REPORT ON FINANCIAL STABILITY

May
2001

Prepared by the Banking and Monetary Policy Department
of the National Bank of Hungary
Issued by the Department for General Services and Procurement
of the National Bank of Hungary
Responsible for publishing: Botond Bercsényi,
Head of Department
Prepared for publication by the Publications Group of the Department
for General Services and Procurement
Mailing: Miklós Molnár
Phone: 36-1-312-4484
Fax: 36-1-302-3714
Internet: http: //www.mnb.hu

ISSN 1419-2926

Contents

Introduction

The purpose of the 'Report on Financial Stability', a publication launched by the National Bank of Hungary in 2000, is to provide a comprehensive overview of the key issues directly or indirectly affecting the stability of the Hungarian financial system and to present the main economic developments and trends witnessed since publication of the previous Report.

This Report is organised in the same way as the first two issues: the first three customary Sections (1 – General macroeconomic environment, 2 – The stability of the banking sector, 3 – The position of non-bank financial intermediaries) are again supplemented by articles on current issues related to the stability of the financial intermediary sector. The Report focuses mainly on the year 2000; however, the Section on macroeconomic issues surveys the most recent data and information for the period since the beginning of 2001 as well.

The Report finds that, although the worsening of business conditions which started in the second of 2000 has continued in 2001, the global economy will probably be strong enough for export-led growth in the Hungarian economy to continue. In 2000, Hungary registered its fastest growth rate since start of economic transition, with GDP rising by 5.2% in real terms. However, following several years of a steady downward trend, the decline in inflation has stalled. Motivated by the higher-than-expected inflation path, the National Bank, in agreement with the Government, reduced the monthly devaluation rate of the forint in April 2001; then, in May, it widened the official fluctuation band of the currency. This move is expected to support the achievement of the inflation objectives, but the measure of exchange rate risk for economic agents will increase considerably. Changes in exchange rate expectations, combined with a more pro-active interest rate policy, may also lead to higher interest rate volatility in the future.

The corporate sector borrowing requirement increased further as a proportion of GDP in the course of 2000, while the patterns of financing saw little changes and the average gearing ratio barely rose. Households' operational income rose more strongly than consumer prices. The rate of consumption growth developed more evenly than that of incomes. Households managed to secure a higher level of consumption in proportion to incomes only by curtailing savings. The shift in household wealth to non-bank forms of savings continued in the early months of 2000; however, the percentage share of non-bank financial assets grew only modestly over the greater part of the year and in early 2001.

By various measures, the performance of credit institutions in 2000 was more favourable than in previous years – the sector's aggregate balance sheet total increased at a rate above inflation, with its after-tax profits tripling relative to 1999. The driving force behind business expansion was the robust pick-up in lending activity, which took place simultaneously with the improvement in portfolio quality. Overall, the sector is judged to be stable. However, out-

standing loans to the household and corporate sectors, extended under benign economic conditions and qualified as problem-free in view of current income prospects, could lead to a rise in qualified assets in case of a potential break in the cyclical upturn and become a source of significant loan losses. In the Bank's view, the pro-cyclical nature underlying the sector's operations may carry dangers over the longer term in the event of a potential slowdown in economic activity.

The position of cooperative credit institutions continues to be vulnerable, savings cooperatives are undercapitalised, and their asset profiles saw a further significant rearrangement towards more risky assets in 2000. Taken as a whole, the sector has a fairly poor portfolio quality, with cover provided by provisions falling off considerably and profitability remaining virtually static. The tightening of regulations suffered a further delay, while the exposures facing the sector continued to mount. However, this does not imply significant systemic risks due to the small market share of the sector.

In 2000, the non-bank intermediary system grew at a rate similar to that recorded in the previous year, so its role in financial intermediation strengthened. The combined share of investment funds, pension funds and insurance companies within the entire institutional system continued to increase, essentially on account of the robust rises in households' equity in pension funds and insurance technical reserves. In terms of non-bank intermediaries, the activities of financial enterprises (in particular leasing companies) are judged to be the most risky, as they undertake risks practically commensurate with those assumed by banks. In 2000, their outstanding claims rose at a rate well in excess of that at which banks' outstanding loans increased. Meanwhile, due to the imperfections of regulations affecting the sector, provisioning lagged far behind the required level in light of the risks undertaken. Banks are also indirectly faced by higher lending risks in addition to those suggested by the analysis of the banking sector, via improperly managed risks and provisioning for loan exposures, given that they secure the background for the overwhelming majority of leasing companies.

