries in respect of both the structure of spending and the debt-to-income ratio. In 2003, the sector spent 92%–93% of its income on consumption, which is very high even in international comparison. Higher consumption rates may only be found in the Anglo-Saxon countries with developed money and capital markets, traditionally relying on robust domestic demand. As households' consumption/saving decisions fundamentally determine a country's growth prospects and external equilibrium, we consider it very important to determine the reasons for such the changes in behaviour.

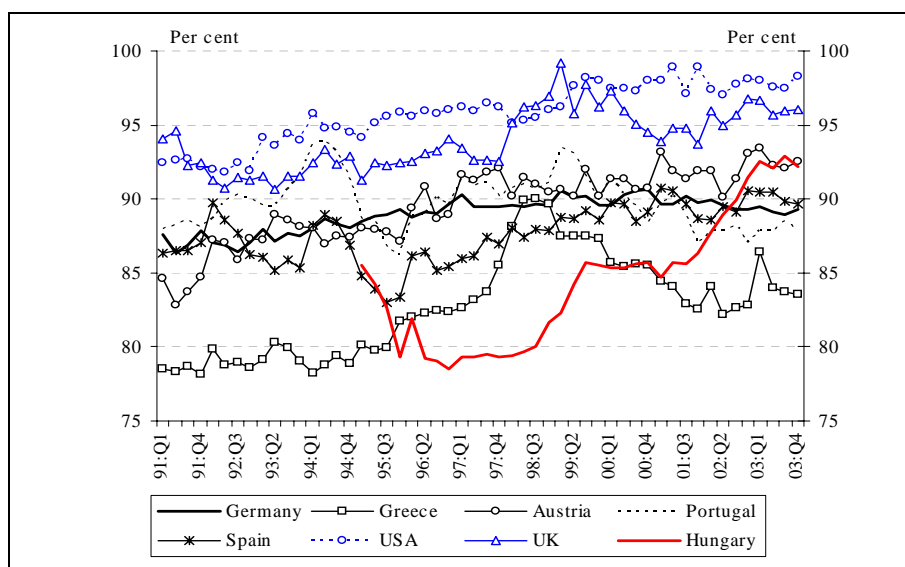
**Chart IV.9 Main aggregates characteristic of household consumption/saving decisions**  
Annual real growth rate, HUF billions



Sources: CSO National accounts, MNB Hungary's financial accounts; MNB estimate for 2003 disposable incomes.

Operational transactions are derived by eliminating inflation compensation, holding gains/losses due to exchange rate and price changes as well as other changes in volume from total change in financial assets and liabilities.

**Chart IV.10 Consumption rate<sup>62</sup> in selected industrialised countries**



Source: OECD; Hungarian data for 2003 are MNB estimates.

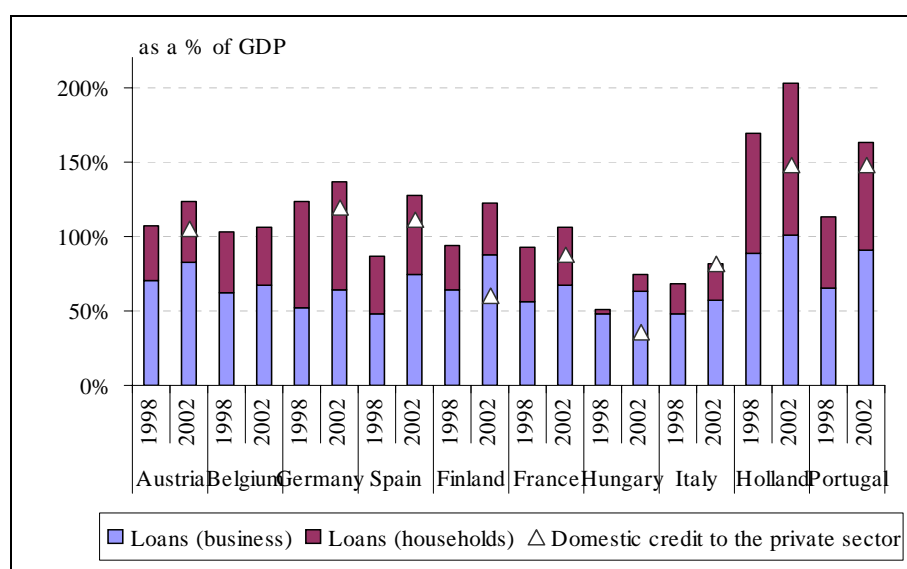
The adjustment in household behaviour, which is still underway, is characteristic of practically all converging transformation economies in the past few decades. As a result of

<sup>62</sup> The consumption rate may be defined as a differential between consumption expenditure and disposable income.

this process and simultaneously with economic development, households switch to an equilibrium path of higher consumption and indebtedness, similarly to the practice of industrialised economies, instead of reaching an equilibrium at a lower level of consumption and indebtedness characteristic of less developed countries. The starting point of the rise in debt was the establishment of a stable macroeconomic environment in the case of all of these countries, while its speed—and risk to stability—was determined by changes in the institutional environment and other exogenous factors (the exchange rate, government regulation, etc.).

A stable, predictable macroeconomic path and a low inflation environment facilitate the change in household behaviour through several channels. First, the decline in uncertainties surrounding expected real incomes fosters the development of long-term, consumption smoothing household behaviour. Second, it reduces the probability of unanticipated changes in (financial or real) asset-prices, which—in turn—contributes to the mitigation of credit risks.

**Chart IV.11 Private sector borrowing as a proportion of GDP in selected EMU Member States**



Similar processes were observed in the less developed EMU Member States. In these countries, the lending boom started 4–5 years prior to their accession. In the period between 1997–2002, outstanding credit grew by approximately 55%–60% in Portugal, by 25% in Ireland and by 20% in Spain. By 2002, the level of debt was well above the average loans-to-GDP ratio of EMU (100%) in Portugal (approximately 140%) and in Ireland (approximately 120%), but in Spain it also reached the EMU average, despite the country’s economic progress remaining below average. However, similar growth in credit in some of the more developed countries, such as the Netherlands and Italy, requires cautious interpretation of the reasons behind this boom in indebtedness.

Financial institutions are becoming more and more open to household demand for credit. This plays a significant role in growth in household indebtedness in Hungary and the converging economies of Central and Eastern Europe. It is characteristic of almost all countries in the region that, after the financial and economic consolidation, commercial banks only behaved in a competitive manner in the corporate market. At the end of the 1990s, however, the declining profitability of corporate lending and more stable household

real income growth created a conducive environment for rapid expansion in household lending.

As Hungary is expected to approach the broad economic characteristics of the EU in the long run and accession to the EU may also lead to sharp competition in financial intermediation in the household market, the sector's consumption/saving behaviour will also converge with the structure prevalent in the more developed European countries. At the same time, this long-term adjustment process has also been influenced by one-off, exogenous factors.

The very low rate of indebtedness<sup>63</sup> characteristic of Hungarian households began to increase gradually in 1998–1999. The growth of indebtedness was first shown in a jump in consumer credit, as in 1999 more than 70% of household debt fell into this category. This process was facilitated by processes on both the demand and supply sides of the market. On the demand side, the gradually increasing level of income after the negative income shock of 1995–1996 boosted household demand for credit, while on the supply side, commercial banks increased the probability of access to loans through stepped-up activity in the household segment. Whereas at end-1998 household lending hardly made up 5% of commercial banks' total assets, in June 2004 it accounted for nearly 20%. Financial enterprises, which registered dynamic activity growth in the same period, also showed growing interest in lending to the household sector. Household credit more than doubled from 25% in 1999 to 57% by mid-2004 as a proportion of the total assets of financial enterprises engaged mainly in lending activities associated with higher risks.

Despite a sharp rise in outstanding consumer credit, at the turn of the millennium household indebtedness remained at only a fraction of the level (70%–100%) characteristic of the more developed European countries. Introduction of the housing loan subsidy scheme resulted in an explosive change in this slow convergence process.

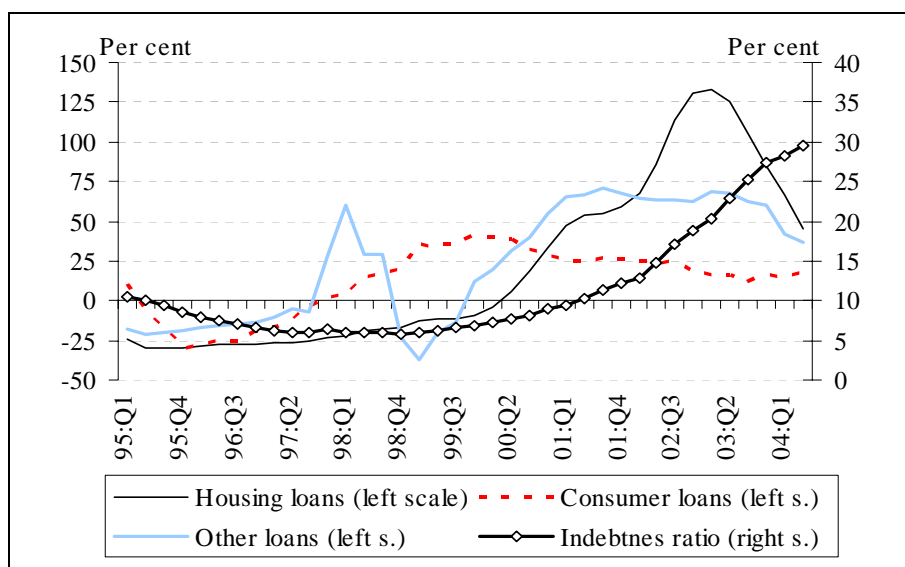
The launch of the government housing loan subsidy scheme in 2001 and its extension to used homes in 2002 resulted in significantly lower interest expenses on housing investment than justified by economic fundamentals. Its positive effect on demand for credit was further strengthened by the fact that household incomes and income expectations rose quickly, primarily as a consequence of government measures.<sup>64</sup> The sector's rate of indebtedness nearly tripled between early 2001 and the final quarter of 2003.

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<sup>63</sup> The rate of indebtedness is calculated as a ratio of household debt to disposable income.

<sup>64</sup> Among these governmental measures are the minimum wage increase of 2001–2002 and the salient increase in the wages of civil servants. Due to their demonstrative effect and the expansion of public sector employment, these government measures contributed to an acceleration of wage increases in the private sector as well.

Chart IV.12 Annual real growth rates of household borrowing and indebtedness



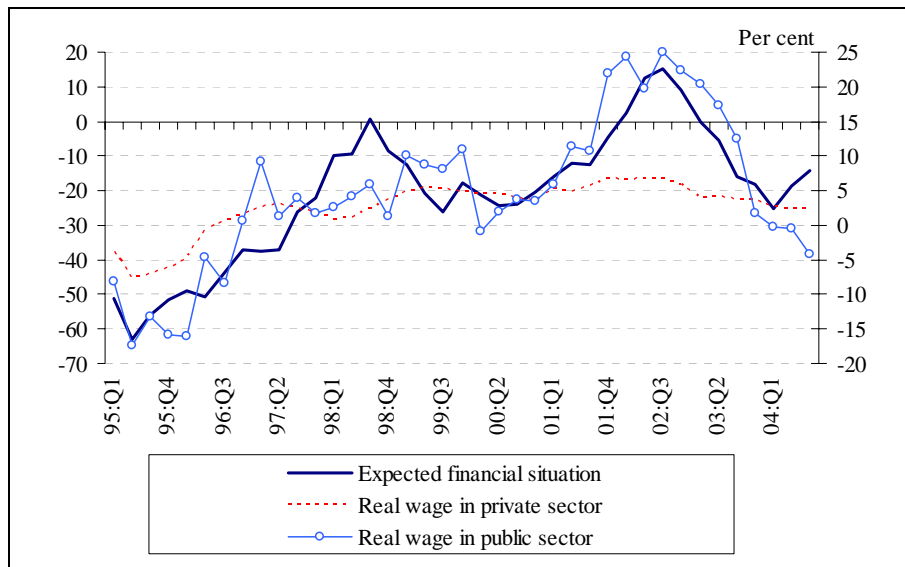
Source: MNB national financial accounts.

The introduction of the government housing loan subsidy scheme and—most notably—its extension to used homes contributed to the significant increase in household investment expenditure. However, according our calculations, some 15%–30% of subsidised housing loans was used to purchase consumer durables.<sup>65</sup> Consequently, the government housing loan subsidy scheme continued to fuel consumption growth until the conditions of borrowing were tightened significantly at end-2003.

Modification of the system in 2004 led to a fundamentally new situation in household lending. As an effect of the tighter criteria, interest rates on subsidised housing loans approached a level justified by economic fundamentals, which resulted in a sharp downturn in forint borrowing, particularly in borrowing for purchases of used homes. Simultaneously with this, foreign currency lending, which was already expanding in the category of consumer credit less sensitive to costs, showed increasingly strong growth within lending for house purchase (while in 2003 foreign currency housing loans hardly amounted to 5% of total housing loans, in 2004 H1 more than half of borrowings were foreign currency-based). The strong supply-side pressure from commercial banks and households' low risk awareness (arising from the lack of borrowing experience) may also have contributed to the pick-up in foreign currency lending (see the previous Article). In the period under review, both the changes in interest rate levels and the relative stability of exchange rates against the forint fostered the rise in foreign currency debt. This process must also have had an impact on the rapid expansion of foreign currency housing loans.

<sup>65</sup> For more details on the macroeconomic effects of the subsidised housing loan scheme, see Chapter V.3 of the February 2004 issue of the Bank's *Quarterly Report on Inflation*.

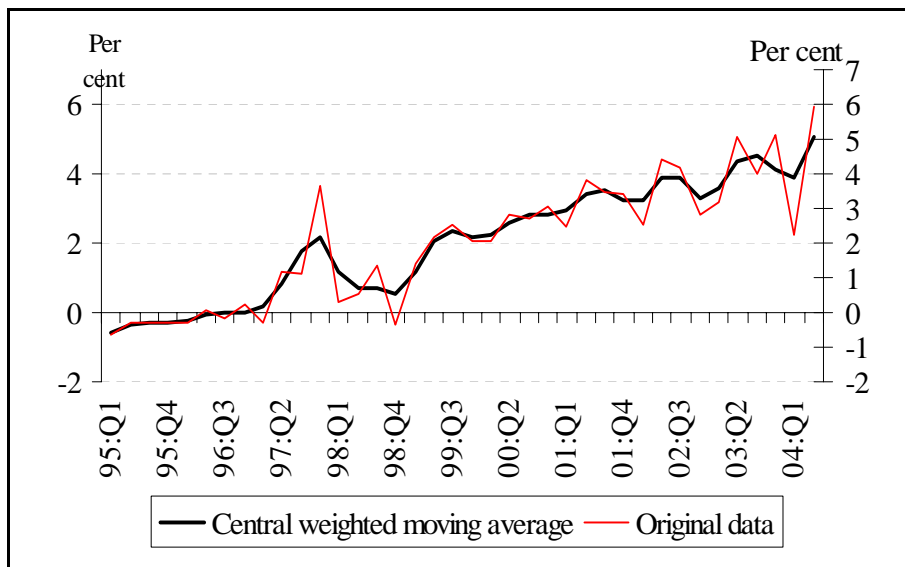
**Chart IV.13 Evaluation of households' expectations of their own financial situation (based on the GKI confidence index) and real income changes**



Sources: CSO and the GKI household confidence index.

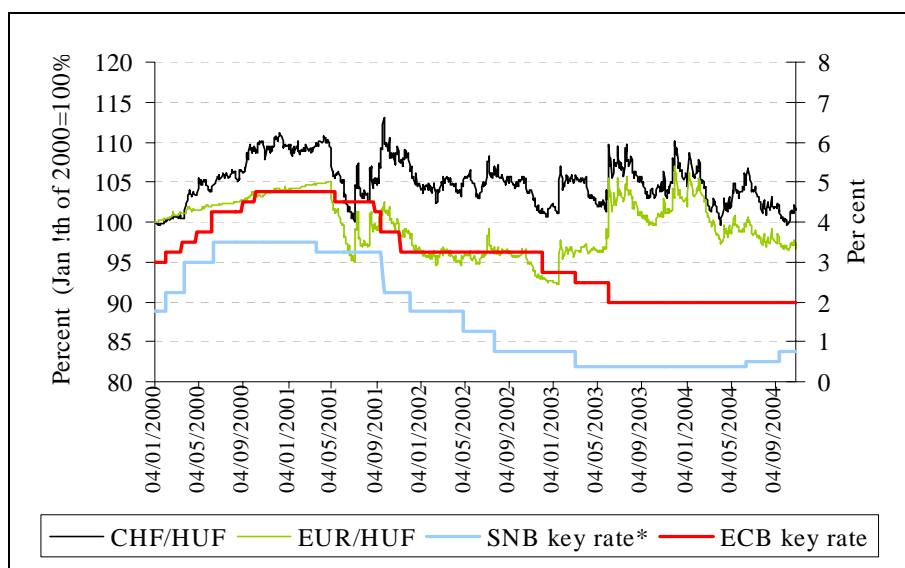
Rising income expectations and the increasing depth of financial intermediation in the household market (mainly motor vehicles and electronic equipment) also resulted in a significant increase in sales of consumer durable goods. Financial enterprises also began to provide an increasingly wider selection of lending products to households (mainly leasing contracts for car purchase), further stimulating demand. In our calculations, in 2003 10% of household consumption expenditure was financed by consumer credit.

**Chart IV.14 Net consumer credit as a proportion of consumption expenditure**



Sources: CSO GDP statistics, MNB national financial accounts.

**Chart IV.15 International factors accompanying the expansion of household foreign currency borrowing\***

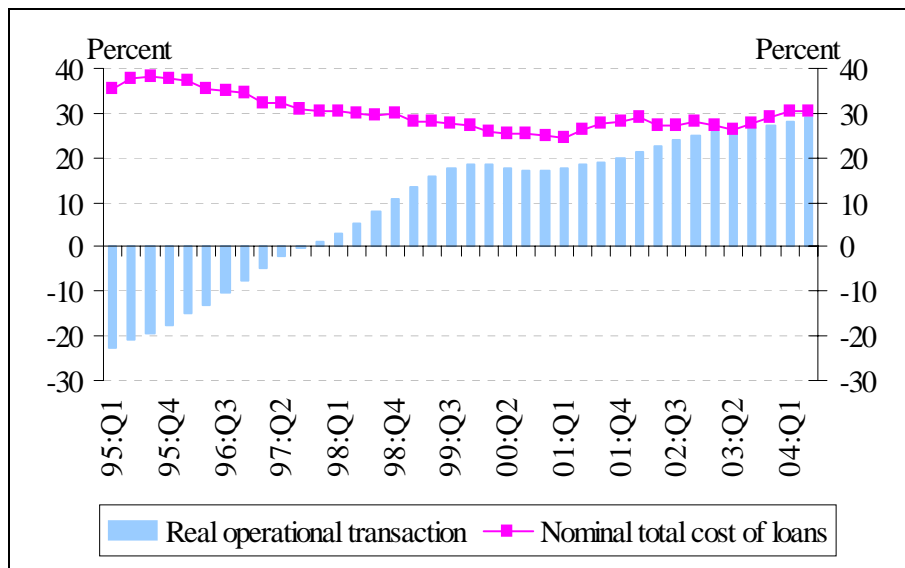


\* In the case of the Swiss benchmark interest rate, the chart plots the mean of the interest rate corridor.

In summary, the change in households' consumption/saving behaviour in the past three years has been a part of the transition process characteristic of converging economies. Households have shifted to a path with higher rates of consumption and indebtedness and lower financing capacity. This change has been accelerated by several one-off factors, which are not believed to have an effect over the long term. The extension of the subsidised housing scheme to include used homes, government-induced wage increases in 2001 and 2002 and exogenous exchange rate and interest rate developments abroad are examples of such one-off effects.

The slowdown in the rate of indebtedness is foreshadowed by the fact that, despite the relatively low rate of indebtedness, in June 2004 nominal interest expenses on household debt liabilities approached 5% of the sector's income. This ratio is nearly the same as in the more developed European countries which generally have a rate of indebtedness which is three times as high as that of Hungarian households. Growth in lending will be determined mainly by the decline in yields as macroeconomic stability is restored and by the effect of market competition on reducing the costs of borrowing.

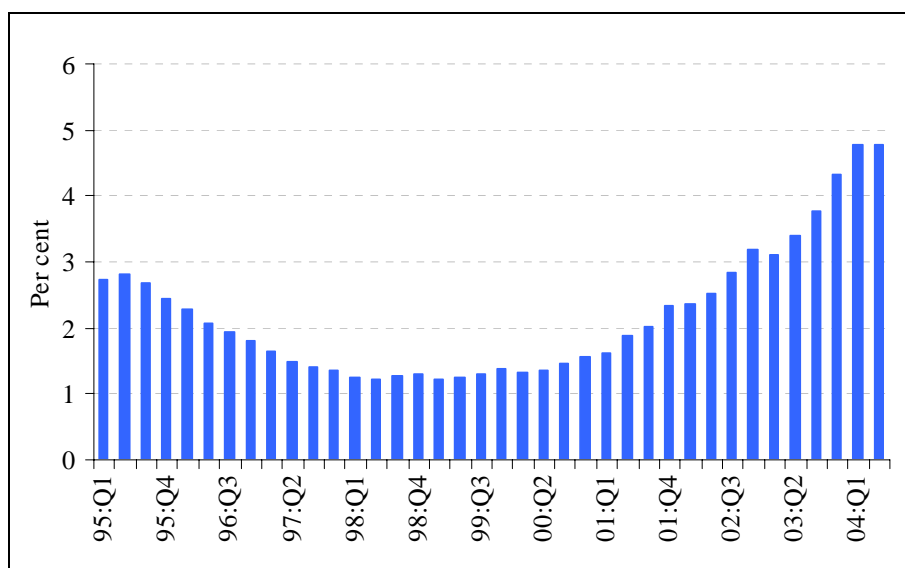
Chart IV.16 Consumer credit and costs of borrowing



Sources: MNB national financial accounts and average interest rates on household forint borrowings.

The quickly accelerating indebtedness process of the past few years may be evaluated as an equilibrium process—we do not expect a reversal in household consumption/saving behaviour to an extent that would considerably influence the economic outlook. However, with a higher rate of indebtedness, households also become more vulnerable. A permanent slowdown in the growth rate of household real income or a negative exogenous shock affecting foreign currency borrowing (a forint depreciation or an increase in international interest rates), may expose households to liquidity problems, or cause a considerable decline in (consumption and investment) demand of households at the whole-economy level.

**Chart IV.17 Nominal interest rate expenses of household debt service**  
Relative to disposable income



Sources: MNB estimates, CSO national accounts.

### IV. 3. Profitability and stability of non-financial corporations

The following analysis of the situation in the non-financial corporate sector uses a framework similar to that of last year. From the aspect of financial stability the most important criteria are profitability, indebtedness and liquidity, all of which are focussed on in this analysis. The following review is based on balance sheet and profit and loss account data shown in corporate tax returns.<sup>66</sup>

#### Summary

The aggregate stability position of non-financial corporations changed positively in 2003. In terms of profitability, the entire sector's position has improved: for the first time since 1998 the aggregate earning capacity increased.

Changes in the economic environment in 2003 affected corporate sub-sectors differently. Sales opportunities of industries facing competition from the non-resident sector improved significantly with the rise in demand, which was reflected in their increasing profitability. The most significant improvement in profitability was recorded in manufacturing. Profitability in the services sector grew slightly in 2003. Companies operating in these sectors typically aim at the domestic market, thus buoyant consumption is presumed to have played a significant role in the high profitability observed in recent years. Two major factors are expected to affect future developments in aggregate profitability. As for the exporters' profitability, based on the developments in 2004, high profitability is expected in the near future. However, due to the slowdown in domestic consumption growth one may not rule out the possibility that the profitability of the services sector may slacken in 2004,

<sup>66</sup> This year's analysis, similarly to that of last year, does not deal with financial, budgetary and non-profit companies. Companies with fewer than two employees in the reference year and companies where the number of employees was below five during three consecutive years have been excluded from this year's report as well. Thus, the number of observations available between 1992–2003 has fallen by 65% to 533,000.

unless service providers manage to adapt to the changing environment by cutting back on costs.

There were no changes in the capital structure of companies that would have represented an increasing risk to the stability of the sector as a whole. In the light of consumption growth, one positive development was that servicing companies' capital gearing did not grow last year. The significant decrease in the interest coverage of construction companies constituted an unfavourable change, which is attributable to a decline in profitability. However, this does not carry a major systemic risk, partly because the weight of this industry is small and partly because the profit of construction companies provides ample reserves to cover interest expenses.

### **Profitability**

In order to measure corporate profitability, the indicators used in last year's *Report* were employed. The first natural indicator is the ratio of loss-making companies to total companies. In 2003, 36% of all companies incurred operational losses. At first sight, this appears to be an unfavourable change compared to 2002 (when this ratio was 29%), but the picture looks more benign if one considers the fact that the loss of these companies decreased, both in terms of absolute value and relative to aggregate income (from 41% to 31%), which constitutes a favourable development as far as stability is concerned.

A clearer image of the sector's development is provided by the analysis of balance sheet and profit and loss data. As a first step, three indicators, ROA, ratio of sales revenue to assets and profit margin were used to analyse non-financial corporations.<sup>67</sup>

ROA = operational income/balance sheet total<sup>68</sup>

Profit margin = operational income/net sales revenue

Ratio of sales revenue to assets = net sales revenue/balance sheet total

Operational income as a proportion of sales revenue represents the operational profit margin or mark-up, which can be interpreted as a cost efficiency indicator. The ratio of sales revenue to assets functions as an indicator of capacity utilisation and is used to describe the changes in demand and the investment behaviour of a company. The two indicators together determine the magnitude of the earning capacity of a company's assets, which is gauged by the ROA indicator.

### **Aggregate profitability**

As a first step, aggregate profitability of the whole corporate sector is characterised by the weighted average values of the above three indicators. The ROA indicator shows how the ratio of operational income produced in the entire sector and the aggregate balance sheet total has changed. The change in the aggregate values of the ratio of sales revenue to assets and of the profit margin may be interpreted similarly. After the aggregate picture, cross-section developments underlying the changes in aggregate profitability are examined below.

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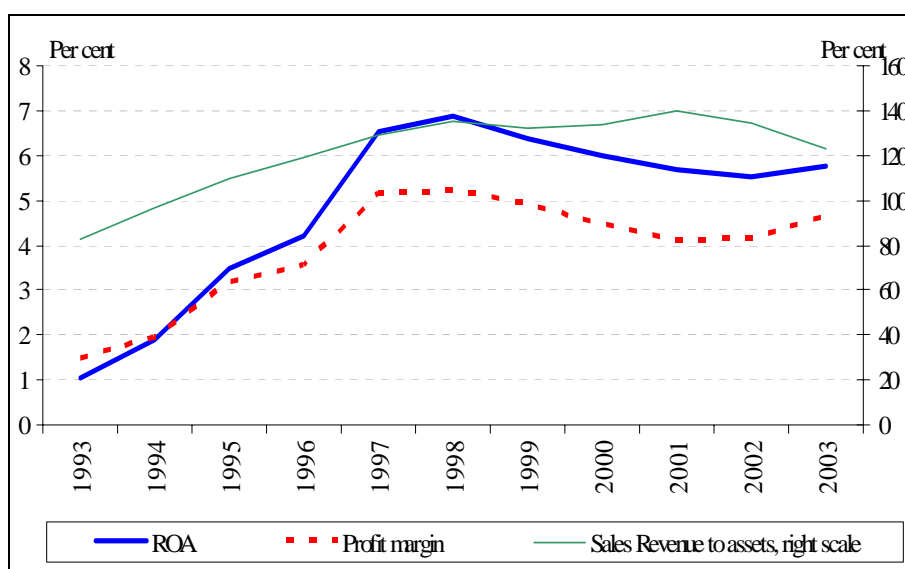
<sup>67</sup> For a more detailed interpretation of these indicators and the correlations between them please, see page 75 of the *Report on Financial Stability*, December 2003.

<sup>68</sup> ROA: 'Return on Assets'. In the case of the ROA indicator, the year-end value of the stock variable was used in the denominator instead of the annual average. Indicators calculated from stock and flow data cannot be regarded as authoritative. The analysis focussed on annual changes. For details, please, see footnote 52 on page 74 of the *Report on Financial Stability*, December 2003.

Throughout almost the entire period under review, corporate ROA was driven mainly by developments in the profit margin, i.e. input efficiency. The only exception was in 2002, when the slight deterioration was due to the ratio of sales revenue to assets. In 2003, the sales-to-assets ratio continued to decline, although it did not have a perceptible effect on the operational earning capacity of companies, because the profit margin increased, and this latter effect proved to be stronger than the fall in the sales-to-assets ratio.

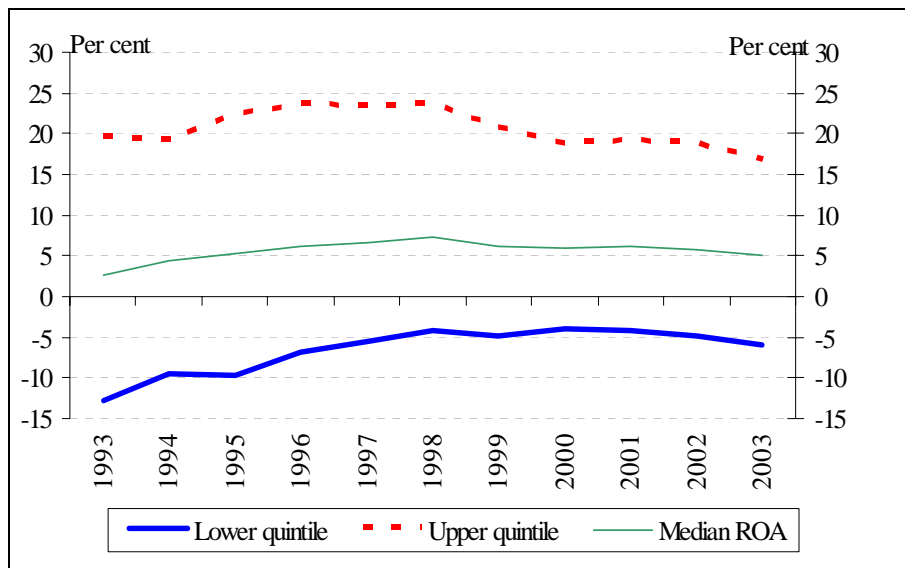
The increase in the aggregate operational profitability is an especially favourable development, as this has not happened since 1998. It is mainly a result of the improvement of the profit margin, i.e. of the cost efficiency. Export demand, increasing as a result of the improvement of global business conditions, and domestic demand, which was still rather buoyant in 2003, are considered to have played a significant role in the improvement of aggregate profitability. The decline in the sales-to-assets ratio seemingly contradicts this. However, the decrease in this indicator is explained by the fact that although the sales revenue of the entire sector grew dynamically in 2003, the balance sheet total—presumably due in part to an upswing in corporate investments—increased even faster.

**Chart IV.18 Corporate sector profitability indicators, 1993–2003**



In addition to aggregate profitability, another factor which is of relevance to stability is the cross-section changes underlying the growth of aggregate profitability. This requires an examination whether companies' position changed in a similar direction and to a similar extent, or if there was differentiation behind the improvement of aggregate profitability. In order to describe the distribution of ROA, quintiles representing the limit of the lower and upper 20% of observations and the median were used. These indicators clearly demonstrate that—in addition to the improvement of the aggregate indicator—the entire distribution moved slightly 'further down', i.e. profitability in the majority of companies deteriorated: in 2003, 45% of the companies had a better ROA indicator and 55% of them had a worse ROA indicator. However, the moderate downward movement of the distribution does not pose any serious risk to stability, because the change is not significant. All in all, it shows that in the whole sector the number of those companies whose profitability deteriorated was slightly higher than the number of those with improving profitability. However, the positive aggregate change indicates that it was mainly companies with a larger balance sheet total which were characterised by improving profitability.

Chart IV.19 Distribution of ROA, 1993–2003\*

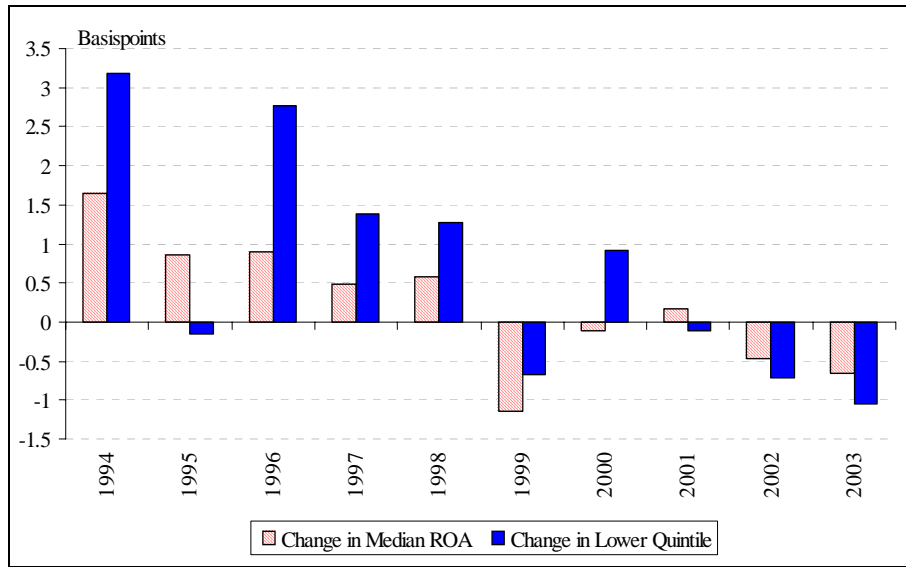


\* In order to make the changes between years interpretable, the observations which were included in the sample in two consecutive years were taken into account.

From the point of view of stability, it may be of interest to examine which group the weakest performing companies come from and what weight these companies represent within the sector. An equally important issue is to what extent these companies diverged from the median, which is the mean value of distribution. Thus, the change in the relative position of the lower quintile and of the median shows the improvement or deterioration relative to the central value. In 2003, companies with the worst income position drifted away from the median. Although the increasing distance between the worst and the median is an unfavourable development, the extent of the change does not represent a high risk to stability, since the sub-sectoral breakdown of the group of the worst performers reflects the composition of the entire sector, i.e. none of the sub-sectors is over represented. Moreover, the group accounts for only about 2.5% of the value added<sup>69</sup> of the sector, meaning that they are small companies.

<sup>69</sup> Average of 1992–2003. The corporate value added was approximated as follows: Value added = (Net sales revenue+Value of activated own performance) – (Material-related expenses+Other costs).

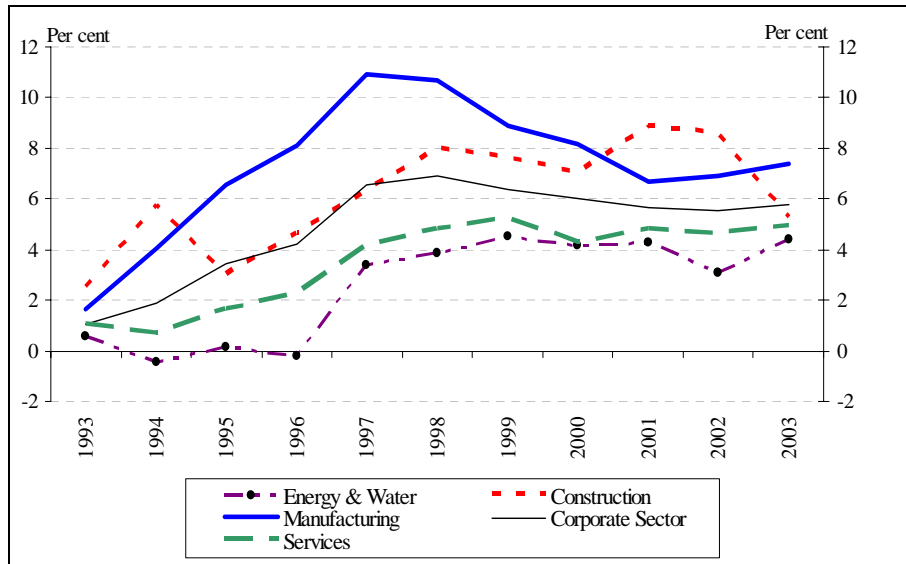
Chart IV.20 Changes in the median and lower quintile of ROA, 1993–2003



### Sectoral Profitability

Detailed data reveal that in the period under review the two largest sub-sectors, i.e. manufacturing and services, were key to the dynamics of the corporate sector as a whole.<sup>70</sup> As manufacturing and exports play a dominant role, the issue of their profitability is dealt with separately. In this section, the developments in other sub-sectors are analysed briefly.

Chart IV.21 Profitability (ROA) in individual sub-sectors, 1993–2003



While the profitability of the services sector improved somewhat in 2003, it fell short of its peak in 1999. The strong earning capacity over recent years can be attributed to the fact that, except for hotels and restaurants, the profitability of each services sub-sector

<sup>70</sup> In 1992–2002, within the corporate sector as a whole, manufacturing and the services sector contributed to operational income by 50% and 33%, respectively. Agriculture and Mining, excluded from the chart, accounted for a mere 5% of the income of the entire non-financial corporate sector.

improved. The performance of the hotel and restaurant sub-sector was affected by the globally low tourism since the events of 11 September 2001. The profitability of trade and repairs,<sup>71</sup> which has the biggest weight, continued to increase in 2003. Although the improvement was less substantial than in 2001–2002, it was still considerable due to the buoyant consumption growth in 2003, despite the somewhat slower dynamics. At the same time, recovery in foreign demand may also have had an impact, since more than 20% of the sales revenue of every fifth company in this sub-sector comes from exports.<sup>72</sup> The other important services sub-sector—transport, storage and telecommunications—also performed similarly well, which may be explained by the increase in exports, since this sub-sector of the non-financial services is the most sensitive to developments in business conditions abroad.

Profitability of the construction sub-sector fell significantly in 2003, which may be attributed to several factors. One of these may be that at the beginning of 2003 the planned infrastructure investments (motorway constructions) were not realised, and although later during the year some of these works were accomplished, they lagged behind what had been planned. The decline in the commercial real estate market in 2003 may provide further explanation.<sup>73</sup> Increasing competition between companies engaged in housing construction might also have played a role in the decrease in profitability. In 2003, there was dynamic growth in demand in the housing market, but the growth rate of real housing prices declined in the latter half of the year, possibility indicating an increase in competition. This may have forced several building contractors to cut their profit margins. However, the deterioration of profitability in the construction sector was not reflected in the aggregate indicators, due to the low weight of the sub-sector.<sup>74</sup> The decline in profitability in Energy & water in 2002 proved to be temporary, and in 2003 this industry's profitability returned to the consistently high values recorded in the second half of the 1990s.<sup>75</sup>

### **Manufacturing profitability**

Due to the dominant role of manufacturing companies in the non-financial corporate sector, it is justified to examine what income components underlie the positive change of manufacturing profitability.

After the nominal decrease in 2002, sales revenue in manufacturing grew dynamically in 2003. One favourable development was also that this recovery was accompanied by an even faster increase of export income. Not surprisingly, an outstanding role was played by the machinery and equipment, as it has the greatest weight and is the most export-oriented industry<sup>76</sup> within manufacturing, and in 2003 a discernible increase in external demand occurred. Developments were similar in the chemicals industry, which also carries considerable weight in the sector and in metallurgy, manufacture of basic metals and fabricated metal products, which may also be considered significant.

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<sup>71</sup> 'Trade and repairs' and 'transport, storage and telecommunications' provide approximately 50% and 20% of the operational income of the whole services sector, respectively.

<sup>72</sup> Based on 2003 data.

<sup>73</sup> See details on page 40 of the *Report on Financial Stability*, June 2004.

<sup>74</sup> The average share of 'construction' in aggregate income was approximately 5% in the period of 1992–2002.

<sup>75</sup> In assessing the performance of this sub-sector, it should be noted that prices here are mostly regulated. Therefore, decisions by the government distort the effects of market developments.

<sup>76</sup> Ratio of export sales revenues to sales revenues. For the export orientation of individual sub-sectors, see Chart III-9 on page 80 of the *Report on Financial Stability*, December 2003.

**Table IV.4 Sales revenues and operational income in manufacturing sub-sectors**

(change, year/previous year)	Net sales revenue (1)	Export sales revenue (2)	Operational income (3)	Weight in added value (percentage, average of 1992–2002)
<b>Manufacturing total (2002)</b>	<b>0.95</b>	<b>0.89</b>	<b>1.03</b>	
<b>Manufacturing total (2003)</b>	<b>1.09</b>	<b>1.14</b>	<b>1.36</b>	
Food industry	0.99	1.05	0.82	17
Textile industry	0.99	0.99	1.42	6
Manufacture of paper and paper products	1.15	1.17	1.10	7
Chemical industry	1.12	1.19	1.24	26
Manufacture of non-metallic mineral products	1.13	1.10	1.11	4
Metallurgy, manufacture of basic metals and fabricated metal products	1.03	1.05	1.66	10
Machinery and equipment	1.14	1.15	1.99	29
Other manufacturing	1.7	1.11	0.99	2

**Table IV.5 Profit margin in manufacturing, 2001–2003 (percentage)**

	2001	2002	2003
<b>Manufacturing total</b>	<b>4.6</b>	<b>4.9</b>	<b>6.1</b>

Nevertheless, an increase in sales revenue itself does not necessarily translate into an improvement in the performance of a company. In order to obtain a more complete picture of a company's performance we need to examine in what direction the specific values of profit components changed in 2003. Specific profit components represent the components' values relative to sales revenue, while their change depends on the growth rate relative to the sales revenue. They show to what extent the changes in cost structures of companies contributed to the change in corporate profit margin.

Of the most important cost components,<sup>77</sup> material-related expenses increased by 9% in nominal terms in the manufacturing industry as a whole in 2003. However, their share in sales revenue did not change because sales exhibited a similar growth rate. This was a change compared to 2002, when developments in unit material-related expenses alone increased the profit margin of manufacturing sub-sectors by 3 percentage points.

<sup>77</sup> Table III-11, page 80, *Report on Financial Stability*, December 2003.

**Table IV.6 Changes in profit components in manufacturing**

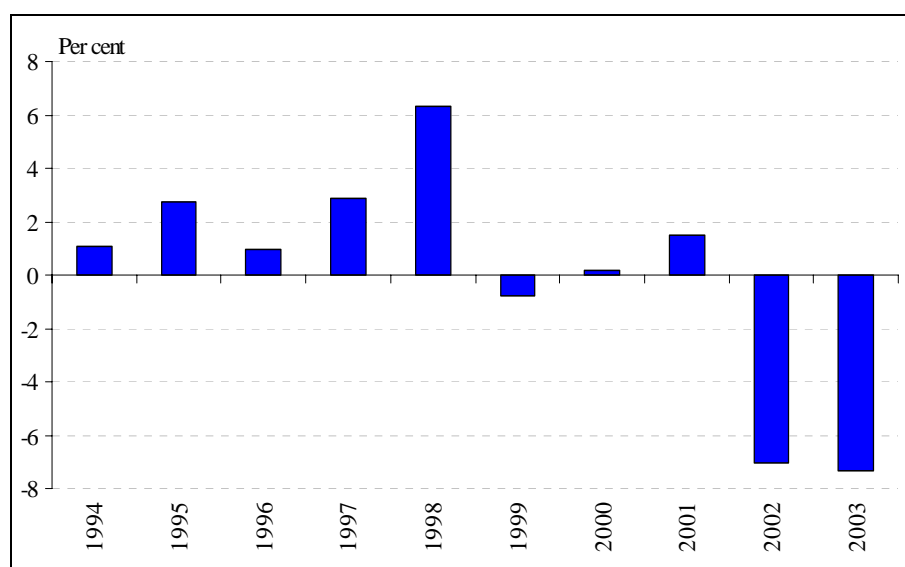
Change (2003/2002)	Material- related expenses	Staff-related expenses	Value of activated own performance	Other expenses	Other revenues	Depreciation	Profit margin (2003– 2002)
<b>Manufacturing</b>	<b>1.09</b>	<b>1.01</b>	<b>2.3</b>	<b>0.99</b>	<b>1.01</b>	<b>1.10</b>	<b>1.2</b>

The situation is different as far as staff-related expenses are concerned. The growth of the wage bill was moderate in manufacturing and was below the rate of increase in sales revenue. In order to be able to understand wage developments we need to be aware of the tendencies of recent years.

The strong wage inflation of previous years increasingly encouraged companies to substitute capital for labour, which was especially typical of companies in the textile industry.<sup>78</sup> The gradual termination of low productivity workplaces, which is also reflected in the significant lay-offs in manufacturing, and their replacement with capital increased the productivity of companies. At the same time, the improvement in productivity was accompanied by a speed-up in output, which the case we are examining is indicated by the developments in sales revenue, and this resulted in a decline in the ratio of wage-related expenses. In other words, the recovery on the output side and the increase in productivity allowed companies to increase wages without cutting their profit margin. On the contrary, as a result of the two developments, the unit staff-related expenses decreased.

**Chart IV.22 Average statistical number of employees in manufacturing, 1994–2003**

Percentage changes



Of the remaining cost components, the change in the value of activated own performance was significant and is economically well interpretable. An important part of this is changes in self-manufactured stocks. The value of activated own performance in the manufacturing industry as a whole was more than twice as much in 2003 as in 2002. This clearly indicates that, as a consequence of increasing foreign demand, companies started to build stocks.

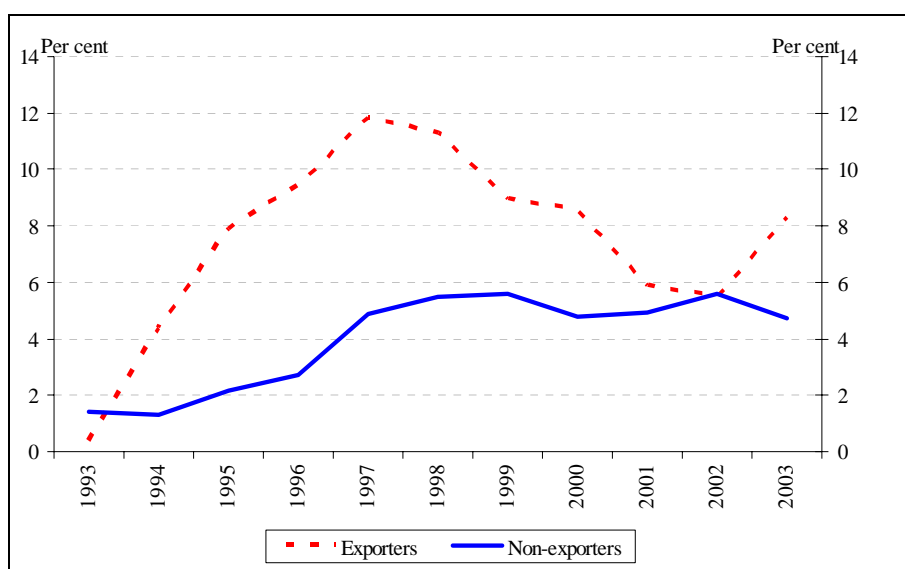
<sup>78</sup> In 2002–2003, due to continuous capacity downsizing the average statistical number of staff decreased by 27% in the textile industry. For details, see *Quarterly Report on Inflation*, August 2004.

## Profitability of exports

The positive impact of the recovery in foreign markets was not restricted solely to the manufacturing sub-sectors: therefore, in the next part of this analysis the profitability of exporters<sup>79</sup> and domestic market oriented companies is examined as well.

The profitability of exporters improved significantly in 2003, which had not happened in the previous six years. At the same time, non-exporters' profitability declined. One may raise the question as to what role was played by the slightly undervalued exchange rate in the improvement of companies targeting foreign markets. On average, the euro/forint exchange rate was approximately 4% lower in 2003 than in 2002, which broadly corresponds to the average 2001 exchange rate, while in real terms, because of the cumulative inflation differentials, it was much more appreciated. Nevertheless, exporters' profitability in 2003 was well above the 2001 level, which indicates that the main reason of improvement was the recovery of external demand and an upswing in external trade.

Chart IV.23 Profitability (ROA) of exporters and non-exporters, 1993–2003



In order to be able to understand the reasons for differences between companies targeting foreign or domestic markets, developments in the main profit components in these two groups were examined.

In 2003, the sales revenues of companies targeting domestic markets and companies targeting foreign markets increased as well. Relative to 2002, this is a significant change, since in that year only the sales revenues of companies targeting domestic markets increased (by 23%), while those of exporters fell (by 10%).<sup>80</sup> Accordingly, the dynamics of sales revenues played a dominant role in the development of the profitability of exporters, which was closely related to the improvement in foreign business conditions. In 2002, the global and European slowdown passed its low point, and in 2003 there were obvious signs of recovery in Hungary's foreign markets. Growth became intense only from the second part of 2003, which, as data show, resulted in a significant increase in the sales revenue of

<sup>79</sup> These are companies where more than 20% of sales revenue stems from exports.

<sup>80</sup> See details in the *Report on Financial Stability*, December 2003.

foreign market oriented companies. Non-exporters continued to record increases in sales revenues in 2003, which may be attributable to the still buoyant consumption.

The growth rates of material-related expenses—one of the two most important cost components—had different impacts in the two groups. Although these expenses increased quickly for exporters, sales revenue increased even faster, and thus the share of such expenses in sales decreased. However, as a result of the growth rate exceeding sales revenue, non-exporters' share of material-related expenses in sales increased.

Staff-related expenses had positive impacts, but of different magnitudes on the profit margins of the two sectors. The wage bill<sup>81</sup> in both groups of companies increased, although as a result of exporters' more disciplined wage policy, the share of wage-related expenses in sales significantly decreased in this sector. As far as non-exporters are concerned, this impact was much less significant, which may be attributed to a slowdown in sales dynamics compared to 2002, accompanied by hardly slowing wage dynamics.

**Table IV.7 Changes in exporters' and non-exporters' cost categories and profits**

2003/2002	Net sales revenue	Material-related expenses	Staff-related expenses	Operational income
Exporters	1.21	1.20	1.06	1.96
Non-exporters	1.15	1.16	1.12	1.07

**Table IV.8 Profit margin of exporters and non-exporters (percentage)**

	2002	2003
Exporters	<b>3.8</b>	<b>6.2</b>
Non-exporters	<b>4.3</b>	<b>4.0</b>

### IV. 3. 1. Indebtedness and liquidity

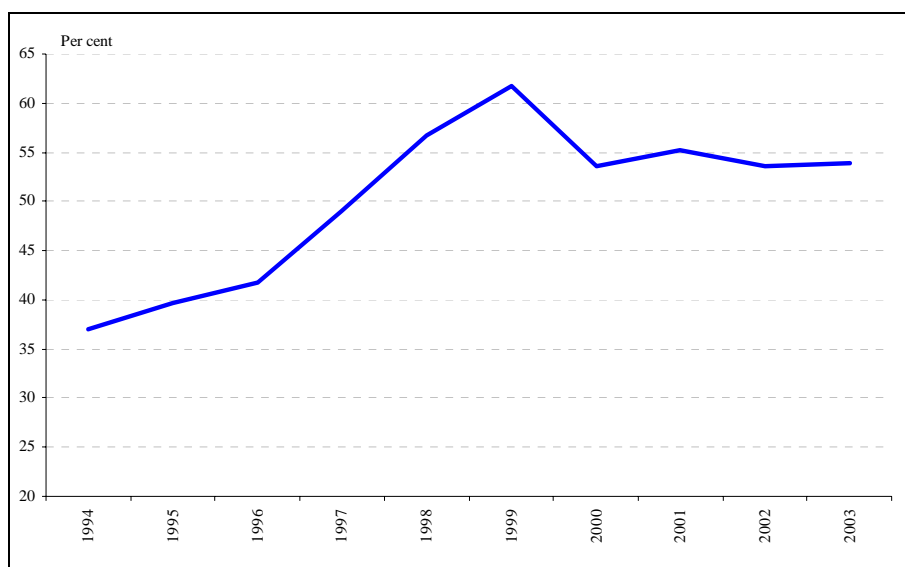
Leverage, i.e. the debt-to-assets ratio, was used to analyse developments in the indebtedness of the non-financial corporate sector.

The indebtedness of the sector as a whole remained broadly unchanged in 2003. In the continuing recession in 2002 companies refrained from new investments and from taking on new loans, thus in that year the whole sector was in a net saving position, and leverage declined moderately. However, in 2003 the financing requirement of non-financial corporations<sup>82</sup> slightly increased, although the extent of the increase was low in a historical comparison. This increase is imperceptible in the aggregate leverage indicator.

<sup>81</sup> The dynamics of staff-related expenses of exporters was more vigorous than in 2002, because in that year the wage bill decreased by 1% in this group. Staff-related expenses of companies targeting the domestic market increased by 13% in 2002.

<sup>82</sup> See p. 39, of the *Report on Financial Stability*, June 2004.

Chart IV.24 Leverage of non-financial corporations (debt-to-assets ratio, 1994–2003)



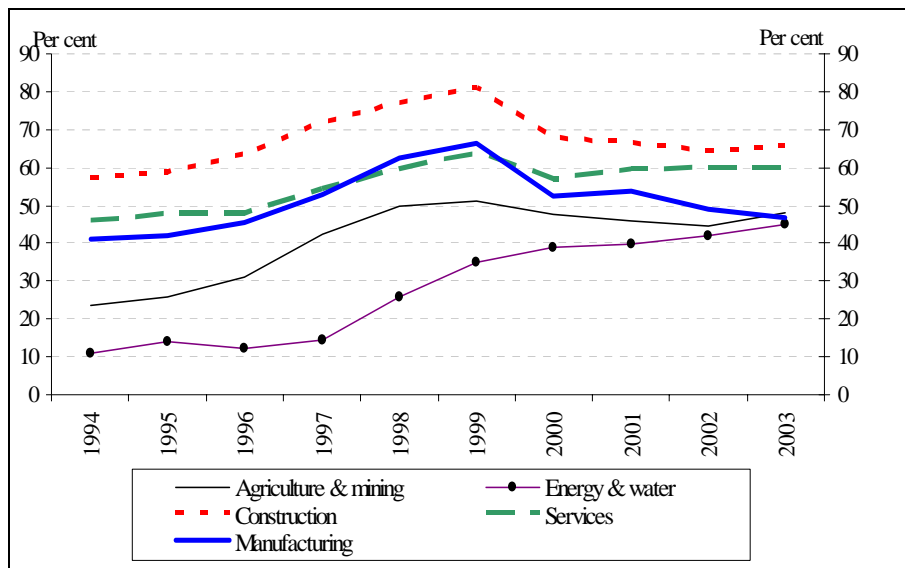
Based on sub-sectoral leverage indicators, the corporate sector seems to have become more homogenous in terms of indebtedness in recent years: the average level of leverage fluctuated in a narrowing range, and remained within the band of 45–65% in 2003.

In terms of changes in leverage, the behaviour of individual sub-sectors was more similar in 2003, compared to 2002. In 2003, only the indebtedness of manufacturing sub-sectors decreased, while the indebtedness in other sub-sectors remained unchanged or increased slightly. The decrease in manufacturing leverage may be attributed to the significant inflow of foreign direct investment into the sector, which improved the capital position of companies, creating also financing resources for the vigorous manufacturing investment activity at the same time.

The indebtedness of services sub-sectors did not increase in 2003. In last year's analysis we indicated that we saw some risk in the behaviour of service companies. The underlying reason was that in 2001–2002 consumption expenditure on services grew faster than aggregate consumption, and this was coupled with slow growth in leverage. The fact that the leverage of this group of sub-sectors seems to have stabilised indicates that service providers have adapted to the slowdown in consumption growth and refrained from taking on new credits.

According to the latest data, leverage in the construction industry increased somewhat, and we see some risks in the developments which are anticipated. In the event that the sub-sectors suddenly deteriorating profitability proves to be permanent and companies are unable to adapt their capital supplies, a further increase in leverage may cause problems in the future. The leverage of companies operating in energy & water increased further in 2003. In this sub-sector several large investment projects commenced last year, financed by companies from credit: the stock of project financing credit was 37% higher in nominal terms than in 2002.

Chart IV.25 Sub-sectoral leverage indicators, 1994–2003

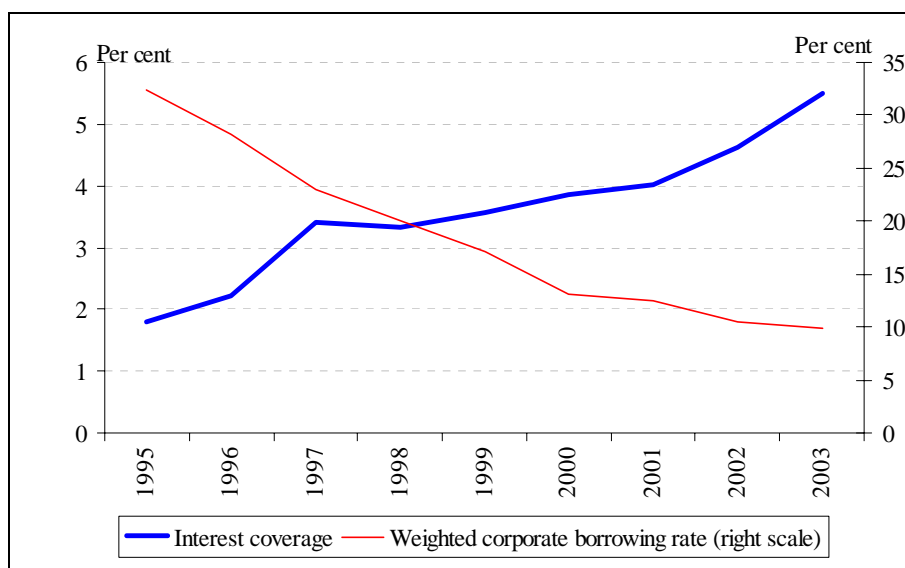


The flow equivalent of the debt-to-assets ratio is the interest coverage ratio.<sup>83</sup> It shows the extent to which earnings generated through ordinary business activities can cover interest liabilities. Changes in three factors, profitability, corporate borrowing rates and leverage together determine interest coverage developments. The increase in interest coverage remained unbroken in 2003. Prior to 1998, improved aggregate profitability affected interest coverage beneficially, which was further boosted by falling interest rates after 1995. Then, however, declining interest rates were at the forefront, as the profitability of the entire corporate sector had been deteriorating since the late 1990s. In 2003, it was once again profitability that determined the development of interest coverage, since corporate borrowing rates and leverage hardly changed.

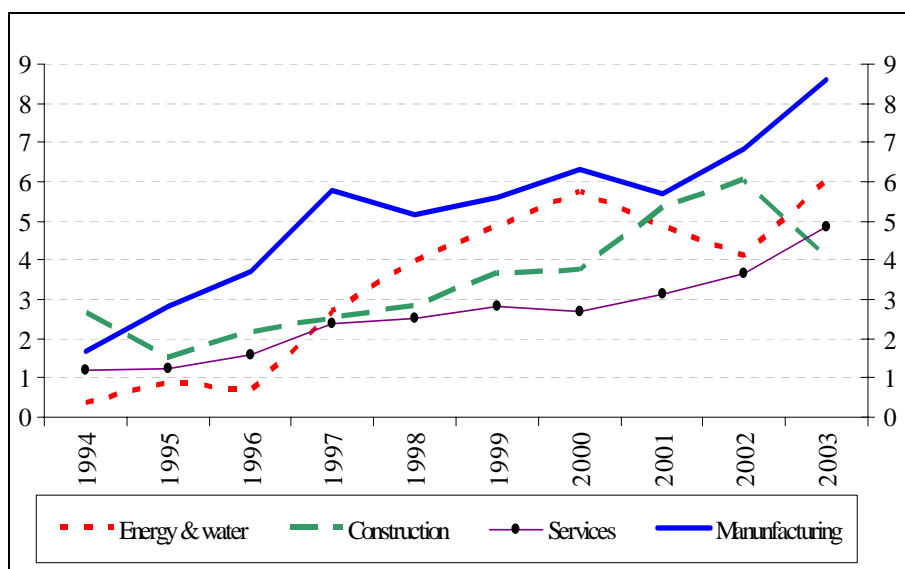
Detailed data confirm this aggregate picture. As neither interest rates, nor the level of indebtedness changed significantly, earning capacity of companies played the dominant role in sub-sectoral interest coverage as well. Therefore, the position of the manufacturing, energy and services sectors improved rapidly. In manufacturing, the effect of profitability was also strengthened by the decrease in the aggregate value of interest burden. In accordance with what was described above regarding profitability, the interest coverage of construction companies deteriorated.

<sup>83</sup> Interest coverage ratio = Profit before taxation and interest payment / Interest paid and interest-related disbursements. The interest coverage ratio shows that, in principle, profitability, corporate borrowing rates and changes in leverage exert a combined effect on changes in interest coverage.

**Chart IV.26 Aggregate interest coverage and weighted average corporate borrowing rates with maturity over one year, 1995–2003**



**Chart IV.27 Sub-sectoral interest coverage indicators, 1994–2003**

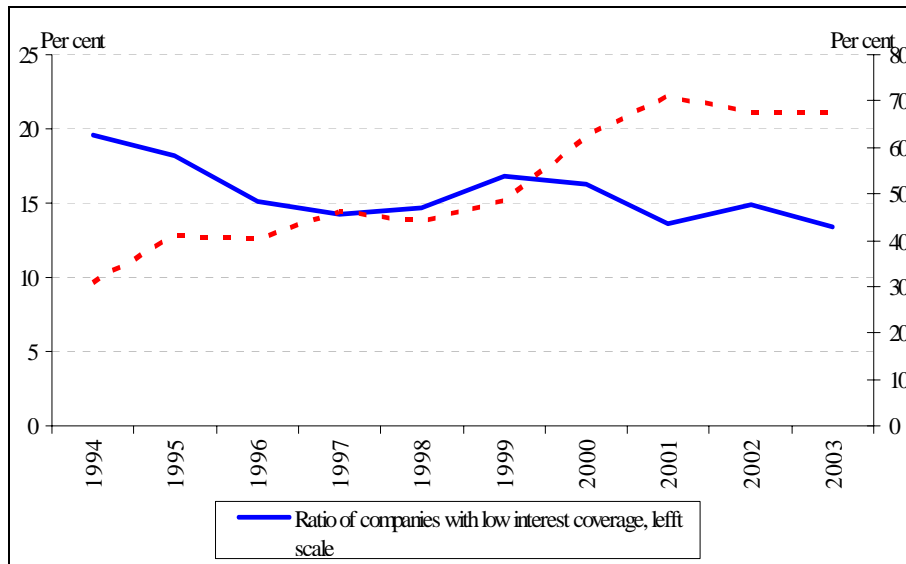


From the perspective of financial stability, leverage poses the greatest danger to companies whose cash flow from ordinary business activity fails to provide sufficient coverage for their interest expenses. The reason for this is that these companies would be able to meet their interest liabilities only if they further relied on external credit, which, in the long run, is unsustainable and leads to insolvency. Therefore, close attention should be paid to companies whose interest coverage indicator is below one. In respect of these companies, their leverage considerably exceeded the corporate average in the last three years. Such companies invariably generated losses, and the composition of this group changes significantly year by year.<sup>84</sup> At the same time, the leverage of this group of companies did

<sup>84</sup> See more details on pages 82–83 of the *Report on Financial Stability*, December 2003.

not grow further in the last two years, and their weight vis-à-vis all the companies also decreased in 2003, which is a favourable development.

**Chart IV.28 Weight and leverage of companies with the lowest interest coverage\*, 1994–2003**



\* Where the interest coverage ratio is below one.

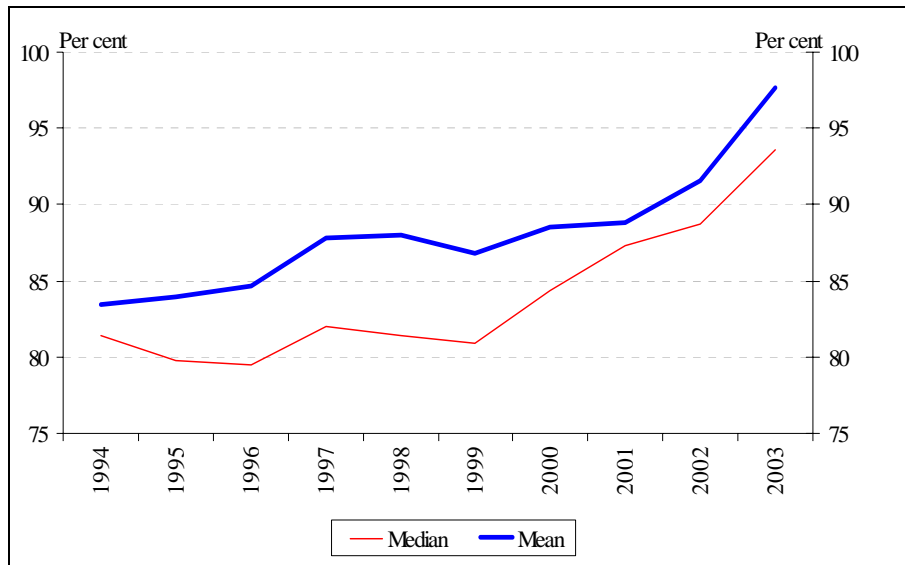
When a company is heavily indebted and the value of its assets falls rapidly, its liquid assets may prove insufficient to cover current liabilities, even if the proportion of such assets is high. If the company, however, manages to increase the proportion of its most liquid assets on its balance sheet, this reduces the risk of insolvency significantly. In order to assess this ability, quick liquidity and cash ratios were used.<sup>85</sup>

Aggregate liquidity ratio reveals that, in line with profitability, the liquidity position of the entire sector improved rapidly in 2003, but liquid assets still cannot completely cover the short-term liabilities of the entire sector.

<sup>85</sup> Liquidity ratio = (Receivables + Securities + Cash) / Short-term liabilities.

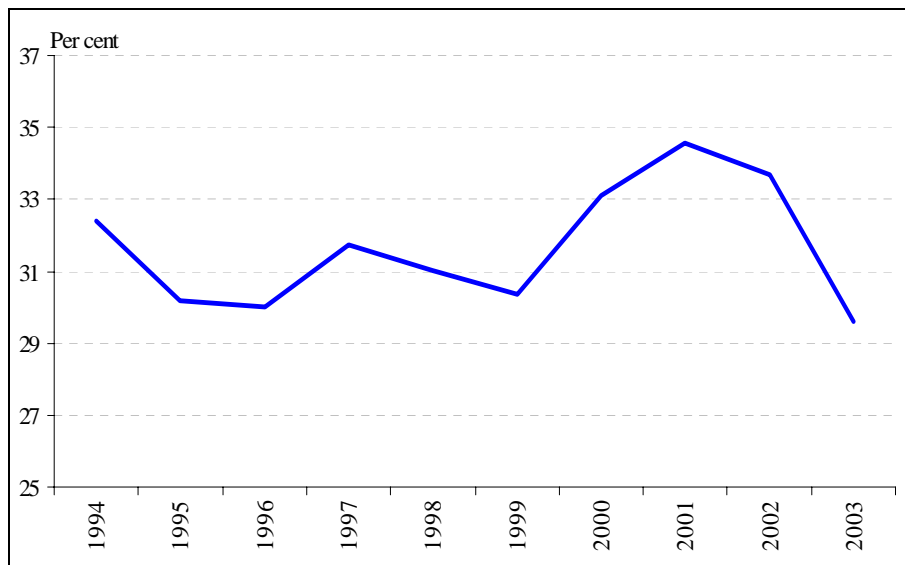
Money ratio = (Securities + Cash) / Short-term liabilities; Short-term liabilities: Short-term loans, Short-term credit, Liabilities arising from services and transport of goods, Inter-company loans and Other short-term liabilities.

**Chart IV.29 Quick liquidity ratio in the corporate sector, 1994–2003**



In contrast with what was outlined with regard to the aggregate situation, the fact that the liquidity position of the least liquid companies<sup>86</sup> deteriorated considerably in 2003 was a less favourable development. Should such companies face bankruptcy, they would only be able to meet less than one-third of their current liabilities, using their liquid assets.

**Chart IV.30 Lower quintile in the distribution of the quick liquidity ratio, 1994–2003**

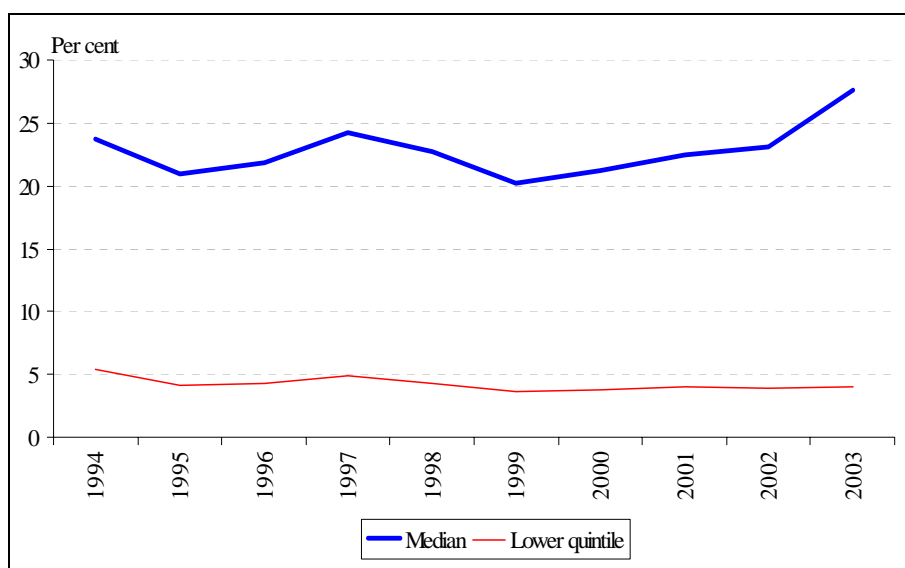


Nevertheless, the improvement of the cash ratio of companies was a positive development. If only the most liquid assets are taken into account in the numerator, we may say that the cash and securities stocks of a typical Hungarian company together can cover more than 25% of short-term liabilities. This is a considerable improvement, as this indicator has not been so high since 1993. The position of the group with the worst cash ratio did not

<sup>86</sup> Companies that belong to the lower 20% of the distribution of the liquidity ratio.

change in 2003; monetary assets and securities continue to cover a mere 5% of short-term liabilities, although this is by no means low by international standards.<sup>87</sup>

**Chart IV.31 Median cash ratio and lower quintile, 1994–2003**



#### IV. 4. Strengthening financial regulation

An important precondition for financial stability is the creation of an adequate regulatory environment. Effective regulation of financial intermediary institutions and financial markets lessens the likelihood and negative consequences of financial crises. The legislative programme of the European Union aims at the establishment of a single financial market, and developing a single market regulation is an important priority. In accordance with the legislation schedule of the Union, these targets are met through directives, with the Magyar Nemzeti Bank also playing an active role in their adaptation in Hungary. The most important steps of financial legal harmonisation taken last year are reviewed and the main elements of the new regulations and their impacts on financial stability and market development are described below.

2002/87/EC of the European Union required the amendment of the Acts on Credit Institutions and Financial Enterprises, on the Capital Market and on Insurance Institutions and the Insurance Business.<sup>88</sup> The amendments adopted contribute to sustaining the stability of the financial system mainly by the uniform and comprehensive regulation of institutions operating in all these three sectors and by the creation of a supervisory framework required for its control. The single European conglomerate legislation is based on and supplements existing prudential regulations in the fields of banking, investment and insurance. The effectiveness of new supervisory concepts is enhanced by the application of uniform notions and definitions, by capital adequacy requirements covering all three sectors and by enhancing supervisory cooperation under the direction of a leading or

<sup>87</sup> The cash ratio was around 20% in the United Kingdom in the second half of the 1990s (see Chart 6, p. 88 of the Bank of England's *Financial Stability Review*, June 2000).

<sup>88</sup> The new regulation is included in Act LXXXIV of 2004, which amends sectoral legislation. The provisions of the Act entered into force on 7 October 2004.

coordinating supervisory authority. The new legislation extends beyond the existing sectoral rules by providing a better overview for the supervisory authorities of the risks and their concentration arising in the three sectors. In addition, when assessing capital adequacy, the possibility of multiple gearing of the same capital elements and the acknowledgement of excessive leverage is minimised.

#### *Essential elements of the conglomerate regulation*

Current legislation also provides for supervision on a consolidated basis, but these rules apply only to homogeneous group members. According to the scope of supervision on a consolidated basis, in case of credit institutions and investment firms and the financial and subsidiary undertakings affiliated to them, the basis of projection of prudential rules is the consolidated account of these undertakings. The same is valid for insurance groups consisting of insurance undertakings, reinsurance undertakings and their subsidiary undertakings. However, the recently adapted directive does not provide for common supervision, but for the supplementary supervision of those groups which include insurance undertakings and credit institutions or investment firms simultaneously. Except for intra-group transactions, the rules apply to those group members that have a parent–subsidiary company, participation or horizontal relationship. Thus, the rules cover those institutions that are considered parent and subsidiary companies from an accounting aspect and those that have a decisive influence on each other’s operation based on the opinion of the supervisory authority. The legislation also covers institutions with a ‘horizontal relationship’, i.e. ones which are managed on a uniform basis or governed by a common executive body. Cooperative groups appear as new terminology in legislation; supervisory authorities in their case take into account open commitments towards the other party as a decisive influence. However, not all financial conglomerates fall within the scope of the directive. For example, when banking activities within a bank-insurance group may be considered negligible, the group is still an insurance group and not a financial conglomerate. (Of the credit institution groups registered in Hungary, the authority is expected to declare one group of institutions a conglomerate, while of those with foreign parent companies five groups may be affected.)

The rules on risk-taking, own funds and quality of top management of financial conglomerates have been fashioned in such a way that the earlier sectoral rules do not change; they are only supplemented. However, the rules on the establishment of a supervisory system that controls financial conglomerates and extends over sectors and mostly over borders as well represent a radical change. The previous rules that were based on the cooperation of authorities are replaced by a two-stage hierarchical system of competent supervisory authorities. The supervisory authority that plays the role of the coordinator is responsible for the supervision of the whole financial conglomerate, and it harmonises the work of various authorities that control individual sub-groups or institutions.

## **2. Harmonisation of the Financial Collateral Arrangements Directive**

Directive 2002/47/EC on financial collateral arrangements extends the application of the legal principles introduced to payment and settlement systems and central banking operations by Directive 98/26/EC on settlement finality to a much wider area, i.e. to transactions between financial market participants in general. The directive aims to regulate certain questions of collateral rights based on cash, securities and other financial instruments in order to provide for the satisfaction of the beneficiary of the collateral in

accordance with uniform principles in case of default or bankruptcy. European legislators hope that all of this will enhance the development of cross-border financing with collaterals and the further integration of European money and capital markets. Moreover, the directive contains important regulation from the aspect of financial stability as well, because by enhancing the more efficient enforceability of contractual collaterals and reducing the chances of 'domino effect' bankruptcy situations, the new regulation moderates the system risks of financial intermediary activity in general. Consequently, those market participants that act as creditors with collateral in an adequate legal framework may considerably reduce their partner risk exposure.

Community legislation on financial collaterals mainly affects rules of civil and bankruptcy laws, therefore it was mainly the Hungarian Civil Code and the Act on Bankruptcy Proceedings which had to be amended. The material scope of the directive may be cash, securities and other financial instruments which may serve as collateral. Since in Hungary these instruments may only be objects of security deposit (and not those of lien), domestic implementation mainly required supplementing the security deposit rules of the Civil Code.

In basic interpretation, the personal scope of the directive is limited, since it is a rule that at least one of the parties reaching an agreement must be some kind of financial organisation, although Member States are entitled to determine a narrower or wider scope of subjects. Most Member States decided to determine a wider scope of subjects. Their justification was that for the financial market of the given state this may provide regulatory advantage in competition. Partly for this reason and partly because in the Civil Code in force there is no limitation with regard to the subject when applying a security deposit, Hungarian legislators also decided to extend the scope of subjects of the regulation.

The new regulation also makes it unambiguous that security deposit is, in fact, a special kind of lien. The amendment continues to reserve the right of the collateral taker for direct satisfaction in case of cash and quoted securities. However, with regard to securities and financial instruments that do not have an unambiguously determinable value (e.g. private offering of securities), a precondition of exercising the right of direct satisfaction is the parties' preliminary agreement on the valuation of the security deposit.

The full enforcement of unconditional direct satisfaction from the security deposit also required the modification of certain provisions of the Act on Bankruptcy Proceedings in force. Therefore, the Act repeals the rule which in the interest of the protection of general creditors' bankruptcy assets in certain cases used to limit to 50% the satisfaction of the beneficiary from the security deposit, and did not allow exercising the separate satisfaction right in the case of security deposit provided within one year reckoned backwards from the commencement of the liquidation proceedings.

Moreover, the law expressly states that substitution of the object of guarantee by equivalent collateral and/or by providing supplementary collateral and close-out netting provisions are not considered to be transactions that aim at defrauding the creditors and are not considered to be transactions reducing the debtor's assets, thus they cannot be contested on this basis.

### **3. Harmonisation of the directive on electronic money institutions (ELMI)**

Harmonisation of Directive 2000/46/EC on the taking up, pursuit of and prudential supervision of the business of electronic money institutions was carried out by Act XXXV of 2004, which has been in force since 1 May 2004. According to Hungarian legislation, electronic money institutions are specialized credit institutions that issue electronic money

and electronic money instruments and provide related services. Electronic money is digital value stored on electronic means of payment that is accepted as payment not only by the issuer, but by others as well. Electronic money is typically used for payment transactions of small amounts (micro payments) globally. Legislation on electronic money institutions is, in essence, the legal support of a financial innovation that appeared in the last decade. For the Magyar Nemzeti Bank, as the institution responsible for the development and control of payment systems, it is important to regulate new market innovations that affect payment systems as well.

The background of uniform prudential rules of ELMIs is that the issuers of electronic money have to exercise due care, similarly to banks, when they invest the money received as counter value. The reason for this is that it is only the issuer who stands behind the electronic money, and the issuer's mismanagement may damage not only the value of the electronic money issued by him, but may also affect the confidence in the financial intermediary system. Strict prudential rules are also required by the fact that the scope of deposit insurance does not cover ELMIs. An important element of the prudential rules vis-à-vis ELMIs is that their scope of activity is limited to the issuance of electronic money and the related activities in order to prevent ELMIs from undertaking other types of business risks. Furthermore, at least three hundred million forints of initial capital is required when establishing an ELMI, which is obliged to accumulate own funds based on its financial obligations embodied in the outstanding amount of electronic money. Moreover, for certain instruments ELMIs are required to have their own funds to cover exposure and partner risks, and for certain instruments the large exposure limit also applies. The investment policy of ELMIs is strictly limited; they are allowed to keep their assets only in highly rated assets. Investment restrictions provide for the liquidity of institutions. Assets covering outstanding electronic money must continuously be valued, and the value of coverage must reach at least the nominal value of the electronic money issued. Following the conservatism principle of accounting, of the cost and market value always the lower one is to be taken into account when calculating the liability.

The provisions of the Act on Credit Institutions and Financial Enterprises apply with regard to the establishment, operation and supervision of ELMIs, with the differences in the Act on Electronic Money Institutions (Act XXXV of 2004).

#### **4. Harmonisation of the Market Abuse Directive**

The European Parliament and the Council adopted the so-called Market Abuse Directive directives, including the framework directive (2003/6/EC), and the relevant, so-called implementation directives (2003/124/EC, 2003/125/EC and 2004/72/EC) and Regulation No. 2273/2004 on the buy-back programmes and the stabilisation of prices of financial instruments in February 2004. The Act and the relevant decrees prepared on the basis of the directives are in the phase of final discussions, and they are to be on the Hungarian government's and parliament's agenda at the beginning of next year.

From the perspective of stability, the harmonisation of directives contributes to the development of market integrity, i.e. it lays down the basic rules of information flow in the markets, and enhances the information to be made public in an accurate and understandable format. All of this increases investors' confidence, and—as the law provides a more efficient system of measures for the supervisory authority—it becomes easier to sanction those who break the rules. The new Hungarian legislation is to modernise the regulations on the scope of prohibited behaviours. In addition, it determines the scope of market practices allowed during trading, which creates a clear situation for market

participants as well. All of this is important not only relative to financial stability, but also because it indirectly contributes to the proper functioning of monetary policy as well. The liquidity of financial markets grows together with the increase in market integrity, which also makes monetary transmission more effective. The earlier community legislation had become outdated,<sup>89</sup> and failed to comprehensively regulate behaviours that could be considered as market abuse. Moreover, implementation in Member States varied considerably. Consequently, there were differences in the practices of Member States with regard to the examined market abuses, the sanctions applied and the competence of supervisory authorities. All of this presented an obstacle to the establishment of uniform rules in Member States' capital markets regarding acknowledged and prohibited behaviours, cooperation between authorities and disclosure of sensitive information.

The prospective Hungarian legislation determines disclosure requirements vis-à-vis insider information, defines accepted market practices, grants wider investigative competence to the supervisory authority, and settles the issues of cooperation between supervisory authorities.

Issuer will be obliged to make insider information public immediately. They may be exempted from this obligation on their own responsibility, with reference to their legitimate interests. Issuers will be obliged to compile a list of persons who have access to insider information. Persons in a managerial position at the issuer and/or major owners therein must reveal their transactions with the issuer's share.

The scope of the new Hungarian regime will cover all financial instruments introduced into regulated markets operating on the territory of Member States. Hungarian legislation will distinguish between two forms of market abuse: insider trading and market-manipulation. According to the new regime, insider trading is a transaction with regard to a financial instrument affected by insider information. Anybody who knew or should have known that the information utilised is deemed insider information is considered to be an insider. Moreover, certain people—irrespective of their knowledge—will be considered as parties pursuing insider trading, if they belong to the group defined by law. Disclosing insider information to other persons or recommending to someone else to engage in a transaction affected by insider information will also be considered as insider trading.

The new legislation introduces the concept of market manipulation. The concept of market manipulation will include three types of conducts: 1) transactions that gives or may give a false or misleading signal about the demand and supply conditions and the price of a financial instrument; 2) transactions which employs fictitious devices; and 3) dissemination in public of unfounded, misleading and false information, provided that the person who disseminates such information is aware of the fact that the information is false or misleading, or should have known it by reasonable diligence under the circumstances. Exceptions from prohibited conducts are specified in detail in the legislation, which obliges market participants to report suspicious transactions.

The new regime will extend supervisory competences and will also define the rules of cooperation between supervisory authorities. Detailed procedures with regard to the publication of investment recommendations are expected to be regulated on a decree level.

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<sup>89</sup> Directive 89/592/EEC on coordinating regulations on insider dealing.

## **V. Articles**

### **V. 1. Dynamic expansion in the Hungarian consumer lending market in the light of international trends**

**By András Bethlendi and Erzsébet Nagy Vas**

#### **Introduction**

In Hungary, household lending activity was insignificant from the change of regime to the end of the 1990s, with loan portfolios showing a continuous decrease relative to GDP. Around 1998-1999 the first segment that came to life was consumer lending, followed by the housing loan market in 2001, as a result of governmental measures. Between 1998 and 2004, consumer indebtedness rose rapidly, exhibiting an average annual growth rate of 45%. Market mechanisms created a consumer credit market, which was practically non-existent before 1998, but which has since become relatively well-developed even by international standards. The dynamic nature of this market's development has also surprised most experts and market participants. According to international empirical research, a rapid increase in lending may involve significant risks, increasing the vulnerability of the financial intermediary sector to macroeconomic shocks. Therefore, we deem it important to analyse the reasons and characteristics of the extraordinary growth in consumer debts. Furthermore, we aim to describe in greater detail the credit market that has come into existence over the past few years.

The term 'consumer credit' refers to household credit for financing any purchase transactions except for obtaining a dwelling or securities. In the analysis we will compare the experiences and characteristics of developed countries with those of Hungary. In the first section, we present the development, structure and main consumer credit products of developed countries. The consumer lending market of the United States is one of the oldest and most developed markets and this is why we frequently refer to the experiences and the regulatory and institutional framework in that country. We also describe the main reasons for credit default and discuss two special institutions with an influence on default: personal bankruptcy and credit counselling. In the second section, we describe the Hungarian market in a structure similar to the first part, focussing first on the development of the market and the product range, and then turning to a discussion of credit risk. Following this, we devote special attention to two characteristics we consider important from the point of view of the domestic consumer market development: liquidity constraint and the very high interest rate margin.

## V. 1. 1. Consumer credit markets in developed countries

### V. 1. 2. Rising indebtedness<sup>90</sup>

Until the end of the 1970s banking activities were highly regulated in European countries, with interest rates and credits controlled as part of disinflationary policy. From the 1980s, financial sector reform, deregulation and liberalisation resulted in stronger competition and an accelerated financial innovation process, decreasing the significance of credit rationing and household liquidity constraints. The consumer lending market started to boom.

The upswing in consumer lending slowed down in the first part of the 1990s, parallel to the economic downturn, and remained below 5% in most countries. In the United States and in the United Kingdom growth showed a less steep decline, remaining at an average of around 7%. The Scandinavian banking crisis (in Norway, Finland and Sweden) caused household consumption and consumption-related indebtedness in those countries to drop significantly.

After coming out of recession, the portfolios showed a marked increase again. Decreasing inflation and interest rates provided renewed momentum to the process of indebtedness. In an inflationary environment households obtain smaller credits; the debt-to-income ratio diminishes and is quickly 'inflated'. In contrast to this, a lower level of inflation triggers a higher debt-to-income ratio. On the one hand, low nominal interest rates make higher borrowing possible, and on the other hand, the debt ratio decreases much lower (Debelle [2004]). This had a particularly strong impact in the former peripheral countries: in Ireland, Spain and Greece the average growth rate of the period from 1996 to 2001 was between 14% and 33%. The low base also contributed to the high growth rate in Greece (Jentzsch and Riestra [2003]).

Despite a similar level of economic development, we find significant differences in consumer lending by country, primarily owing to differences in credit supply, institutional and cultural backgrounds.<sup>91</sup> Generally speaking, mortgage lending tends to be dominant within household credit, and since the 1990s its share has been increasing. The role of consumer credits is secondary from the point of view of the level of household indebtedness<sup>92</sup> (Table V-1.). Therefore, this is area of banking services is less frequently examined than, for instance, mortgage or corporate lending. Empirical studies generally examine the supply and demand factors for total household indebtedness and not for consumer lending only.<sup>93</sup>

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<sup>90</sup> A fair international comparison of the household market (and within it the consumer credit market) is greatly hampered by the non-unified nature of categories and definitions, and the lack of harmonised data. See Guardia [2002].

<sup>91</sup> For instance, differences in lifestyle: in Italy students generally live with their parents, which means less expenses and less demand for financing, which contrasts with other Western countries, where most students live in separate households.

<sup>92</sup> An international comparison of household indebtedness can be seen on page 46 of the June 2004 issue of the Report on Financial Stability.

<sup>93</sup> For a summary of the various empirical studies, see Crook [2003].

**Table V.1 Weight of consumer lending relative to GDP and to total household lending in 2001**

	Consumer credit to GDP	Consumer credit to total household credit
Greece	7%	35%
<b>Hungary*</b>	<b>8%</b>	<b>49%</b>
Finland	8%	24%
The Netherlands	8%	9%
Ireland	10%	24%
Belgium	10%	26%
Germany	11%	15%
France	12%	32%
Italy	14%	63%
Portugal	15%	22%
Denmark	15%	17%
Sweden	16%	31%
Austria	16%	40%
United Kingdom	16%	22%
Spain	18%	37%
United States	20%	30%

*Source:* IMF, Jentzsch - Riestra [2003] 2001 data, ECB, Eurostat, MNB.

*Note:* \*2003 data; the table contains non-housing household debts, which is not a clear consumer credit category, because this includes loans for securities purchase, but in most of the above countries the latter is not significant.

Consumer lending plays a much more significant role with respect to the debt service burden of households.<sup>94</sup> This is primarily due to the much shorter maturity of consumer loans, although the characteristically higher interest rate on consumer loans also contributes to this fact. Despite a significant rise in the household debt portfolio, at the EU level the debt service burden only increased from 12% in 1997 by one percentage point by 2001 (Jentzsch - Riestra [2003]).<sup>95</sup> In the United States the debt service burden has fluctuated in the 11.5-14% range in the past twenty years, within which the debt service burden of consumer debt ranged between 6%-9%, while mortgage debt grew from the level of over 4% to under 6%, showing less fluctuation. Parallel to the cycles in consumer lending, the

<sup>94</sup> Debt service burden: repayment obligations (principal plus interest) relative to income during the given period.

<sup>95</sup> There are substantial differences between the household debt service of the individual countries: it is the highest in Holland, Germany and Portugal (17-22%), while in Italy it is relatively low (6-7%). (del Rio [2003], quoting Jentzsch - Riestra [2003] data for 2001.)

size of total debt service burden is also cyclical.<sup>96</sup> The debt service burden on consumer debts is larger than on mortgage debts, despite the fact that consumer debts amount to less than one-third of total debts.

Since the end of the 1990s households have been using mortgage debts in several countries (United States, England, Denmark, Ireland), withdrawing housing equity, to increase their consumption, repay other debts or purchase financial assets. Consumers turn to arbitrage: they use their mortgage borrowings (real estate wealth converted into liquid assets) to replace some of the traditional consumer lending products. In the United States refinancing and replacement of mortgage debts already began to experience a significant upswing in 2001 (refinancing boom).

Refinancing mortgage debts can increase the purchasing power of households in two ways. On the one hand, due to increasing house prices, the additional borrowing capacity with unchanged loan-to-value ratio provides immediate cash to households. On the other hand, if the interest rate on the new mortgage credit is lower than that on the one replaced, disposable income will grow even at the same amount of debt, owing to smaller interest obligations (Deep – Domanski [2002]). In contrast to the United States, in numerous European countries early repayment is prohibited or made more difficult via considerable costs, resulting in lower flexibility of European households.

According to the experiences of developed countries, growing household lending – including consumer lending – may have important macroeconomic effects:

- a significant decline in savings rates;
- due to the lower liquidity constraint households can better smooth their consumption using consumer credits, rendering aggregate consumption more resistant to temporary real economic shocks, which together may lead to a higher level of household welfare and less real economic fluctuations;
- financing methods may support the above macroeconomic impact. Housing equity may be more and more considered a source of liquidity, contributing to smoothing household consumption;
- in several countries there is a substantial debt service burden on consumer debts. Greater indebtedness becomes risky, if it takes place parallel to a significant increase in the debt service burden. In the case of a macroeconomic event with a persistent negative effect (period of interest rate increase, unemployment, drop in house prices, or expectations of such), the rise in debt service burden relative to income may trigger a drop in consumption. A constraint in credit supply in the context of lending losses may further deepen the crisis. Therefore, a sudden increase in the number of households with credit constraints may lead to a decline in consumption; and
- parallel to this, the consumer debt and financial savings portfolios – particularly long-term savings (i.e. pension, health, unit-linked insurance) – may show an increase.

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<sup>96</sup> Consumer lending and expenses on durable goods strongly correlate. Therefore, consumer lending is highly cyclical, decreasing during recession and growing dynamically during economic expansion, which means that consumer loans are not typically used for surviving hard times (Maki [2000]).

### V. 1. 3. Structure and regulation

#### *The role of certain types of institutions*

The possible types of institutions in consumer lending are:

- banks,
- savings cooperatives,
- specialised financial institutions (financial enterprises),
- non-financial enterprises (i.e. larger retail companies),
- special government institutions,
- institutional investors (through securitisation).

These types of institutions play various roles in the various countries, with primarily credit institutions (particularly commercial banks) and financial enterprises being predominant, and the rest having less significance. The EU consumer lending market is mainly characterised by banks. In Germany and several smaller Member States, credit institutions provide the majority of loans. Despite their decreasing market share, in the United Kingdom it is still credit institutions that provide nearly three-quarters of consumer loans. In the past, specialised financial institutions and credit institutions had a 50-50% share in the consumer lending market in France, but over the past few years the market share of banks and savings cooperatives showed a sharp upturn, which may be attributed to their intensive efforts, wider distribution network, information advantage and lower funding costs. In Italy, the market share of credit institutions is only about 50% (Guardia [2002]).

The institutional structure of the United States differs largely from the European one, as the market share of credit institutions has shrunk substantially since 1990, to a level of altogether 40% in the 2000s. The financial system of the United States has been fragmented for a long time, and owing to the sharp borderline between investment and commercial banks, banks were strongly motivated in asset securitisation. Securitisation is particularly characteristic of the credit card market. Currently, approximately 30% of credits can be found in securitised pools. This contributed to the rapid growth of the American consumer lending market. In other countries there is no securitisation to such an extent. In European countries this type of financing is most broadly used in France, where it still hardly amounts to 5% of the total lending portfolio. As a consequence of the establishment of the EMU and owing to capital market development efforts, in Europe growth is expected in the securitisation of lending, in particular of consumer credits, with a parallel decrease in the market share of banks.

### V. 1. 4. Fragmented markets

In Europe, interbank and ‘wholesale’ markets are much more integrated than the household (retail) market in a broad sense, including small and medium-sized enterprises, which is still fragmented by national markets. Within the banking systems, the national champion model<sup>97</sup> is still dominant (FSAP [2004]). Despite the unifying effect of Monetary Union and the regulatory efforts (see more detail in European regulation), market reactions have been weak so far, with a limited supply of cross-border consumer lending services

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<sup>97</sup> During the consolidation process in the sector, at first the large national market leading service providers are established.

(Kleimeier *et al.* [2001]). In comparison to wholesale markets, many more factors make the provision of household cross-border services difficult:

- the natural barriers: preference of closeness, differences in languages and culture, trust issues, cost of searching;
- more legal obstacles; and
- certain cross-border retail services are more expensive.

Therefore, lower prices (interest rates) themselves do not provide enough incentive for consumers to use cross-border services.<sup>98</sup> The lack of cross-border competition and the low level of national competition maintain the differences in pricing.

In the United States, there are less barriers to market integration than in the European Union. For instance, language and cultural differences do not play a role, regulation is based on a uniform principle (case law) and American society is more mobile. However, the main reason for the fragmentation of the household markets – geographical distance – can also be found in the United States, and therefore the market of fundamental retail banking services is also more fragmented there. At the same time, increasing integration is underway in certain areas (car and personal lending), which is attributable to the sharp competition of distant service providers and non-bank financial institutions.

#### *European regulation*

European regulation is primarily focussed on regulating the institutions instead of regulating the financial products. One exception is consumer lending. The consumer lending directive and its amendment serves a dual purpose: on the one hand, it is part of the general regulation of financial services, and on the other hand, it is intended to protect client interests. As for the regulation of financial services, the main objective is to eliminate barriers to competition among the Member States and to create a unified market. Consumer protection is facilitated by the harmonisation of contracts, with special regard to the fact that consumers should have fair, easily understandable and comparable information on total borrowing costs. There is another field of regulation on borrowing costs, i.e. the prohibition of usury. The right of early repayment serves the protection of client interests as well.

Despite the above efforts, several areas continue to be regulated at the national level, and the differences created this way hinder the integration of consumer lending markets. The Financial Services Action Plan provides further impetus to the integration of the financial service markets. The aim of the programme is to eliminate the legal barriers to the provision of various financial services (including consumer lending) in the territory of the European Union and to increase the efficiency of cross-border transactions. Currently, we find the following barriers to the expansion of cross-border household services: differing regulations in the Member States on consumer protection and contracts, prohibitions of certain banking products, the control of product planning and data protection issues (e.g. personal data are unavailable for foreign service providers), and tax regulations.

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<sup>98</sup> That is, in contrast to other markets (for instance, the bond and the foreign currency markets), there is no international arbitrage, which means that they are not indebted at the place where they could do it most cheaply, and they do not place their deposits where they would receive the best interest.

### **V. 1. 5. Types of consumer loans**

Consumer loans may be grouped according to several aspects: by loan purpose; revolving or non-revolving; and secured or unsecured.

There are specific purpose credits (for a specific purchase transaction) and general purpose credits. In the past, specific purpose credits were predominant (for purchasing products and cars), but nowadays there is an increasing market share of general purpose credits (e.g. personal loans), which is mainly connected to card payments (credit cards).

Consumer credits may also be grouped according to the fact whether they are non-revolving or revolving. Non-revolving credits are usually provided for a specific purpose. In the case of revolving credits and credit limits, after the client has repaid the loan, he may use it again without a new credit assessment procedure and it is usually general purpose. In the United States, revolving credits are widespread – their most characteristic form being credit card debt. However, they are rapidly expanding in Europe as well.<sup>99</sup>

Finally, consumer credits may also be grouped according to whether they are secured or unsecured. Consumer loans were defined as credit instruments financing any kind of purchase transactions other than a dwelling or a financial investment. Owing to consumer arbitrage it is difficult to differentiate between mortgage credits for housing purpose and general (consumer) purpose. Mortgage-backed credits are often much cheaper, therefore in several countries households prefer them to finance their consumption expenses other than house purchase. This consumer arbitrage is supported by tax regulations as well.<sup>100</sup>

Student loans, which is a special type of personal credit, has great potential for development in the more developed countries. Students are not good clients for banks, as they usually have no income or collateral to back their borrowings, and this is why the government is required to play a role in student loans, directly or indirectly in the form of government guarantee.

In Anglo-Saxon countries, subprime lending, to clients with below-average creditworthiness, represents a substantial market segment, which is also a sign of the easing of liquidity constraints.<sup>101</sup>

### **V. 1. 6. Lending risks**

Consumer credits have a significant impact on the size of household debt service burden. Generally, households fail to pay consumer credit instalment earlier than the instalment of

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<sup>99</sup> In the past decade credit card debt has spread in the European consumer credit market. Germany is the only country where this trend is not prevalent (Guardia [2002]).

<sup>100</sup> For instance, in many countries the interest expenses of housing loans are fully deductible from personal tax: Greece, Italy, Japan, Holland, Portugal, Switzerland, United States (Debelle [2002]). At the same time, consumer credits are not positively distinguished by governments. The only country where interest expenses of consumer borrowings may reduce the tax is Holland – subject to certain conditions (Guardia [2002]).

<sup>101</sup> Lending to more risky clients is naturally only possible with higher interest, as this segment is highly sensitive to macroeconomic shocks. Lending to subprime debtors is well-developed in the Anglo-Saxon countries, spreading in the past decade, while in Europe it is insignificant owing to much stricter consumer protection regulations and the prohibition on extremely high interest.

housing debt. Therefore, in the case of a potential economic shock, losses on consumer credits jump first. Sometimes this may even endanger financial stability as a consequence of the size of consumer lending.

Various analyses based on micro-level data found the following main reasons for credit default:<sup>102</sup>

- decrease in income (becoming unemployed),
- inadequate financial skills (bad financial management),
- unexpected private events (divorce and illness).

Further factors increasing credit risk:

- factors arising from the size of credit supply:
  - size of credits to more risky clients,
  - size of unsecured revolving loans,
  - level of indebtedness of debtors;
- institutional factors:
  - consequences of non-payment – social (condemnation) and economic sanctions,
  - extent of information asymmetry.

The combination of the above reasons determines the level of credit risk characteristics of a country or region.

The most risky clients are much more sensitive to macroeconomic conditions; therefore, receivables expected from this group are also much more volatile (Nayda - Perli [2003]).

The level of indebtedness of the individual debtor has a great impact on risks. Banks charge lower interest rate on smaller consumer borrowings relative to annual salary, while the interest rate becomes larger in the case of larger borrowings, which can be attributed to the increasing probability of credit default. Over a certain limit no loan is provided at all. The limits where the interest rate is increased or further lending is rejected differ in the case of the various household risk groups (Chatterjee *et al.* [2002]).

The view is generally accepted in the sector that debtors first fail to pay their unsecured debts and only then do they fail to pay secured ones. There is empirical support for this hypothesis (Cox *et al.* [2004]). Unsecured consumer debt bears the highest risk. In the United States, the annual loss rate of card debt (net loss of value) is about 4-5%, while in the case of secured debt this rate is much lower.

The opportunity for debtors of personal bankruptcy may be an efficient tool in imperfect markets, as it may smooth out household consumption.<sup>103</sup> At the same time, too moderate consequences of non-payment may reduce debtors' efforts to pay the instalments (may

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<sup>102</sup> Jentzsch - Riestra [2003] summarising studies on the following countries: USA, Austria, Belgium, France and Spain; as well as Chatterjee *et al.* [2002] survey on the USA.

<sup>103</sup>With the help of filing for bankruptcy clients may practically take up unsecured loans with partial or full collateral. In the United States, the range and extent of properties secured against bankruptcy differs from state to state. The institution of personal bankruptcy protects households against persistent shocks in individual income (e.g. illness) (White [2003], Grant [2003]).

increase the ratio of non-payment) and may force lenders to be more cautious about their credit supply (less credit, with higher margin), therefore its effect on welfare is not completely unambiguous.

Institutions facilitating debtors' and lenders' access to information have an important effect on the operation of the credit markets. The institution of credit counselling is the most popular in the United States, increasing the financial knowledge/awareness of clients. On the one hand, they provide counselling on budgeting issues, and on the other hand, they work out a multi-year debt management programme (required for personal bankruptcy), paid by the debtor, but the lender also contributes to the costs.<sup>104</sup>

Credit information systems mitigate information asymmetry through better knowledge of the characteristics of borrowers, making it easier to forecast client risk. They reduce the costs of banks relating to obtaining information, increasing inter-bank competition. They increase repayment discipline, preventing non-paying debtors from taking up further loans from other banks.<sup>105</sup> In countries where creditors share information with each other, there is a higher volume of lending and less credit risk (Jappelli and Pagano [2002]). In Europe, people have more pronounced rights to keep private life confidential and credit information systems are segmented, which hampers the creation of a unified market. In contrast to Europe, in the United States there is less strict regulation on data protection, and there is a very well-developed and efficient credit information industry.

## **V. 1. 7. DOMESTIC PROCESSES**

### **Transformation crisis, birth of a new market**

In the first half of the 1990s household lending in Hungary declined significantly due to the transition crisis. The real value of the debt portfolio decreased substantially. Both demand and supply factors must have played an equally important role in this process. The most substantial portion of the outstanding portfolio of financial institutions<sup>106</sup> (70%) was housing loans provided before the change of regime. The demand for credit considerably declined in the context of the huge recession. Credit institutions did not regard households as their target market and practically did not offer household lending products at all. Financial enterprises specialised in household lending did not exist. The range of products was very modest, and new loans were only provided under strict conditions. Studies examining household consumption and savings in the first half of the 1990s all emphasize the significance of the liquidity constraint (Zsoldos [1997], Menczel [2000]).

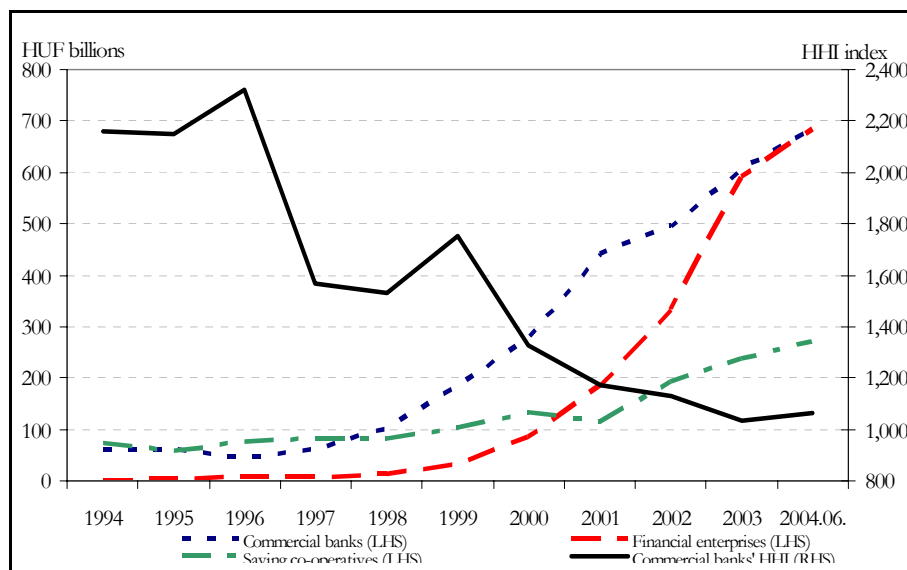
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<sup>104</sup> See details on the institution of credit counselling: Furletti [2003].

<sup>105</sup> See more details on the credit information systems: Árvai - Dávid - Vincze [2002].

<sup>106</sup> Financial institutions: banks, specialised credit institutions, savings cooperatives and financial enterprises.

**Chart V.1 Consumer credit portfolio by type of financial institution, HHI index of consumer credits provided by banks**



Note: HHI: Herfindal-Hirschman concentration index

In the second half of the 1990s, the household income outlook improved in the context of economic consolidation, while there was impatience amongst consumers due to the previously postponed consumer spending, resulting in substantial excess demand (Árvai - Tóth [2000]). The significant liquidity constraint, i.e. strictness on the supply side, may have become the main obstacle to growth in household indebtedness. The aforementioned authors forecast an easing of the liquidity constraint and gradual growth in the level of household indebtedness.

Credit supply reacted to the improving creditworthiness of households with a delay, but from 1998 on dynamically increasing consumer lending activity characterised both banks and non-bank market participants (Chart V-1). The dynamic growth in market development surprised most market participants as well. The housing loan market only became active much later in 2001, as a reaction to the launch of the government housing subsidy scheme. The rapid increase in household indebtedness took place in parallel with a decline in the savings rate.

The relatively slow reaction of credit institutions may be due to several factors. On the one hand, there are considerable entry constraints to the household lending market, as it is very asset intensive (branch network, IT system, etc.) and requires special know-how that most banks did not have at the time. Development of such systems is a relatively time-consuming, costly process. On the other hand, as lending to large corporations was highly profitable banks were not motivated to enter this more asset-intensive and risky market segment. As the wholesale market matured, however, and its profitability began to decline, the above arguments became much less significant. Having undertaken the required investments, banks were forced to increase the volume of lending in order to ensure returns, which caused a quick strengthening of supply-side competition. Since then participants' willingness to extend loans in the field of consumer lending has been growing

steadily, while creditworthiness standards and credit terms have become less and less strict, indicating further easing of the liquidity constraint.<sup>107</sup>

In Hungary, decreasing inflation and market yields have not played a great role in the increase of the credit portfolio. Interest rates and fees on forint consumer loans have not declined for years. The impact of decreasing interest rates on the rise of the portfolio appears in a special way, characteristic of converging countries, i.e. through foreign currency lending.<sup>108</sup> In credit segments where foreign currency products are available, most credits are extended in foreign currency despite greater risks (foreign currency products allow for much larger loan amounts), due to the substantial difference in interest rates.

After 1998, the consumer loan portfolio almost quadrupled within a period of three years, though from a very low base. Consequently, consumer loans temporarily amounted to 70% of the household credit portfolio in the balance sheet of financial institutions. Starting from 2002, this extraordinary expansion tapered off somewhat, mainly for commercial banks. The reason behind this downturn was the impact of the state-subsidised housing scheme. Some debtors turned to arbitrage, using subsidised housing loans extended at preferential rates to finance their current consumption.<sup>109</sup> As a result of the housing loan boom, the ratio of consumer loans to banks' total household lending dropped to 50%, which may still be regarded as high compared to most other European countries. In 2004, the 'crowding out' impact became weaker owing to the tightening of the subsidised housing scheme. The robust growth in house constructions had a pulling effect on consumer loans. The rate of growth in consumer loans remained high in 2004 (approximately 30%), but did not return to the very high level registered before the launch of the housing subsidy scheme, which may be attributed to the more mature market (base effect) and to worsening income expectations.

Market mechanisms have created a consumer market that can be considered well-developed even by international standards. The economic importance of domestic consumer lending in the Hungarian economy has reached the lower edge of the very heterogeneous field found in developed countries (Table V-1). Therefore, the forthcoming period cannot really be regarded as a convergence process. International comparison shows that the differences between developed countries in the field of consumer lending are mainly explained by institutional and cultural factors.

The average annual growth rate of 45% in consumer indebtedness is characteristic of convergence countries between 1998 and 2004, and it is not comparable with the growth rate of the developed countries. Among the 'old' members of the European Union only the Greek growth rate, amounting to 35% per year, approached the level recorded in Hungary.<sup>110</sup> If economic conditions remain favourable, the rate of growth may possibly

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<sup>107</sup> The MNB's Lending Survey, introduced two years ago, primarily targeting qualitative information on the credit supply of banks, also supports this.

<sup>108</sup> A positive risk margin is characteristic of the converging countries, which results in a difference between domestic and foreign credit interest rates, both short-term and long-term rates. Despite the risks, in many cases the differences in the cost of the loans generate a boom in foreign currency lending.

<sup>109</sup> Approximately 15%–30% of borrowings taken up for purchasing existing flats were used by households for financing consumption. Report on Inflation, p. 91, February 2004.

<sup>110</sup> In the period of 1991-2001 (Jentzsch and Riestra [2003]).

remain around 20% for a longer period of time, in the light of similar experiences of European countries that have also experienced a boom in consumer lending and based on the special Hungarian characteristics listed below:

- further easing of the liquidity constraint in the context of an increasingly competitive market;
- positive income expectations in the long run, as well as cultural factors (persistent consumer impatience); and
- the expected decrease in the cost of credit, triggered by strengthening price competition in the forint-based market segments and the expansion of foreign currency based products.

Household debt service is dominated by consumer loans due to their shorter maturity and higher costs. The interest burden on consumer loans showed rapid growth: from 0.7% in 1998 it grew to approximately 3% by the first half of 2004, which amounts to approximately 70% of the total interest burden.

### **V. 1. 8. Development of the market structure**

Significant development occurred in the period under review with regard to structural factors as well. Owing to the initial market structure,<sup>111</sup> at the time of the change of regime, only one or two banks and the savings cooperative sector offered household credit products. Financial enterprises specialised in household lending did not exist at all. In the middle of the 1990s smaller banks and financial enterprises specialised on consumer lending appeared, and larger banks also entered this market, while in parallel, savings cooperatives saw a rapid loss in their market share. Most non-banking creditors have a banking background. This has an important consequence for systemic risk. The consolidated share of banks in the total consumer lending market is continuously growing, currently standing at approximately 75%.<sup>112</sup> Banks provide credits through their financial enterprises partly owing to regulatory arbitrage, and these financial enterprises have recorded stronger growth in lending than banks.

The number of market participants increased in the field of consumer lending, and their weigh became more even, which is reflected by the continuous decline of the Herfindhal-Hirschman (HHI) concentration index of banks. The level of the HHI index, however, is misleading with regard to the strength of competition: the current index of around 1000 theoretically indicates strong competition (Chart V-1). Consumer loans, however, are very heterogeneous on the basis of their product characteristics (purpose, risk, etc.), and the substitution effect among credit types is not too strong as of yet. There are only two or three significant participants in each market segment, and therefore the HHI index shows a high value. The only sector with more numerous (primarily non-banking) participants is car financing.

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<sup>111</sup> During the plan economy, apart from the monobank attending both central banking and commercial banking functions, in most of the Eastern European countries – in Hungary as well – there was another institution specialised in collecting retail deposits (savings bank), which had a huge advantage at the time of the change of regimes.

<sup>112</sup> Own estimate.

**Table V.2 HHI index of banking market segments, June 2004**

General purpose mortgage loan	1180
Overdraft	2196
Personal credit	2434
Hire-purchase loan	3877

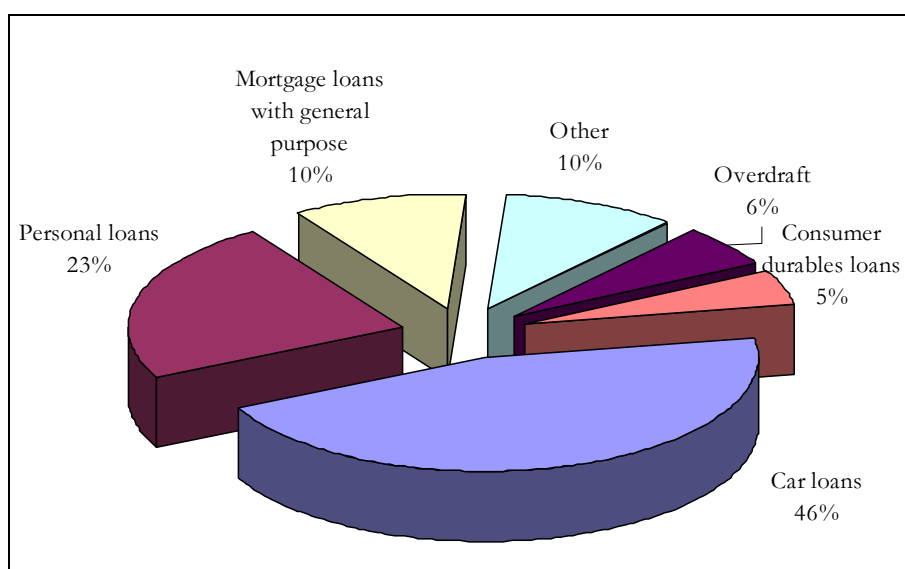
On the basis of the above, banks probably behave in a less competitive way in the market of consumer and other credits – except for automobile financing. The empirical examination of Móri-Nagy [2004], covering the period between 2001 and 2003, found that banks show certain monopolistic behaviour in pricing in the case of the Hungarian consumer credit market. This strong market power is expected to wane in the forthcoming period, on the one hand, in the context of stronger competition and a further increase in the number of market participants, and on the other hand, with the development of the financial culture of borrowers (for example, as they become more price sensitive and investigate various opportunities for borrowing, etc.). Interbank competition may effect non-price conditions as well. Several signs indicate that in the case of certain products – owing to the low price sensitivity of credit demand (see section High consumer credit margin) – non-price factors play an important role in supply side competition, e.g. the number of documents required for providing the credit, the length of the procedure, the use of different channels of marketing, which are not to be neglected in this market.

In the field of consumer lending, cross-border services are practically non-existent and on the basis of the experiences in Western Europe, we cannot expect a quick growth in this field in the future.

#### **V. 1. 9. Types of credits in Hungary**

In Hungary, special purpose credits (car, hire-purchase) have a 51% market share, which is slightly lower than the international trends. In the past few years the share of more streamlined, general purpose credits has started to grow.

**Chart V.2: Distribution of the consumer lending portfolio of financial institutions (June 2004)**



*Note:* the distribution of consumer lending by financial enterprises is our estimation.

Revolving credits include overdrafts and some of the other forms of credit (credit cards and shopping cards). They only account for a small share in the total portfolio, not exceeding 10%. Most of the important commercial banks have only been offering credit cards for 1 or 2 years. The smaller market share arises from the relative risk aversion of domestic banks (such loans are more risky) and domestic purchasing habits (relatively few payments by card).<sup>113</sup> In line with the development seen in Anglo-Saxon<sup>114</sup> (USA, UK) and in certain continental European countries, the share of credit and shopping cards is expected to increase, as the use of revolving credits expands, and in particular card payments become more common.

The term ‘secured loans’ refers to loans covered by a physical asset, including general purpose mortgage, car purchase or loans secured by liens. Hire-purchase loans do not belong to this category, because the products purchased could serve as collateral, but in practice banks cannot validate this collateral.<sup>115</sup> We do not have any statistical information on the size of the credit portfolio secured by other types of collateral (i.e. personal guarantee), therefore such are disregarded. Secured loans amount to a large part (57%) of the portfolio. As the market of secured loans becomes more mature and competition increases (greater risk appetite), growth in unsecured loans (overdraft and credit card debt) is expected.

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<sup>113</sup> Risks are increased, for instance, by the multiple use of credit without a new credit assessment process, or in the case of credit cards, lending without a current account, etc.

<sup>114</sup> In the USA, 35%–40% of the total consumer loan portfolio consists of revolving loans, mostly credit card debt.

<sup>115</sup> On the one hand, the products purchased are only worth a fraction of their original price after putting them in use (e.g.: built-in kitchen units), and on the other hand, they may easily ‘get lost or disappear, etc.’

Foreign currency based lending first emerged in the case of car purchase credits, but has now become more and more frequent in the case of other types of credit as well (personal, general purpose mortgage loans). In 2004 H1, foreign currency lending amounted to approximately 40% of the consumer credit portfolio of financial institutions. Lenders shift currency and interest rate risk fully to the borrowers.

Today, consumer credit covers a wide range of products, but the ratios among the various types of credit products still show a traditional picture of risk aversion. In line with international trends and on the basis of parent bank experiences, credit institutions are expected to provide more and more revolving and unsecured credits (personal loans, overdrafts and credit cards), which have good growth potential. In the past 1 or 2 years we have seen a change in business policies in line with this approach.

#### **V. 1. 10. Credit risk**

Based on the literature, in the case of procyclical lending, a period of rapid increase may be followed by a massive restriction of credit arising from a sharp rise in lending losses resulting from a negative shock. Losses are particularly significant, if the credit expansion is mostly driven by the supply side, i.e. if it is caused by an increased lending willingness and an easing of credit standards and terms, while the creditworthiness of potential borrowers basically remains unchanged (Keeton [1999]). In Hungary, the creditworthiness of potential borrowers has been improving since 1996 and there is massive surplus demand. Before 1998 willingness to lend was very low, while the standards of creditworthiness and lending conditions were strict. Although in 1998 supply started to quickly accommodate to demand, procyclical impact has not been significant up till now. Despite the fact that the reasons listed below usually lead to higher lending losses in developed countries, banks disclose relatively small credit losses and credit margins have so far more than covered these risks.

- The lack of experience on the side of both debtors and creditors, as well as the insufficient financial skills of debtors (together with poor financial management arising from this) makes it likely that the losses are greater than in developed countries.
- Unexpected private events (divorce, illness) are more frequent in Hungary than in many other countries.
- The debt service burden of Hungarian households is lower, but there is a higher percentage of fixed expenses relative to income (accommodation, food, etc.), which allows less flexibility for debt repayment.
- The level of financial savings is low<sup>116</sup> and many debtors do not have any financial savings at all. We can find the largest number of debtors without any savings in the case of hire-purchase and personal loans. In addition, in the case of these products there are more debtors with lower income, wealth and income expectations, who are the most vulnerable to a negative macroeconomic change (Table V-3).
- With a growing level of indebtedness and the markets becoming more mature, the sensitivity of financial institutions to the general macroeconomic situation increases.

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<sup>116</sup> Therefore, the ratio of debt to financial savings is relatively high, exceeding the value of quite a few developed countries. See more details on page 47 of the June 2004 Report on Financial Stability.

- The social sanction of non-paying debtors (social condemnation) is not too strict, economic sanctions are greater.
- The problem of information asymmetry is eased by the negative debtor information system (BAR), but a positive system would help a great deal in judging the creditworthiness of clients more exactly, and clients would feel its impact via the more favourable pricing and higher volumes.
- The boom in foreign currency based credits represents a separate risk. In the currently effective foreign exchange regime the rates cannot be forecast, and banks usually use short-term financing sources, which accounts for the higher volatility of interest. Nor should indirect credit risks be neglected. In the case of the formation of substantial foreign currency credit portfolios the sector becomes more vulnerable to external shocks, and collateral mitigates credit risk to a decreasing degree, due to their homogeneity.

If the process of easing lending conditions continue in the future, there is a danger that the increase in the portfolio will become more and more supply driven. With more mature markets and with a further growth in foreign currency lending the risks may increase.

**Table V.3 Debtors with no savings\* broken down by credit instrument**

Percentage share	2002	2003	2004 H1
Other (including credit cards)	43.0	39.3	47.9
Car purchase loans	43.8	47.1	52.0
Overdraft limit	45.0	51.8	53.3
Hire-purchase loans	49.2	67.2	61.7
Personal loans	65.9	69.4	65.1
<b>Altogether**</b>	<b>54.5</b>	<b>59.6</b>	<b>59.5</b>

*Notes:* \* By savings, we mean all types of savings apart from cash and business shares, as well as investment-purpose real estate. \*\*Includes housing loans and other loans as well.

*Source:* GfK.

### V. 1. 11. Liquidity constraint from the point of view of savings and indebtedness<sup>117</sup>

We examine the phenomenon of liquidity constraint through the characteristics of savings and consumption related indebtedness of the Hungarian population. In the case of savings, we mainly concentrate on the various purposes. In the case of consumer lending, we examine the differences according to various sociological aspects.

A relatively small portion of the Hungarian population, hardly 40%, has savings.<sup>118</sup> The main reason for this is low income, intensified by the liquidity constraint (in the absence of credit opportunities, some parts of the population spend all their current incomes). For the period between 2000 and 2003, we grouped saving purposes as follows: smoothing in line with the life cycle hypothesis, bequest and precautionary motives, liquidity constraint. We found that the most important of these are savings for future consumption, which suggests

<sup>117</sup> Based on the data of GfK Hungária's survey entitled 'Financial market data providing'.

<sup>118</sup> Savings in the broad sense, including real estate investments, various financial assets (excluding cash and business stakes) as well.

the existence of a liquidity constraint (Table V-4). This is followed by precautionary considerations, the life cycle concept and bequest motives. An interesting point in the survey is the fact that the order did not change during the examination period. The small number of savers and the most frequent purposes of savings show that the liquidity constraints may still be significant even today.

**Table V.4 Ratios of the various reasons for savings and specific objectives**

Percentage		2000	2001	2002	2003
<i>Reason</i>	<i>Purpose of savings</i>	n=1722	n=1610	n=1605	n=1426
	L1 House purchase / reconstruction	15	20	22	18
	L2 Travel / holidays	7	5	4	5
	L3 Purchase of car / technical products	9	10	8	10
<i>Liquidity constraint</i>	L1+L2+L3	31	35	34	33
<i>Precaution</i>	Unexpected expenses	24	15	19	21
<i>Life cycle</i>	Years in pension / funeral, tombstone	11	18	17	18
<i>Bequest</i>	Future of children	11	14	17	17
	Other / no answer	23	18	13	11

The frequency of indebtedness shows a positive relationship with the wealth index, the monthly net income per person and more favourable income prospects.<sup>119</sup> Higher qualification indicates a positive income prospect in the long run (favourable outlook in the labour market), which supports the life cycle theory. Higher qualified professional groups usually have higher income (Chart V-3).

Should the income situation and expectations of the entire population improve, people with lower income will become able to take out a loan (even with unchanged credit standards), therefore more such people will become new borrowers than people who have been creditworthy before. Credit supply plays an important role in the relationship between higher income, higher income expectations and better wealth situation versus indebtedness, as banks are more willing to provide credit to clients of higher status. The easing of liquidity constraint is shown by the flattening curves on Chart V-3.

It is worthwhile to break down the former aggregate picture by individual credit instrument. We find a positive relationship between the sociological grouping and the frequency of indebtedness, even if broken down by credit instrument.<sup>120</sup> However, the closeness of the relationship differs by credit type, suggesting that the liquidity constraint also differs. On the basis of the closeness of the relationship the order among the credit

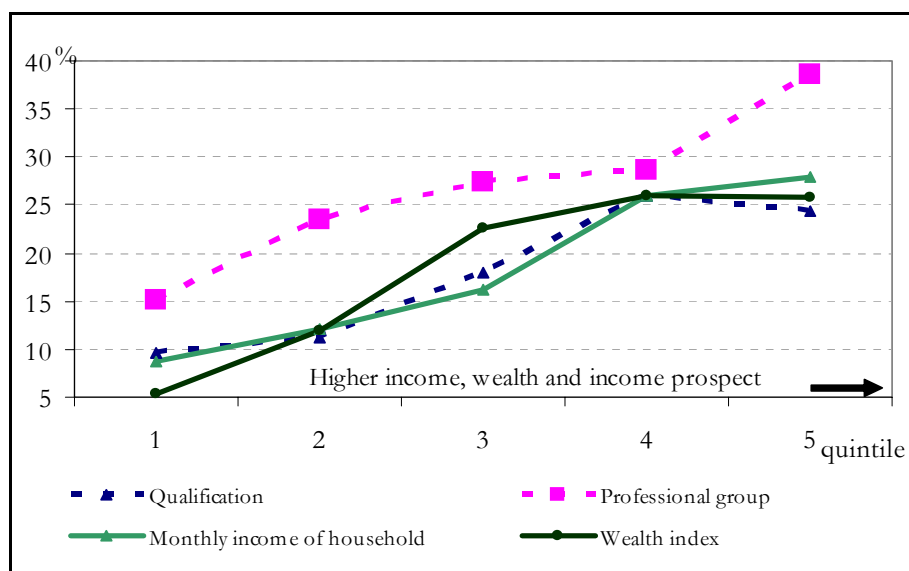
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119 Árvai - Tóth [2000] had the same findings.

120 The strength of the relationship is expressed by the relative deviation index: the higher this index, the more the given sociological aspect differentiates and the stronger is the relationship with indebtedness.

products did not change over time. In the case of personal and hire-purchase loans there is less difference in the frequency of indebtedness among the various sociological groups than in the case of car purchase loans, overdrafts and other credits. This means that in the case of personal and hire-purchase loans banks finance people with lower income, wealth and income prospects as well, the credit instruments have become ‘mass products’ and the liquidity constraint has eased considerably within these segments (Table V-5).

**Chart V.3: Penetration of household loans relative to total population, by income or income prospects, 2004 H1**



*Note:* The segmentation of professional groups does not cover the total population (contrary to the other groups), only including the employed, because employment groups only make sense in their case. This is the reason for higher penetration.

In the case of overdrafts, other loans (general purpose mortgage loans, credit cards, etc.) and mainly in the case of car credits there is a closer relationship between the income or wealth situation and frequency of indebtedness. The close relationship in the case of car purchase credit is in line with the fact that the average nominal value of the down payment required is high (in contrast to other products), therefore people with higher incomes or wealth have better access to this type of credit.<sup>121</sup>

In 2003, the strength of this relationship substantially decreased compared to 2002 in the case of all credit products other than personal loans, probably indicating an easing of the liquidity constraint. In 2004 H1, the relationship between the income or wealth situation and frequency of indebtedness became much stronger again – although on the basis of a smaller sample. The ratio of debtors with no savings decreased somewhat in the case of the most risky credits (personal and hire-purchase). Both supply-side and demand-side reasons

<sup>121</sup> In the case of car purchase credits clients without down payment or with low creditworthiness (lemon financing) probably amounts only to a small part of the total portfolio.

contributed to the change in 2004.<sup>122</sup> However, we do not consider this a trend, because market competition causes a further easing of the liquidity constraint in the long run.

**Table V-1: Strength of the relationship between the various sociological aspects and frequency of indebtedness**

<i>Relative deviation index</i>	Car purchase credit			Other credit**			Overdraft			Credits*			Hire-purchase credit			Personal credit		
	2002	2003	2004 Q1	2002	2003	2004 Q1	2002	2003	2004 Q1	2002	2003	2004 Q1	2002	2003	2004 Q1	2002	2003	2004 Q1
Completed qualification	0.86	0.62	<b>0.88</b>	0.79	0.75	<b>0.85</b>	0.79	0.57	<b>0.57</b>	0.53	0.46	<b>0.41</b>	0.63	0.36	<b>0.36</b>	0.30	0.35	<b>0.52</b>
Professional groups	0.65	0.77	<b>0.98</b>	0.70	0.48	<b>0.77</b>	0.59	0.50	<b>0.35</b>	0.33	0.29	<b>0.32</b>	0.41	0.24	<b>0.25</b>	0.11	0.15	<b>0.22</b>
Monthly net household income	1.21	0.87	<b>0.69</b>	0.43	0.59	<b>0.61</b>	0.55	0.50	<b>0.65</b>	0.39	0.35	<b>0.47</b>	0.39	0.27	<b>0.44</b>	0.15	0.30	<b>0.45</b>
Wealth index	1.03	0.96	<b>0.99</b>	0.84	0.76	<b>0.56</b>	0.68	0.66	<b>0.62</b>	0.48	0.38	<b>0.50</b>	0.39	0.37	<b>0.55</b>	0.47	0.26	<b>0.39</b>

Notes: \*Includes credits for housing purposes as well. \*\*for instance: credit card.

### V. 1. 12. High consumer credit margin

In developed countries, consumer lending is also characterised by higher credit margins compared to other credit market segments, e.g. the corporate sector, due to the following factors: relatively high operational costs compared to the amount of credit; considerable trader or agency fees, the high cost of invested capital (branch network); the generally high level of risk; the low interest rate elasticity of demand,<sup>123</sup> and the priority of non-price credit conditions.

In 2003, average Hungarian currency (forint) margins in the field of consumer lending (11.7%) well exceeded the EU average (5.1%).<sup>124</sup> These higher domestic margins may be explained as follows:

- The very low interest rate elasticity of demand, which probably stems from consumer impatience on the one hand (previously non-creditworthy consumers becoming creditworthy are less sensitive to price), and insufficient financial skills on the other hand. According to the banks' experience consumers first of all make their decision on the basis of the monthly instalments, checking whether the given instalment is within their income constraint, and they often decrease the monthly payments to the required amount by extending maturity. The total cost of the credit becomes of secondary importance, and other potential costs (foreign exchange loss) do not play a role in making their decision-making. In the period between 1998 and 2003, a close positive correlation can be observed between new borrowings and the total cost of credit (Report on Inflation, 2004). The previous

<sup>122</sup> See more details in the section entitled Households in the Financial Stability Report.

<sup>123</sup> For instance, the demand for revolving credits in the USA (Ashley [2002]).

<sup>124</sup> M3 - Nagy [2004] – annual average data of credits with short-term fixed interest. Credit margin: credit interest – BUBOR.

statement about insensitivity to interest rate is not valid in all market segments. In segments where the forint products and foreign currency based products appeared side by side, the latter accounts for most of the credits, which shows a certain price sensitivity of the borrowers.

- The significant market power of banks, together with low sensitivity to interest rates on the demand side, may lead to high interest rates (Móré - Nagy [2004]). Adjustment of consumer credit interest rate to the market rate is extremely inflexible (Horváth - Krekó - Naszódi [2004]). The substantial market power is expected to decline in the coming period in the context of growing competition, development of the financial culture of borrowers and less consumer impatience.
- The higher risk premium is mainly due to asymmetrical information: this is a relatively new market, therefore both lenders and borrowers have very little experience. Lending losses up to now, however, amount to only a small part of the interest rate premium.
- Special indirect competition for clients: in certain segments (hire-purchase and car purchase credits) there is fierce competition for traders and agents, which results in high commission expenses.
- Business policy aspects: in the case of annuity credits it is often not very advantageous to change the amount of instalment, because the product would become more difficult for consumers and would involve extra costs, this is why banks use fixed interest rate, including an interest rate risk premium.

## Summary

In the 1980s reform of the financial sector, deregulation and liberalisation resulted in a stronger competition and accelerated the financial innovation process in the developed countries, as a consequence of which household liquidity constraint declined. The consumer lending market and in particular, revolving, unsecured loans experienced upswing. In the 1990s decreasing inflation and credit rates further eased the household liquidity constraint. Despite the similarities mentioned above there are still substantial differences among the consumption-related indebtedness of the individual countries, due to cultural and institutional differences. In most countries the role of consumer lending is secondary from the point of view of the level of household indebtedness, but it plays a much greater role in the debt service burden. Despite the wide range of institutions providing credit, credit institutions and financial enterprises are predominant.

Before 1998 consumer lending was of negligible size in Hungary, primarily for supply reasons. Since 1998 there has been a dynamic market building process. Currently, consumer credits account for 50% of the total household portfolio, which is considered a high proportion. Most of the household debt service burden comes from consumer debt as well. In consequence of the substantial excess demand and the initially strict supply conditions, the procyclical effect has not been significant so far. Lending losses have been quite small. The easing of credit supply conditions may continue in the future in the context of strengthening competition. There is a danger that the portfolio increase will become more and more supply-driven, which may threaten financial stability owing to the large market share of banks (75%), consolidated with their financial enterprises. The maturing of the market and a further growth in foreign currency lending may also add to the risks.

The weight of consumer lending has reached the lower edge of the very heterogeneous developed countries. Therefore, the forthcoming period can hardly be regarded as a convergence process. Domestic characteristics (increasing lending willingness and competition, further easing of liquidity constraint, positive income expectations and cultural factors) foreshadow a dynamic increase in outstanding consumer loans, which may as well be persistently around the 20% level. Decreasing interest rate on forint credits arising from the strengthening price competition and a further growth in the foreign currency lending will also support the growth process.

Despite the fact that today there is a wide range of consumer lending products, the proportions among the credit instruments still show a traditional picture of risk aversion (secured special purpose credits). We expect to see an expansion of revolving, unsecured credits in line with the international trends. The expansion of foreign currency lending, which is characteristic of the converging countries, is substantial in Hungary.

When examining the characteristics of savings and consumption related indebtedness of the Hungarian population we found that although there has been an easing of the liquidity constraint, it is still significant and the life cycle hypothesis itself is not enough to provide explanation for the consumption and savings related decisions of households. Through personal and hire-purchase loans banks also finance people with lower income, income prospects or wealth situation; these instruments have become 'mass products'. The liquidity constraint is much lower and credit risk is much higher in these segments. In the case of overdraft and other lending products, particularly car purchase lending, there is a closer relationship between income or wealth situation versus the frequency of indebtedness. The halt in the process of easing liquidity constraints this year is considered to be temporary. Stronger and stronger market competition results in a further easing of the liquidity constraints in the long run.

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## **V. 2. Trends in consumer lending, related risks and their management in the practice of Hungarian credit institutions and financial enterprises<sup>125</sup>**

**By Éva Czinege, Zsuzsanna Dávid and György Szalay**

### **Introduction**

The dynamic expansion in outstanding loans to households in recent years justifies a review of the risks that the household sector poses to the banking sector. The Magyar Nemzeti Bank carried out a comprehensive analysis of the risks related to housing finance in 2003.<sup>126</sup> The objective of this study is to provide an overview of the credit, market, liquidity and operational risks that consumer lending poses to the banking system in Hungary.

Sources of data on banks' consumer lending and risk management practices include questionnaire surveys and related data provision on a case-by-case basis. In order to conduct the study, we requested data from 14 banks representing 93.5% of banks' total consumer credit portfolio, thereby satisfactorily representing the market segment under review.

### **V. 2. 1. Lending to the household sector**

#### *Developments in lending*

Recent years have witnessed substantial expansion in the outstanding loans provided by credit institutions<sup>127</sup> and financial enterprises to households, with the increase between 2000 and September 2004 being nearly five-fold.

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<sup>125</sup> Supplemented with appendices, a version of this study presenting the consumer lending practice of banks and bank-owned financial enterprises is available at [www.mnb.hu](http://www.mnb.hu). The opinions of the authors published in the study do not necessarily reflect the official opinion of the MNB.

<sup>126</sup> György Szalay and Gyula Tóth, The practice of housing finance, related risks and their management in the Hungarian banking system (Report on Financial Stability, December 2003).

<sup>127</sup> Credit institutions include banks and co-operatives.

**Table V.5 Developments in lending to households by credit institutions and financial enterprises**

HUF billions	12/2000	12/2001	12/2002	12/2003	9/2004
<b>Banking sector total</b>	<b>462.0</b>	<b>700.5</b>	<b>1190.8</b>	<b>2000.3</b>	<b>2439.7</b>
Housing loans	149.5	263.3	695.1	1393.7	1688.0
Consumer and other loans	312.5	437.2	495.7	606.6	751.8
<i>Share in lending to households</i>	<i>63.8%</i>	<i>68.1%</i>	<i>70.2%</i>	<i>70.2%</i>	<i>69.2%</i>
<b>Co-operatives</b>	<b>132.2</b>	<b>168.6</b>	<b>212.7</b>	<b>282.7</b>	<b>332.6</b>
Housing loans	38.5	61.0	83.1	114.8	131.3
Consumer and other loans	93.7	107.6	129.6	167.9	201.2
<i>Share in lending to households</i>	<i>18.3%</i>	<i>16.4%</i>	<i>12.5%</i>	<i>9.9%</i>	<i>9.4%</i>
<b>Financial enterprises*</b>	<b>130.0</b>	<b>160.0</b>	<b>294.0</b>	<b>568.0</b>	<b>753.0</b>
Bank-owned	75.0	100.0	229.0	492.0	583.0
Non-bank-owned**	55.0	60.0	65.0	76.0	170.0
<i>Share in lending to households</i>	<i>18.0%</i>	<i>15.5%</i>	<i>17.3%</i>	<i>19.9%</i>	<i>21.4%</i>
<b>Claims on households</b>	<b>724.2</b>	<b>1029.1</b>	<b>1697.5</b>	<b>2851.0</b>	<b>3525.3</b>

*Source: Data provision by credit institutions and financial enterprises for the MNB and HFSA*

*\* Data for 2000 and 2001 are estimates.*

*\*\* The rise in the portfolio in 2004 was attributable, in part, to reclassification from the category of bank-owned enterprises.*

Due to their weight within credit institution loans, bank loans determine the product composition of consumer loans. Non-housing loans, within which personal loans represent the largest share (44%),<sup>128</sup> account for half of the household loans held by the co-operative sector with its share in lending to households gradually shrinking over the past years. As the highly diversified portfolio of the co-operative sector does not add significantly to risk exposure of credit institutions from the point of view of financial stability, we do not address the issue of the variegated risk management practices of the 183 co-operatives in this study. Rather, of the consumer credit products offered by banks, we focus on personal, hire purchase and card-based loans, overdrafts as well as general purpose mortgage loans.<sup>129</sup> In addition, we also elaborate on car purchase loans provided by bank-owned financial enterprises,<sup>130</sup> which have an increasingly high profile in lending to households. The reason for this is that, in their lending to households, financial enterprises<sup>131</sup> rely almost exclusively

<sup>128</sup> September 2004 data.

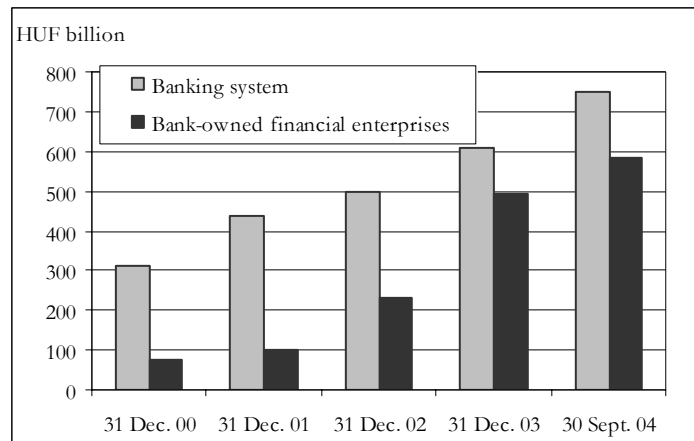
<sup>129</sup> Nor do we elaborate on Lombard loans also classified as consumer credit or special credit facilities (e.g. loans pledged against deposits or securities and loans financing medical treatment and pharmacies) offered to households by banks, owing to their small proportion in the consumer loan portfolio.

<sup>130</sup> A financial enterprise is considered to be bank-owned if it is either directly or indirectly owned by or under the controlling influence of a credit institution or the parent bank of such credit institution. The over 100 non-bank-owned financial enterprises in business in June 2004, owing to the complexity of their activities and ownership, do not constitute a homogeneous segment from an analytical perspective, thus this study does not intend to provide a detailed analysis of them.

<sup>131</sup> In the sections to follow 'financial enterprises' are construed as bank-owned financial enterprises.

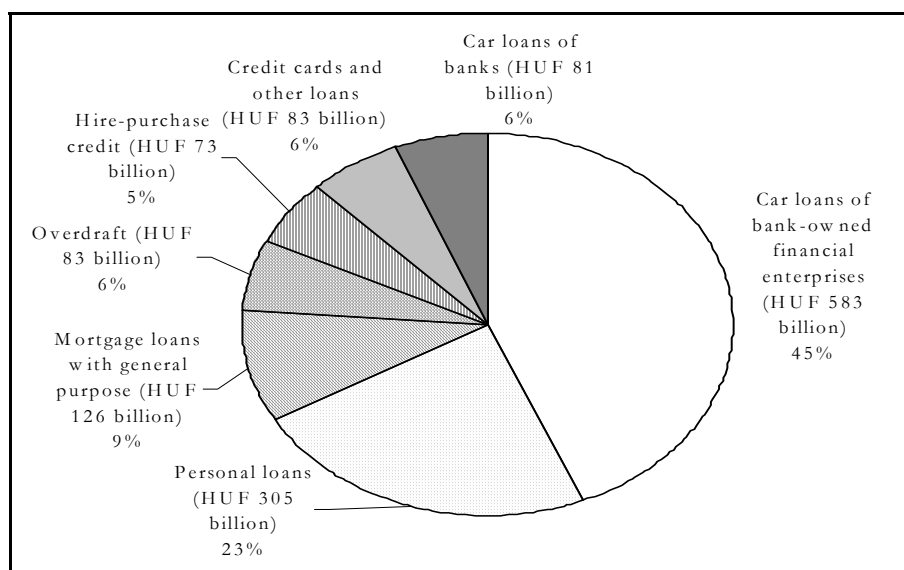
on parent bank financing. In consequence, car purchase loans to households, may, in effect, be considered as a consumer credit product offered by banks. Furthermore, the volume of car purchase loans to households and the credit risk that they imply also justify the inclusion of car purchase financing by bank-owned financial enterprises in the study.

**Chart V.4 Development in consumer lending by the banking sector and its financial enterprises**



In the first half of the 1990s, a dominant proportion of claims on households were consumer loans, since, given the prevailing high market rates, the lack of a subsidy scheme, banks' poor product supply and the shortcomings of the real estate registry system, housing loans were inaccessible for the overwhelming majority of households. Loans to households were predominantly personal loans at market rates that could be considered as high, with their popularity and share in the loan portfolio increasing steadily. After the introduction of the housing subsidy scheme, growth in housing loans was attributable primarily to that in housing loans. Although a dramatic rise in demand for housing loans led to a contraction in the share of consumer credit in the household loan portfolio, demand for consumer credit facilities, and hence the expansion in consumer lending, remained uninterrupted.

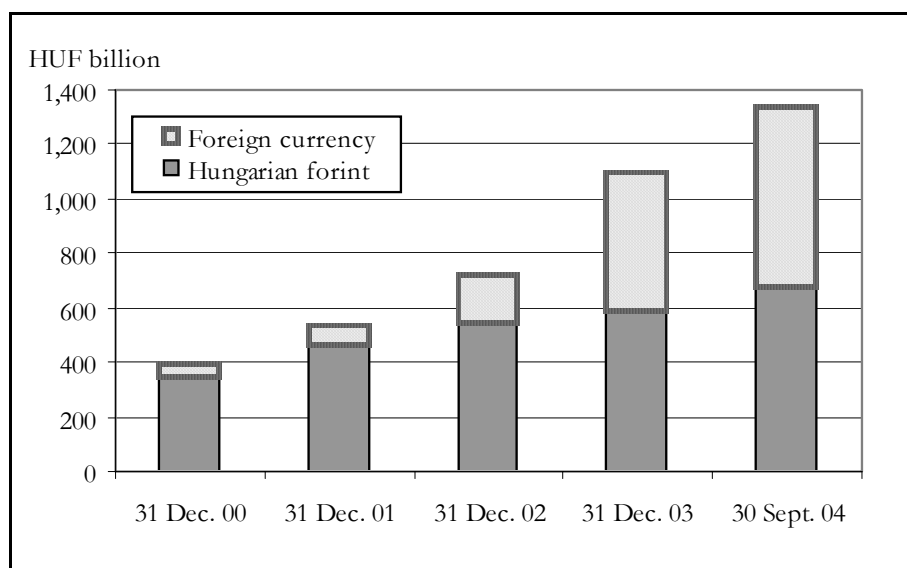
**Chart V.5 Product composition of the consumer loans held by the banking sector and its financial enterprises (September 2004)**



The two flagship products of consumer loans are car purchase loans and personal loans representing a portfolio of HUF 970 billion, with a combined share in consumer loans exceeding 70% as at end-September 2004, so it is primarily risks implied in them that determine the extent of consumer lending risk exposure. The proportion of foreign currency based consumer loans is the highest in the case of car purchase loans, with the ratio of foreign currency based loans on the rise over the past two years. Similar to foreign currency based car purchase loans, general purpose mortgage loans and personal loans are also available on foreign currency basis, but their share in the overall consumer loan portfolio is not, for the time being, substantial.<sup>132</sup> Foreign currency based lending is rare in the case of the other consumer credit products under review (e.g. hire purchase and credit card loans and overdrafts).

<sup>132</sup> It should be noted, however, that 50% of the personal loans and nearly all of the general purpose loans disbursed in 2004 Q1, 2 and 3 were foreign currency loans.

**ChartV.6 Denominational composition of the consumer loan portfolio of the banking sector and its financial enterprises<sup>133</sup>**



### **V. 2. 2. Major products in the consumer market and characteristics of the individual market segments**

The table below summarises the main characteristics of the consumer credit products offered by banks and examined in detail in our study.

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<sup>133</sup> At the time of writing, no data on the denominational composition of loans held by financial enterprises as at end-September 2004 were available.

**Table V.6 Main characteristics as at September 2004 of the consumer credit categories under review**

Type of loan	Contractual amount/credit line (HUF thousands)	Maturity	APRC*** %	Collateral	Purpose of credit	Other
<b>Car purchase loan*</b>	500-25,000	12-72 months	6.0-14.0 (FCY) 18.5-24.0 (HUF)	car financed	car purchase	mandatory down payment
<b>Personal loan*</b>	100-5,000	12-72 months	15.0-37.4 (FCY) 21.6-44.9 (HUF)	debtor's income	not specified	life insurance policy to cover credit is a pre-condition or a supplementary service
<b>General purpose mortgage loan</b>	1,000-40,000	6 months - 20 years	7.1-13.4 (FCY) 20.8-35.7 (HUF)	real estate, debtor's income	not specified	credit line ceiling based on LTV of real estate pledged
<b>Hire purchase loan**</b>	20-1,000	6-48 months	33.19-56.8	debtor's income	consumer goods	mandatory down payment
<b>Credit cards**</b>	50-1,000	12-36 months (until expiry date of credit card)	15.38-44.93	debtor's income	not specified	interest-free period: 40-51 days, minimum amount of monthly instalment: 5 to 18% of the amount of credit used
<b>Overdrafts**</b>	20-500 (100 to 200% of wage transferred)	12 months	22.93-38.18	wage transfers to current account	not specified	regular monthly wage transfer required

\* HUF and FCY(EUR, CHF) facility.

\*\* HUF facility.

\*\*\*APRC (Annual percentage rate of charges) includes lending rates and, depending on the type of credit, bank service charges, contract conclusion fees, administrative costs, commitment fees and, in certain cases, credit insurance premia. The range presented show banks' business offers. APRC approximating the upper end of the range applies to short-term low-amount loans as related fixed costs add to the fees payable mostly in this case.

In terms of consumer credit products, car purchase loans are the most dominant. The market segment of car purchase loans is more mature than that of other consumer credit products, because expansion in this type of loans started several years ago. 2000 and 2001 already saw an accelerating rate of growth in housing lending, which began to pick up speed in 2002. The increase in car purchase loans was mainly attributable to foreign currency based loans, the share of which in the household car loan portfolio exceeded 80% to 90% by 2004.<sup>134</sup> New loans extended are almost exclusively foreign currency based

<sup>134</sup> Based on estimates, as no accurate data are available.

loans. The causes behind this expansion include the marketing of facilities offering better terms and conditions than other consumer credit products, a recent trend of growth in households' real wages and their increased propensity to incur debt. The dynamic rise in car purchase loans coincided with increasingly tough competition, which led to a gradual loosening of lending standards (e.g. marketing credit facilities representing a higher level of risks,<sup>135</sup> lending to customers with poorer creditworthiness, increase in dealer's commissions, the spread of foreign currency based lending). That the business line was experiencing difficulties was reflected already in 2003 in the deterioration of the portfolio quality and an increase in the number of cars foreclosed due to the termination of loan contracts. Lending slowed down in 2004, relative to earlier years, as in 2004 H1 uncertainty about the impact of Hungary's EU accession and the introduction of a new tax form (registration fee) on the price of cars caused a delay in the decision-making of potential buyers of cars. Furthermore, changes in households' real wages also dampened demand.

After car purchase loans, personal loans have the second highest proportion in the consumer credit portfolio. The majority of outstanding loans are forint loans, with foreign currency based loans representing a proportion of 20%. Due to the availability of reasonably priced real estate loans as well as the expansion of foreign currency based car purchase loans with favourable terms and conditions, personal loans mainly finance hire purchases, which is corroborated by the fact that there has been a shift in banks' focus from lending rates to the amount of monthly instalments. As regards future trends, market participants expect general purpose foreign currency based mortgage loans<sup>136</sup> with lower credit costs offered by a growing number of banks without any preliminary appraisal of income to become an alternative of traditional forint personal loans.

Rarely used in lending to households until recently, general purpose mortgage loans are a special type of consumer credit products. Compared to other consumer credit products, the advantages of this facility are that they are more favourably priced and more available to a segment of customers who can pledge real estate collateral, but who would not be eligible for a higher amount of unsecured loan based on their income position. The greatest danger implied in this type of credit is risks to living conditions arising from the forced sale of (usually housing) property in the case of default on payment.

Those banks which are the most active in hire-purchase lending saw a significant increase of over 37% in 2003, the underlying reason for this being, in part, marked demand created by the upturn in housing lending in 2002 and 2003. By contrast, market participants reported a slowdown in demand up till now in 2004, which can be ascribed to the pass-through effect of the tightening of the housing subsidy scheme as well as decelerating real wage growth. In addition, new participants entering the market of hire-purchase lending strive to carve out a market share by offering attractive commissions to retailers, which is ultimately paid for by customers who tend to turn away from facilities with an APRC of

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<sup>135</sup> Such facilities include financing without requesting down payment or through allowing for the possibility that the appraised value of used cars can qualify as down payment. Deterioration in the portfolio in the wake of the introduction and expansion of financing through allowing for the possibility that the appraised value of used cars can qualify as down payment directed financiers' attention to the consequences of excessive risk-taking. Thus, the signs of a return to earlier stricter lending practices in this type of financing were already discernible in 2004.

<sup>136</sup> Recently, however, the APRC of foreign currency loans has been approximating that of forint loans (for a detailed treatment of the issue, see The pricing of foreign currency loans).

around 30%, unchanged for the past years, to a growing extent. The expansion of traditional hire-purchase credit facilities is further hampered by the more favourably priced financing alternative of credit card-based purchases and purchases financed through debit card-related overdrafts. This can, in part, be offset by a shift towards service financing, which will entail the marketing of more flexible products (e.g. travel loans).

The credit card business in Hungary has strong growth potential and is still at an early stage of its development. Paradoxically enough, its wider expansion is hindered by its greatest advantage, i.e. the availability of a 30 to 45-day period of interest-free repayment. The underlying reason for this is customers' mistrust. According to relevant market surveys, the majority do not believe that they can use banks' money without having to pay interest on it, and suspect banks of misusing their uninformedness. This is corroborated by the great popularity of shopping cards, which have similar characteristics and for which eligibility criteria are much simpler. Increasing steadily, the number of traditional credit cards offering an interest-free period was 710,000 at end-2004 H1.<sup>137</sup> The expansion is, however, attributable predominantly to co-branded cards sold by retail service providers.

Overdrafts primarily manage occasional liquidity constraints. It is usually customers unable to plan their liquidity needs in advance who use to this credit facility. A smaller number of debtors treat overdrafts as safety reserves.

Overdrafts are increasing in popularity and are used increasingly widely, with their portfolio at end-June 2004 exceeding the early 2003 level by over 60%.

### **V. 2. 3. Profitability of consumer lending**

Banks' pricing practice with respect to consumer credit products differs greatly from that applied in the case of car purchase loans, the flagship product of household consumer lending, granted by financial enterprises. The reasons for this lie, in part, in competition tension in the given market segment, and in part, in the business strategy for the given product.

#### *Pricing and profitability of consumer loans*

The profitability of banks' consumer loans depends on the interest rate margin<sup>138</sup> that banks apply. Within this, the profitability content of the transactions is basically incorporated in lending rates, while only a smaller portion of it in commissions. The 11.7% interest rate margin<sup>139</sup> in 2003 – high even in international comparison (5.1% in the EU) – is attributable to the degree of competition and the market strength of banks. Furthermore, the factors outlined below also play a part in the high interest margin.

For unsecured HUF loans, the interest rate margin of hire-purchase and personal loans is the highest among consumer loans. It usually stands at 10% to 18%, but there are also a

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<sup>137</sup> See: Éva Keszy-Harmath: The payment card business in Hungary (2004 H1).

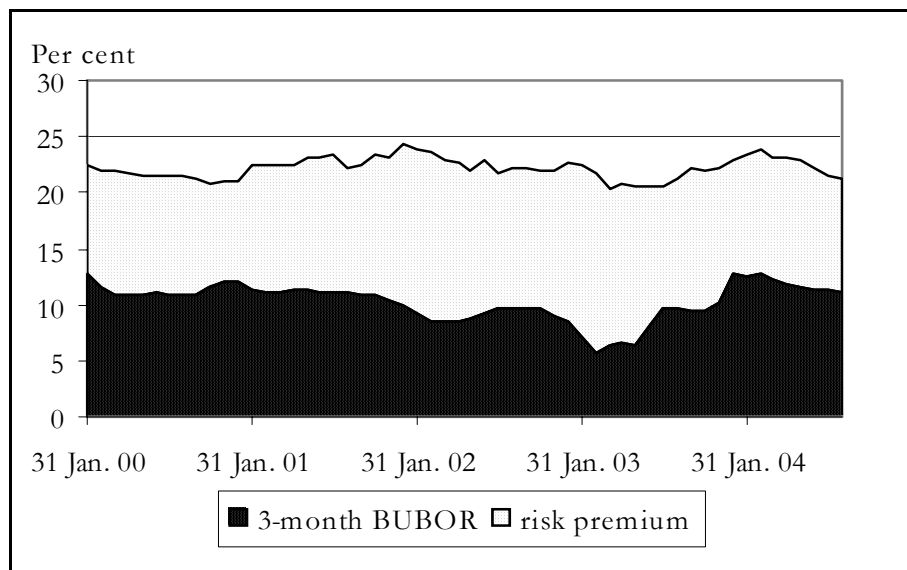
<sup>138</sup> Interest rate margin is calculated as the difference between the gross yield on the product (the sum of the lending interest rate and the related commissions expressed in the percentage of the loan value) and the yield of alternative investments (3-month-BUBOR).

<sup>139</sup> Source: Csaba Móri and Márton Nagy, Competition in the Hungarian banking market, MNB Working Papers 9/2004.

few extreme examples. Lending rates on personal loans are somewhat below those on hire-purchase loans, which can be ascribed to greater competition among banks. Though margin on overdrafts, card-based credit and general purpose mortgage loans is lower, it is still markedly high (8% to 13%).

In their study, Móri and Nagy (2004) argue that high margins suggest that, due to the oligopolistic nature of the market, the market strength of banks in Hungary is relatively high, which – because of the lack of competitive behaviour – they can bring to bear in their margin. At the same time, other factors are equally likely to have contributed to such high margins and their sustainability. Taking the specific risks implied in the individual products into account, banks incorporate the risks implied in consumer lending and products in their risk premia.<sup>140</sup> There is information asymmetry in consumer lending, as banks have no long-term data on households' solvency. Such uncertainty adds to credit risk, which, in turn, leads to higher risk premia. High operational costs<sup>141</sup> and higher costs associated with entry into the market of consumer lending (the establishment of an IT background, personnel conditions and a branch network) also justify a higher margin. A further characteristic of consumer lending is that banks presumably also incorporate market interest rate premia in their margin in order to cushion the impact of fluctuations in market rates.

**Chart V.7 Composition of the average consumer lending rate between January 2000 and August 2004<sup>142</sup>**

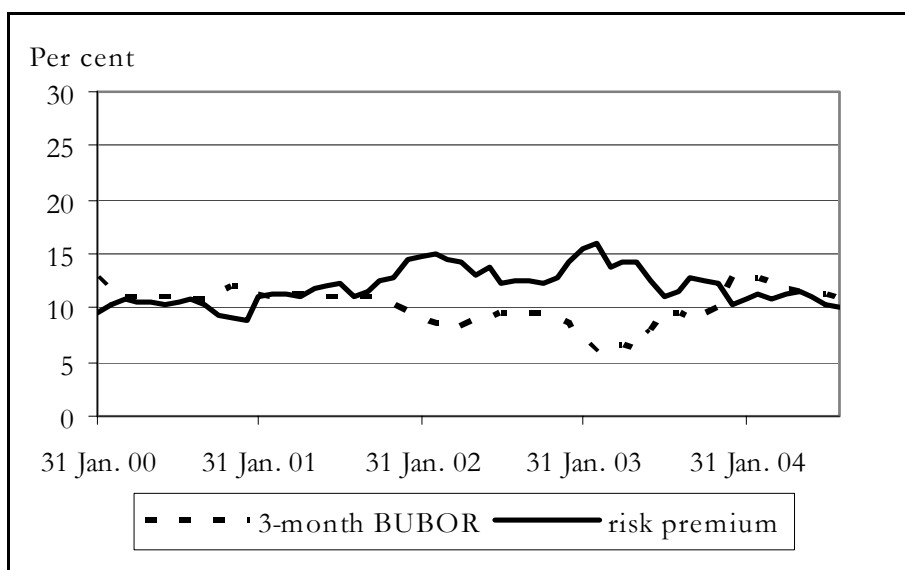


<sup>140</sup> For the purposes of this study, risk premia are calculated as the difference between lending rates and the benchmark yield (which is, as a rule, the 3-month BUBOR).

<sup>141</sup> In addition to the special characteristics of this business line, shortfalls in the operational efficiency of Hungarian banks also increase operational costs, which banks strive to incorporate in their interest rate margins.

<sup>142</sup> Based on HUF consumer credit statistics, the average lending rate on new contracts.

Chart V.8 Risk premium and benchmark yield between January 2000 and August 2004



At the same time, although the risks implied in certain consumer credit products remained relatively unchanged over time, marked fluctuations were discernible in risk premia. By contrast, consumer lending rates were relatively more balanced.<sup>143</sup> Increases or decreases in the benchmark yield are reflected in fluctuations in risk premia rather than in changes to lending rates.<sup>144</sup> This means that, relying on their market strength, banks can sustain the price of their consumer credit products at a relatively high level even in an environment of declining interest rates and improve their profitability by increasing risk premia.

This finding coincides with one of the results of our survey on, among other things, banks' pricing behaviour, according to which, banks' primary concern in pricing their consumer credit products is the prices that their competitors set; the risks implied in the individual products are of secondary importance. A low degree of competition in the individual market segments and households' low interest rate sensitivity allow for the possibility that banks may utilise their market strength through setting high risk premia and, ultimately, high lending rates.

Based on the above logic, an environment of falling forint interest rates projected for the period to come may result in higher risk premia for banks active in consumer lending. What is still a moot question is the number of new market entrants, encouraged by the profitability of this business line, and potential resultant increase in competition, the expected impact of which, however, would be just the opposite, i.e. would reduce risk premia.

<sup>143</sup> While fluctuations in the new average consumer lending rates remained within a 3.95% band in the period under review, those in the reference return and risk premia remained within bands of nearly identical magnitude, 7.03% and 6.94%, respectively.

<sup>144</sup> There is a strong negative correlation between the benchmark yield and risk premia (with the correlation coefficient being -0.85). Since May 2001 in the case of overdrafts the correlation between the benchmark yield and the risk premia has been even stronger (with the correlation coefficient standing at -0.91).

### *Pricing and profitability of car purchase loans*

The practice adopted in pricing car purchase loans is based on the characteristics of the credit facilities, the degree of competition and other market segment attributes, all of which are closely related and interact with each other. An interest rate margin, lower than those on other consumer credit products, could – in principle – be justified by the fact that lending is secured on collateral; however, the current interest rate margin fails to match the actual level of risks assumed by financial enterprises providing car purchase loans, as they loosened their lending standards while taking increasingly high risks.

Of the characteristics of this credit product, collateral, i.e. that the motor vehicle, the purchase of which is financed, acts as collateral, should, in principle, reduce the risks implied in this credit facility. However, especially in the case of used-car financing, during the maturity of the loan, the collateral value of the asset financed may well fall below the actual amount of the loan to a growing extent; furthermore, a diminishing proportion of mandatory down payment may also reduce the degree of the collateralisation of the car purchase loan. As a result, the asset-based pricing adopted by fund providers matches the actual degree of risks implied in car purchase loans less and less adequately. Market competition reduces the annual percentage rate of charge (APRC) on car purchase loans. Recently, in the hope of market acquisition, certain financing fund providers have marketed facilities with extremely low APRCs, which prompted financial enterprises under lending pressure (i.e. parent-bank expectations to sustain and/or increase market share) to make their prices more competitive. Responses to questions in our survey including banks and banking groups' financial enterprises engaged in car purchase financing reveal that competitors' pricing conditions is a major input for financing companies in setting their own lending rates.

There is another factor that exerts a significant impact on the profitability and, through contracting the actual margin, the risk exposure of financial enterprises. This factor is the very fact that an increasingly high amount of dealer's commission fees is paid out to car dealers engaged in the direct sales of loans. The extent of dealer's commission may be as high as 10% of the financed amount, which is disbursed as a lump sum upon the extension of the loan.<sup>145</sup> Such commission fees are associated with the individual transactions, thereby reducing their profitability. Thus, ultimately, increasingly high dealer's commission fees reduce the actual interest rate margin earned. Interest rate margins to be had in this business line will be less and less capable of covering increasing risks.

### *Pricing of foreign currency loans*

The pricing of foreign currency products is practically identical to that of forint loans. The lower prices of foreign currency refinancing resources, however, makes for earning interest rate margins identical to or higher than those on forint loans. In consequence, the competitive edge of foreign currency loans, which arises from smaller amounts of

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<sup>145</sup> Furthermore, some fund providers sometimes pay commission fees to dealers in advance for a certain period of time. There have been attempts to cut back on high dealer's commission fees, e.g. through the initiative of issuing pass-through letters, which was to have established a direct business relationship between fund providers and customers, excluding car dealers from the process of credit sales. However, owing to extremely high resistance from car dealers (reinforced by competitors' counter-strategies), fund providers have to pay car dealers a certain amount of commission also on contracts financed through pass-through letters. Further possibility of reducing dealer's commission fees may open up if alternative methods and channels of distribution are identified and developed.

instalments, may gradually erode, since the amount of the instalments of forint and foreign currency loans may approximate each other to an extent where any potential adverse shift in foreign exchange rates and base rates may lead even to the disappearance of former competitive edge.

In addition to lending rates and associated commissions, charges and fees, foreign currency loans also contribute to profitability by generating ancillary income, i.e. what is called conversion fees. While such ancillary income is mainly earned in car purchase financing, the brunt of it is absorbed by the parent bank, owing to the refinancing structure in place at the banking group, rather than by the financing enterprise granting the car purchase loan. The reason for this is that the disbursement and repayment of the parent bank's refinancing loan follow the same pattern as those of car purchase loans, i.e. the financial enterprise also pays conversion fees to the parent bank. Financial enterprises can only earn a modest amount of income from the fact that they enjoy a special rate on loan repayments, relative to prevailing market rates, while charging official market rates to their customers.

#### V. 2. 4. Consumer lending exposure

This section outlines how market participants' consumer lending exposure and a consistent increase in the volume of outstanding loans influence and affect market participants' *credit, market and operational exposures*.<sup>146</sup>

#### V. 2. 5. Quality of the consumer credit portfolio<sup>147</sup>

Essentially, consumer credit portfolio exposure depends on the solvency of customers and, in the case of general purpose mortgage loans and car purchase loans, expected changes in the collateral portfolio. Customers' loan repayment behaviour hinges primarily on their income position. The reasons underlying arrears in payment include changes in the customer's income position (e.g. illness, unemployment and failure of business), inadequate information on product characteristics and intentional abuse of the product in question.

**Table V.7 Credit portfolio in a breakdown by arrears in payment**

30 December 2003 breakdown %	Not overdue	30 days overdue	30-90 days overdue	90-360 days overdue	Over 360 days overdue
<b>Car purchase loans</b>	85.6	3.3	1.3	1.8	2.8
<b>Personal loans</b>	79.3	11.9	4.0	3.2	1.7
<b>General purpose mortgage loans</b>	72.3	11.8	6.2	4.5	5.2
<b>Hire purchase loans</b>	88.3	5.8	1.6	1.5	2.8
<b>Card-based loans</b>	87.1	8.2	1.6	1.4	1.7
<b>Overdrafts</b>	84.4	9.1	1.4	3.2	1.8

<sup>146</sup> Findings for credit institutions' exposure are based on data for year-end 2003 as well as the evaluation of the questionnaire surveys returned.

<sup>147</sup> Consumer credit portfolio means the aggregate stock of the consumer loans provided by the banks under review and the car purchase loans granted by their related financial enterprises.

Banks' experience confirms that, in the case of overdue payment or default on payment, distinction must be made between the non-timely payment of the first instalment that falls due and that of subsequent ones, because most instances of the non-timely payment of the first instalment can be blamed on technicalities (e.g. erroneous retail current account numbers), whereas, in the case of unsecured credit products, on wilful customer behaviour. Overdue payment at later stages during the maturity of the loan may be attributable to inadequately funded current accounts failing to cover monthly instalments in the case of direct debits, loss of postal cheques in the case of mail transfers or seasonal factors (e.g. delay in payment due to holiday-related expenses).

As regards *car purchase loans*, the primary reason for default on payment is a loan repayment scheme that was not properly engineered at the time of the conclusion of the contract (i.e. overborrowing). Experience shows that fund providers have to, at the debtor's request, modify the original terms and conditions (e.g. they have to extend maturity to lower the amount of monthly instalments) of most loan agreements. The reason for this is that customers often fail to fully consider additional mandatory costs (e.g. CASCO risk insurance policy, maintenance costs) and, in the case of foreign currency based loans, potential additional costs stemming from exchange and interest rate changes.

With regard to *general purpose mortgage loans*, the main source of risk is that customers underestimate their costs of living, thus, due to their finite regular monthly income, they are late in paying their monthly instalments. As, owing to the size of the contracted amounts, general purpose loans entail monthly instalments which are higher than those of other consumer credit products, the proportion of overdue payment for over 1 year (5.2%) is the highest here.

At year-end 2003, the proportion of non-performing loans in the overall portfolio, in respect of personal, hire purchase, card-based and general purpose mortgage loans, stood around 10% of the average of the banks under review; however, there were differences in the case of certain products.

**Chart V.9 Credit portfolio in a breakdown by qualification categories** <sup>148</sup>

<b>30 December 2003 breakdown %</b>	<b>Performing</b>	To be watched	Substandar d	Doubtful	Bad	<b>Non- performing total</b>
<b>Car purchase loans</b>	<b>83.7</b>	12.7	1.6	0.8	1.2	<b>16.3</b>
<b>Personal loans</b>	<b>89.7</b>	3.7	1.8	1.2	3.6	<b>10.3</b>
<b>General purpose mortgage loans</b>	<b>88.9</b>	3.1	1.3	3.4	3.3	<b>11.1</b>
<b>Hire purchase loans</b>	<b>89.6</b>	4.9	1.3	0.6	3.6	<b>10.4</b>
<b>Card-based loans</b>	<b>89.8</b>	6.4	1.0	0.7	2.1	<b>10.2</b>
<b>Overdrafts</b>	<b>96.6</b>	0.6	0.3	0.3	2.2	<b>3.4</b>

<sup>148</sup> The accuracy of the table may be further enhanced by banking groups' differing practices of rating and sales of claims, which may also vary from one product to the next.

The quality of *car purchase loans* granted to households is inferior to that of loans granted by banks to both financial enterprises (practically all of which are performing) and households. It is, however, important to emphasise that the 16.3% proportion of qualified outstanding loans does not include claims that have been written off and derecognised from the balance sheet. In evaluating the quality of car purchase loans, it must be borne in mind that the overwhelming majority of the loans in the portfolio are recorded in the books of the financial enterprises that are bank-owned subsidiaries rather than in those of the banks themselves. And financial enterprises must comply with less stringent effective legal regulations with respect to the qualification of their portfolio than credit institutions. As a result, though they make efforts to adapt parent banks' standards consistently, except for a few cases, we anticipate a practice of a more lax rating of outstanding loans.

In terms of quality, there is a marked difference between forint and foreign currency based car purchase loans. The proportion of performing loans is the highest (between 86% and 98%) in the case of Swiss franc based loans, which can be ascribed to their more favourable age composition (they were the last to enter the market) compared to that of forint and euro based loans, on the one hand, and to the fact that, owing to a lower APRC, *ceteris paribus*, the amount of monthly instalments of Swiss franc based loans is the lowest. In the case of forint loans, the proportion of performing loans is approximately 75%, while the corresponding figure for euro based loans is around 85%.<sup>149</sup>

As regards *personal loans*, it is the proportion of mainly loans qualified as to be watched and bad loans that is high. Based on data provided by banks, a large proportion of outstanding loans in the repayment of which delays are relatively short (under 30 days) qualify as performing.

Concerning *card-based loans*, a higher proportion of loans to be watched compared to both personal and hire purchase loans suggests a practice of more cautious rating, as credit cards are relatively new products for most banks.

The quality of the *overdrafts* portfolio is much better than that of the portfolio of the products discussed above. Its relative superiority originates from the fact that banks can rely on more information while appraising the creditworthiness of their customers, since it is predominantly their own customers, with their current accounts kept with them, to whom they grant this type of credit. It follows that they are better able to spot and exclude non-creditworthy customers. Furthermore, the degree of the collateralisation of this credit facility is somewhat higher, as banks stipulate a certain volume of regular transfers to the account as a pre-condition for loan approval.

## **V. 2. 6. Other characteristics of the credit portfolio**

The tables below plot banks' consumer loan portfolio and related financial enterprises' car-purchase loan portfolio in a breakdown by age and maturity.

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<sup>149</sup> Data mirroring the current situation. Any potential unfavourable shift in the exchange rate may precipitate the proportion of arrears in payment and/or default on payment in a negative direction in the case of foreign currency loans.

**Table V.8 Consumer loan portfolio in a breakdown by age**

30 December 2003 breakdown %	Car purchase loans	Personal loans	General purpose mortgage loans	Hire purchase loans	Card-based loans	Overdrafts
Under 1 year	60.6	54.1	29.0	62.0	48.0	50.5
Between 1 year and 2 years	22.7	23.8	29.3	21.9	39.1	7.3
Between 2 and 3 years	13.4	10.8	25.2	9.7	10.2	8.0
Between 3 and 4 years	2.5	7.8	4.2	4.1	1.8	11.1
4 years and over	0.8	3.5	12.4	2.2	0.9	23.2
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0

**Table V.9 Consumer loan portfolio in a breakdown by maturities**

30 December 2003 Breakdown %	Car purchase loans	Personal loans	General purpose mortgage loans	Hire purchase loans	Card-based loans
Under 1 year	10.6	6.1	7.2	17.1	14.3
Between 1 year and 5 years	67.9	53.2	19.4	82.9	85.7
Over 5 years	21.5	40.6	73.4	0.0	0.0
<b>Total</b>	100.0	100.0	100.0	100.0	100.0

In the case of *car purchase loans*, the problems that are already materialising despite the young age<sup>150</sup> of the portfolio are unlikely to diminish in number as the portfolio matures. Risk exposure is further increased by a higher than 20% proportion of exposures with maturity of over 5 years, since changes in debtors' income position are hard to assess over this time horizon.

Regarding *personal loans*, the proportion of outstanding loans with maturity of over 5 years is also high (40%); in this case risk exposure is further compounded by the lack of collateral – thus, risks arising from long-term uncertainty about debtors' income position will affect long-term developments in the quality of the portfolio even more significantly.

As for *general purpose mortgage loans*, banks' portfolios are more mature. The term of these products is, by nature, predominantly longer. In the case of uncollateralised *hire-purchase loans*, owing to the young age of the portfolio and the fact that these loans are with maturity of over 1 year, the quality of the portfolio may change markedly during the term of the contracts.

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<sup>150</sup> The underlying reason for the young age of the portfolio is that the majority of loans, typically with maturity of 2 to 4 years, granted at the time when the business line started to pick up either matured or revolved. Furthermore, owing to a fast rate of growth, the proportion of new contracts was outstandingly high in all the years reviewed; as a result, the proportion of the loans granted earlier diminished dramatically.

In the case of *overdrafts* and *card-based loans*, though the term of the approved credit lines is almost invariably 1 year, most banks renew contracts for these revolving lines automatically (i.e. without a repeat of the creditworthiness appraisal) if there have been no instances of overdue repayment during the term of the contract or if customers meet the requirements (e.g. a fixed amount of income transferred to the current account on a monthly basis and the regular repayment of a minimum amount set) stipulated by the bank. The probability of default on the repayment of overdrafts is reduced by the fact that the IT system at most banks can now check whether customers honour their obligation to have a set amount of their income transferred to their accounts on a monthly basis; thus, relying this support function of their IT system at the time of renewing contracts, banks can spot and exclude customers who fail to honour their repayment obligations in a timely manner.

**Table V.10 General purpose mortgage loans in an average breakdown by the LTV ratio<sup>151</sup>**

30 December 2003	Below 20%	Between 20 and 30%	Between 30 and 40%	Between 40 and 50%	Between 50 and 60%	Between 60 and 70%	Over 70%	Total
Breakdown %	38.9	16.3	12.5	17.8	6.5	3.0	4.8	100.0

Under current banking practice, the maximum amount of loans that banks provide to finance the purchase of real estate is 45% to 60% of the collateral value of an asset (LTV), depending on whether they are forint or foreign currency based loans and whether financing is based on income or it is collateralised. If the maximum LTV ratio fails to be established or if overall encumbrance on the property that serves as collateral reaches an 80% LTV ratio adds to credit risks significantly. Only two banks establish LTV ratios pegged on the type of the currency in which loans are provided, the rest adopt uniform limits.

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<sup>151</sup> LTV (Loan to Value) = the ratio of the loan granted to the fair value of the collateral calculated on the basis of most recent information.

**Table V.11 Credit portfolio in a breakdown by individual volumes based on the amount of loans granted**

Number of loans 30 December 2003 breakdown %	Car purchase loans	Personal loans	General purpose mortgage loans	Hire purchase loans	Card- based loans	Overdrafts
Up to HUF 0.1 million	0.9	14.1	0.4	82.7	61.4	77.1
Between HUF 0.1 - 0.5 million	7.2	59.6	9.4	17.2	38.1	21.8
Between HUF 0.5-1 million	22.7	21.0	23.7	0.0	0.5	0.6
Between HUF 1 and 5 million	54.4	5.3	61.7	0.0	0.1	0.4
Between HUF 5 and 10 million	14.6	0.0	3.8	0.0	0.0	0.0
Over HUF 10 million	0.3	0.0	1.1	0.0	0.0	0.0
<b>Total</b>	100.0	100.0	100.0	100.0	100.0	100.0

Based on the individual amounts of loans, products can be classified in two distinct categories. Loans with a contracted amount below HUF 100,000 are dominant among uncollateralised hire purchase and card-based loans as well as overdrafts, with the latter used mainly to finance current expenses, and practically the overall portfolio contains loans with a contracted amount below HUF 500,000 each. Families usually take out car purchase or general purpose mortgage loans with a contracted amount of between HUF 1 and 5 million to finance major fixed investment.

**Table V.12 Loan loss provisions for banks' outstanding consumer loans and bank-owned financial enterprises' car purchase loans**

	12/2001	12/2002	12/2003	9/2004
<b>Banks' outstanding consumer and other loans</b>	4.41%	4.18%	3.93%	4.00%
<b>Bank-owned financial enterprises' car purchase loans</b>	0.82%	1.68%	1.52%	1.82%*

\* June 2004 data

The approximately 4% ratio of loan loss provision for banks' consumer credit products accurately reflects the higher risks that these products carry.<sup>152</sup> In the case of car purchase loans a lower, 1.82% loan loss provision ratio is only partially justifiable by the availability of asset collateral. In our opinion, the reason for a relatively lower amount of loan loss

<sup>152</sup> For purposes of comparison, the ratio of loan loss provision for housing loans granted by banks is below 0.45%.

provision lies primarily in the fact that the practice of financial enterprises differs from that of the banks.<sup>153</sup>

Unlike credit institutions, financial enterprises are allowed to reduce their tax base<sup>154</sup> by only a smaller proportion of the amount of loan loss provision, thus, in principle, financial enterprises are not motivated to account for higher loan losses. Nevertheless, the proportion of the loan loss provisions accounted for exceeds the amount by which the tax base can be reduced.

### **V. 2. 7. Factors jeopardising loan recovery**

Based on banks' responses to questions included in our questionnaire survey, factors jeopardising loan recovery primarily include the following:

#### Adverse shifts in income position

As debtors' loan repayment behaviour depends primarily on developments in their income position, any negative shift in this for any reason enhances the risk of default on payment. In the case of *overdrafts*, overdue payment materialise when customers lose their jobs or change banks. In respect of *card-based loans*, risks are enhanced by the fact that people in relatively low-income brackets (e.g. those earning the minimum wage) can access this product. In fact, certain credit facilities target this very customer segment. As for *personal loans* and *general purpose mortgage and car purchase loans*, entailing the payment of somewhat higher monthly instalments, the risk of default on payment originates from the fact that customers fail to assess their solvency, hence overborrow, which later leads to failure in honouring their loan repayment obligations.

#### Risks implied in foreign currency consumer lending

Banks and financial enterprises pass risks stemming from interest and exchange rate changes on to their customers. The risks implied in foreign currency based consumer lending lie primarily in households' lack of foreign currency income that could provide protection against the exchange and interest rate risks assumed. If debtors maximise the amount of the loan they wish to take out, based on the exchange and interest rates prevailing at the time of applying for the loan, in addition to any adverse change in their income position, any minor adverse shift in money market conditions may result in overdue payment or, in serious cases, default on payment. At the same time, however, experience shows that exchange rate changes in recent years have not brought about any material deterioration in customers' solvency. The assessment of credit risks is further made difficult by the fact that the scoring system in place at most banks does not allow for the possibility of differentiating between forint and foreign currency loans, i.e. the majority of banks do not apply stricter criteria for approving foreign currency loans.

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<sup>153</sup> In the case of one financial enterprise, the ratio of loan loss provision for loans overdue for over 365 days is below 50%.

<sup>154</sup> A maximum 2%, 5% or 25% of the book value of the claim is deductible if it is overdue for 90 to 180, 180 to 360 or over 365 days.

### Shortcomings of the scoring systems in place

The inadequate refinement of scoring systems is a common problem, which is attested to by the fact that – in effect – most banks use the same scoring system in estimating the risks implied in both *personal* and *card-based* loans (and sometimes even in *overdrafts*) and that they fail to fully take into account the individual characteristics of the products that they offer. The assessment was further complicated by the fact that some banks, citing business confidentiality, refused to provide information or that they are unfamiliar with the details of the scoring system in place at and employed by their respective parent banks.

### Difficulties in assessing the probability of default on payment

As banks grant the majority of *personal* and *hire purchase loans* to customers other than their own, for lack of these customers' credit and current account history, they can only assess the probability of default on payment, without fully verifiable data forming the basis for such assessment. In assessing the probability of default on payment, banks can rely on the particulars and a statistical analysis of the repayment history of the customers to whom they provided loans earlier as well as on data for the customer in question. Whether default does or does not materialise varies from one loan applicant to the next. The introduction of an interbank credit register recording both performing and defaulting customers would be able to allow for the possibility that banks can have more reliable information available on customers' credit history and existing repayment obligations, which, in turn, would considerably reduce the uncertainty arising from the fact that the probability of default on payment can only be assessed.

### Time constraints on credit assessment

Owing to the very nature of *personal, hire purchase and credit-based loans*, banks strive to step up the process of credit assessment and decision making. As a result, the majority of banks chose not to adopt 'the four-eye principle' in the case of loans representing low contracted amounts, e.g. personal loans of under HUF 500,000 and card-based loans of under HUF 100,000. Thus, the process of credit assessment and decision making at the fastest banks only takes 15 to 20 minutes, which leaves them with little time for consideration and the verification of data provided by customers. This, in turn, enhances the probability of erroneous decisions. The management of risks arising from the process of quick credit assessment and decision making requires the use of a detailed and adequately refined system of scoring, which will require for the further development of the systems currently in place at most banks. In the case of *car purchase loans* the speed of credit assessment, which also does not always allow for the possibility of a thorough investigation of the documents needed for credit assessment, is a potential source of risks.

### The quality of the tripartite relationship between banks, retailers and debtors

A further factor of uncertainty with respect to *hire purchase loans* and *card-based loans* is the tripartite relationship between banks, retailers and debtors, in which hitches may hinder the performance of reliable administration and the timely flow of real content information. As

to *car purchase loans*, the quality of the relationship between fund providers and retailers is a source of potential problems for a number of reasons. Granting loans that turn bad owing to retailers' wilful abuse or negligence is another source of risks.

### Special risks implied in general purpose mortgage loans

#### *Lending without an analysis of income positions*

A number of banks offer general purpose mortgage loans of which the contracted amount is established exclusively on the basis of the value of the collateral pledged against the loan, without an analysis of the debtor's income position. As, owing to the shortcomings of financial culture,<sup>155</sup> some debtors erroneously assess how their payment capabilities arising from their income positions compare to monthly instalments, higher monthly instalments, characteristic of this type of credit, may lead to overdue payment.

#### *Abuse in connection with collateral appraisal*

In the case of general purpose mortgage loans, as the results of collateral appraisal fundamentally affect access to loans and the contracted amount, there have been instances of and/or attempts aimed at modifying the results of the process of collateral appraisal, especially in the case of property of considerable value.

#### *LTV as a factor of competition*

With respect to property on which loans are secured, another factor that adds to risks is that the maximum ratio of LTV, now a factor of competition among banks, is established on a case-by-case basis. If, spurred by competition, banks further raise the 50 to 60% ratio of LTV, which is currently deemed as sound, or they further increase the ratio of collateral to market value, even a slight loss in value of the collateral portfolio may endanger the repayment of loans.

#### *Lack of the regular revaluation of the collateral portfolio*

Despite the fact that, based on banks' responses, exposure to changes in the value of property on which loans are secured is low as a result of current market trends and Hungary's EU accession with an impact of stabilising and increasing prices, there may occur changes, owing to external physical or natural impacts, in the general condition of the individual pieces of property that can reduce the value of the collateral significantly. In consequence, depending on the maturity of the loan, banks should revalue the property pledged as collateral against the loan at least every two years.

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<sup>155</sup> For a detailed treatment of the issue, see András Bethlendi, Dynamic expansion in the Hungarian consumer lending market in the light of international trends (a background study included in the December 2004 issue of the Report on Financial Stability).

### *Concentration in the collateral portfolio*

Heavy concentration of property on which loans are secured as per geographical location (e.g. economically less developed regions and small settlements with low property market turnover) or property type (e.g. flats in housing estates) may, in the case of a potential default, make the sale of the collateral at a fair value significantly difficult.

### Special risks involved in car purchase loans

#### *Increase in risk tolerance, loosening conditions of access to loans*

In the market of car purchase loans, with increasingly fierce competition, fund providers have gradually pushed the limits of their risk tolerance, thereby adding to the risks assumed in this business line. One example of pushing limits is a gradual reduction in the proportion of debtor's mandatory down payment, as a result of which its calculation is no longer based on potential loan recovery; rather, it is subject to market competition and competitors' offerings. The greatest danger lies in the fact that fund providers have, over the past few years, made their services available to households, the solvency of which was dubious already at the time of lending. This is also closely related to the spread of used car financing. Excessive risk tolerance on the part of financing companies (e.g. scrap car financing) has led to considerable deterioration in the portfolio.

#### *Other risk factors*

- *Eligibility of collateral with poor value retention and low marketability*: this is primarily linked to used car financing, as exposure may increase due mainly to financing cars with a low and progressively declining value.
- *Failure to check the whereabouts and roadworthiness of the collateral during the term of the loan agreement*: a common problem among fund providers. Continuous monitoring of the cars serving as collateral presents an almost insurmountable problem both technically and with respect to potential costs.<sup>156</sup>
- *Inadequate monitoring*: monitoring of the credit portfolio is pivotal to the retrospective establishment of the success of the individual facilities as well as to the evaluation of the performance of the individual car dealers.

#### *Risks materialising indirectly at banks*

Findings on car purchase loans directly pertain to fund providers, i.e. financial enterprises. However, as the owners of the financial enterprises with the strongest presence in the market are domestic banks, which are the exclusive providers of funding for financial enterprises, a number of risks may affect banks indirectly. Given a negative shift in the quality of the portfolios of financial enterprises, shrinking interest margins and an increase in the risk tolerance of fund providers, it is highly important

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<sup>156</sup> The adaptation of the evaluation method of sample-taking adopted in the case of property serving as collateral may contribute to the mitigation of risks.

that banking groups should pay closer attention to the prudent operation of financial enterprises, since it is ultimately credit institutions that will be at the receiving end when problems, materialising in the sector of financial enterprises, lead to loss of earnings or even loss of capital at a banking group level.

#### Problems related to the sale of collateral

In the case of *general purpose mortgage loans*, it is the low efficiency of work out activities that gives rise to difficulties. Broadly speaking, customers seek to co-operate with banks and do everything in their capacity so as not to forfeit their residential property. Enshrining loan and lien agreements in a public deed allows for the possibility of foreclosure on the property without litigation. However, delays in forced sales, due to lack of interest, may pose a risk. As to *car purchase loans*, in contrast to lease facilities, the ownership of the asset financed is transferred to the customer under the loan agreement. Thus, in the case of default, a bailiff may sequester the car in question only after the debtor has been verifiably notified, which may take several months.

## **V. 2. 8. Expected developments in the quality of the consumer credit portfolio**

While expecting ongoing expansion in consumer loans, the banks included in the questionnaire survey did not anticipate any material changes in the risk exposure of the portfolio in 2004 or 2005. In their opinion, the risk management mechanisms in place would be able to maintain the current quality of the portfolio. Only one bank raised the issue of a potential increase in risk exposure in connection with the spread of credit cards and an increase in their number. It proposed, however, that a rise in the number of loans secured on property would offset this at the portfolio level.

As regards customers' willingness and ability to meet their repayment obligations, banks anticipate – contingent on changes in overall macroeconomic conditions – no change in current tendencies before year-end 2005. In the coming 2 to 3 years, however, with the average age of the portfolio rising, a rise in the proportion of customers falling in arrears may materialise.

The banks reviewed find the danger of a negative shift in customers' willingness and ability to pay most threatening in the case of car purchase loans with low down payment. The underlying reasons include a rise in the number of loan applicants acting in bad faith and their increasingly state-of-the-art methods. In order to spot and exclude such customers, banks and banking groups engaged in car purchase financing must step up the upgrading of their credit assessment systems.

Judging from current trends in the market of consumer lending, we project further consistent expansion in outstanding loans in the coming 2 years. With respect to the exposure of the consumer credit portfolio, with the portfolio entering a more mature stage, a further increase can be hypothesised in the proportion of non-performing loans in all credit categories. We expect that this will materialise in hire purchase loans popular among people in low income brackets with no collateral to be pledged and in car purchase financing where strong market competition prompts fund providers to assume higher risks. As to the dynamically expanding card-based credit portfolio, for lack of market experience, it is still hard to assess the risks arising from future default. International trends, however, suggest that the number of instances of default will be much higher than it is currently.

Considering general purpose mortgage loans, personal loans and overdrafts, we do not expect any material rise in risk exposure in the future provided no exogenous impacts materialise which adversely affect the value of collateralised property or debtors' income position. If increasing competition on the supply side leads to the loosening of lending conditions, the adverse effects outlined above could be felt more acutely.

The exposure of credit facilities available also in foreign currencies may be significantly increased by unfavourable interest and exchange rate trends, which, in turn, may result in a higher number of customers in arrears or default.

## **V. 2. 9. Market and liquidity risks**

Overall, as regards consumer lending, we deem interest rate, exchange rate and liquidity risks run by banks and, indirectly through financial enterprises, banking groups as low. As interest rate, exchange rate and liquidity risks related to banks' consumer credit products constitute part of the overall banking position, risk assessment and risk management are

performed under the total balance sheet approach. At the same time, however, owing to the characteristics of structure of refinancing between banks and their financial enterprises, it is worth paying special attention to potential group level risks.

### **Banks' consumer credit products**

As to *interest rate risk* it is mainly the risk of re-pricing that should be mentioned in the case of consumer credit products, which may lead to a wide gap between the re-pricing of obligations and claims. Interest rate exposure and interest rate risk management are performed under the total balance sheet approach at most banks. At a banking group level, interest rate risk is managed mainly through the adjustment of the refinancing structure to the structure of assets.

*Exchange rate risk* associated with banks' consumer credit products is not material, owing to the fact that consumer credit products are not widespread yet. As seen with foreign currency housing loans in 2004, foreign currency consumer credit products are also expected to gain in popularity. This trend is already discernible in the case of general purpose mortgage loans, given that new loans in 2004 Q2 and Q3, were typically foreign currency based loans.

We find that on the whole the *liquidity risk* that bank assume with consumer lending is moderate; the impact of separate transactions, each with a low contracted amount, on banks' liquidity position is still not significant despite the high number of such transactions. Liquidity exposure arising from maturity transformation may grow if the number of general purpose loans with the longest maturity increases. The reason for this is that, unlike subsidised housing loans, which are financed by mortgage banks' long term liabilities, these loans are typically financed through liabilities with maturity below 1 year.

### **Car purchase loans and banking group level risk**

Interest rate risk associated with car purchase loans may crystallise directly at financial enterprises. Banks hedge the interest rate risks posed by the loans they grant to financial enterprises under their total balance sheet method of risk management. Risks do not materialise on a banking group level if there are no mismatches between liabilities and assets at financial enterprises. Under adopted practice, banks perform mirror financing, i.e. the financing funds provided by banks to financial enterprises are adjusted to the characteristics of loans granted to customers in terms of their denominational composition and re-pricing. In their study on banking group level risks, Fischer and Sánta (2003) find that interest rate risk materialising at financial enterprises is low.

Foreign currency based car purchase financing is performed through financial enterprises at most banks. The parent bank refinancing of financial enterprises is performed in the currency of lending, thus financial enterprises have no or very little exchange rate exposure.<sup>157</sup> In addition, under the loan agreement that banks and financial enterprises conclude with customers, exchange rate risks are passed on to the customers.

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<sup>157</sup> For a detailed treatment of the issue, see Lívía Sánta and Éva Fischer, Banking group level risk management in the Hungarian banking sector, MNB 2003.

The *liquidity risk* exposure of bank-owned financial enterprises is significantly influenced by potential liquidity imbalances in their balance sheets: short term liabilities may, to a large extent, outnumber short time assets.<sup>158</sup> Nearly all short term liabilities arise from the loan repayment obligations of financial enterprises vis-à-vis their parent banks. It follows then that, if financial enterprises faced liquidity problems, parent banks would probably renew their refinancing credit contracts with them rather than force them to honour their obligations.<sup>159</sup>

## V. 2. 10. Operational risk

Banks' operational risk exposure associated with consumer lending is affected by personnel-related and technical conditions, some of which are closely related to credit risk, the extent of which is, however, much lower.

At most banks participating in the survey, household risk management at the division or directorate level is clearly distinct from front office activities. However, that this organisational distinction is not made on the highest level at each bank is a source of risk. At an overwhelming majority of banks, approval from the risk management area must be sought in the course of credit appraisal only in the case of specific loans granted under specific terms and conditions or large-amount consumer loans. Speedy decision making, common in consumer lending, is a one-man, i.e. non-executive level, process in the case of low amount personal loans granted under standard terms and conditions, which may increase exposure in the case of banks operating a scoring system with shortcomings in efficiency.

Experience suggests that the risk of fraudulent acts is higher in the case of consumer credit assessment than in the case of, for instance, housing loans. Fraud in the latter case may materialise through the submission of falsified documents or the provision of misleading data.

Further operational risks in the case of *car purchase loans* include the fact that not all financial enterprises employ a scoring system to support the process of credit appraisal or that the quality of the scoring system is below that of the banks. The participation of car dealers is also a significant risk factor if financial enterprises fail to select their retail partners with due care, fail to oversee them properly or the contracts concluded with them fail to urge them to adopt sound lending behaviour.

Banks may suffer direct losses from credit card abuse (e.g. losses incurred through lost, stolen or counterfeit cards and fraudulent card applications etc.)<sup>160</sup> as pursuant to the relevant legal regulations<sup>161</sup>, after banks are notified of an occurrence of loss of card or card

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<sup>158</sup> The proportion of operating assets is 30%, that of short-term liabilities is 52% (30 June 2004 data).

<sup>159</sup> See Lívía Sánta and Éva Fischer, *Banking group level risk management in the Hungarian banking sector*, 2003.

<sup>160</sup> For a detailed discussion of the issue, see Keszty-Harmath Éva, *Bank card frauds* (2003).

<sup>161</sup> See Government Decree No. 232/2001 on cash transfers, cash transfer services and means of electronic payment.

theft, they bear all the financial ramifications of resultant losses.<sup>162</sup> Recently, we have been witnessing favourable trends in the area of card fraud control, which can be ascribed to the fact that banks continue to upgrade their monitoring systems capable of spotting suspicious transactions.

## Conclusion

With respect to consumer lending practices and risk exposure of credit institutions and bank-owned financial enterprises, we have the following findings:

Essentially, *credit risk*, constituting the most significant risk segment in consumer lending, hinges on customers' ability and willingness to pay and, in the case of general purpose mortgage loans and car purchase loans, expected changes in the value of the collateral portfolio. Debtors' ability to pay is strongly influenced by the fact that, due to the shortcomings of the financial culture in Hungary, some customers fail to assess their borrowing capacity in a manner that it matches their income position; furthermore, they fail to have adequate knowledge of the individual financial products. Lending risks are further enhanced by the fact that the probability of default is difficult to assess due to banks' limited availability of data; in addition, in the case of such products that are also available as foreign currency based products, exchange and interest rate risks borne by debtors ultimately increase banks' lending risk exposure. An inadequate refinement of scoring systems and problems associated with collateral appraisal in the case of general purpose mortgage loans add to lending risks. In the market of car purchase loans, in an increasingly fierce competition fund providers have gradually pushed the limits of their risk tolerance, the impact of which may ultimately be exerted on market leader domestic banks, which own the financial enterprises financing car purchases and which act as exclusive fund providers.

Overall, in respect of consumer lending, we deem interest rate, exchange rate and liquidity risks run by banks and, indirectly through financial enterprises, banking groups as low. As these components of risks associated with banks' consumer credit products constitute part of the overall banking position, risk assessment and management are performed under the total balance sheet approach. We do not find banking group level market and liquidity risks potentially arising in connection with the refinancing relationship between banks and their financial enterprises to be material, as the financing funds provided by banks to financial enterprises are adjusted to the characteristics of loans granted to customers in terms of their denominational composition and re-pricing.

*Operational risk* associated with banks' consumer lending (organisational collusion, one-man decision-making, fraudulent customer behaviour in connection with loan applications, shortcomings of the scoring systems and card fraud) is closely related to credit risk, the extent of which is, however, much lower.

With respect to the *profitability of the business line*, banks' pricing practice concerning consumer credit products differs greatly from that applied in the case of car purchase loans.

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<sup>162</sup> Prior to notification of banks, cardholders must absorb losses below HUF 45,000. Losses exceeding this amount must be absorbed by banks unless such losses are imputable to the cardholder's wilful or grossly negligent behaviour.

The 11.7% interest rate margin in 2003 *on banks' consumer credit products* is high even in international comparison. Pricing depends on the degree of competition in the individual market segments, banks' competitiveness and other factors (e.g. high operational costs, banks' relative low efficiency, interest rate premia and product risks). The pricing practice of *car purchase loans granted by financial enterprises* is influenced by market competition as well as the characteristics of the products and the market segment. While an interest rate margin which is lower than in the case of other consumer credit products under review could in principle be justified by the fact that car purchase lending is secured on collateral, due to other factors (increase in fund providers' risk tolerance, decrease in the LTV ratio and a decline in lending rates brought about by price competition) current interest margin can cover the actual risks assumed by providers of car purchase loans to a decreasing extent.

In conclusion, it is safe to say that neither the practice of consumer lending adopted by credit institutions and bank-owned financial enterprises nor the current extent of the risk exposure in this business line threatens the stability of the financial system.

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