The first of the two articles in this Report considers the expected effects of Hungary's accession to the European Union on the domestic banking sector. Building on international experiences, the article offers a review of developments in banking regulations and the market in the 80s and 90s, discussing the underlying trends in banks' operations and incomes. It analyses the processes that Economic and Monetary Union has set in motion and how these will affect the future opportunities of the Hungarian banking sector. The second article looks into the pricing policy of domestic banks. Analysis of banks' pricing behaviour is important for gaining a better understanding of the transmission mechanism and investigating the sector's stability, as the pricing mechanism shows exactly whether risks taken on by banks are properly identified and also whether they are adequately reflected in the prices of banking products.

1 Macroeconomic and financial environment

General macroeconomic environment

The global business cycle and international capital market factors

Global economic conditions have continued to worsen since the beginning of 2001. The slowdown in US economic growth, anticipated for some time, has started, adversely affecting the outlook for the world economy. Nevertheless, the economic downturn is expected to run the most part of its course in the first two quarters of the year, and analysts expect growth to resume towards year-end, in spite of the fact that the effect of the US monetary authorities' moves to ease monetary conditions, aimed at fostering growth (the Fed has reduced the federal funds rate by 250 basis points since the start of the year), has been weakened by the fall in asset prices dampening consumption and destocking. But there still remains the possibility of a more unfavourable situation, with the current slowdown developing into a hard landing in the US. Among the sources of risk, the substantial current account deficit, which has been accumulating for many years now, and its potential negative impact on the money and capital markets deserve special mention. Nevertheless, analysts see little chance of a recession scenario materialising.

The outlook for the European Union continues to be more positive than for the US economy. This year, growth in countries of the European Union is expected to be only slightly down, despite the strengthening of the euro and the fall in export demand caused by the slowdown in US growth, as domestic demand is expected to remain strong. According to latest forecasts, the annual growth rate of import demand will remain in the range of 8 to 10 per cent. This is encouraging for Central and Eastern European exporters. In the event, however, of a lasting recession in the US, the growth prospects for the European Union may be revised downwards (see Chart 1.1, 1.2 and Table 1.A).

For the Central and Eastern European economies, therefore, external demand will possibly not be a factor hindering growth. The Czech Republic will likely register 3% growth in GDP in 2001, similar to its performance last year, accompanied, however, by further increases in the current account and general government deficits. The rise in Poland's output stalled in the second half of 2000, due to the massive tightening of monetary conditions. Nevertheless, most analysts believe that, coupled with a sustainable external position, growth may resume this year, supported by a gradually less restrictive monetary policy. Turning to the emerging countries, there is still the possibility of a financial

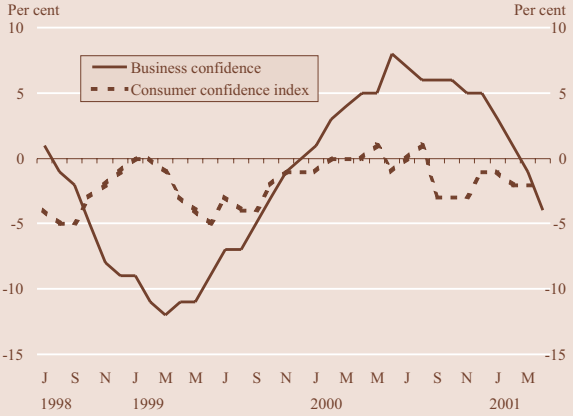
Table 1.A **Real GDP growth rates in certain regions**

Per cent

	1996	1997	1998	1999	2000*	2001**	2002**
United States	3.6	4.5	4.4	4.3	5.0	1.7	3.1
European Union	1.7	2.6	2.8	2.5	3.4	2.8	2.9
Central and Eastern Europe	3.6	3.2	2.5	1.7	3.7	3.8	4.1
Asia and Latin America	6.1	5.0	3.0	4.4	5.4	4.5	5.0

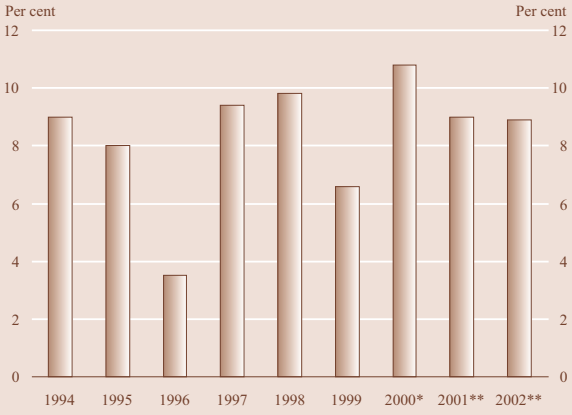
Source: Forecasts by international financial institutions and investment banks.
* Estimate.
** Forecast.

Chart 1.1 **Consumer and business confidence indices in the European Union**



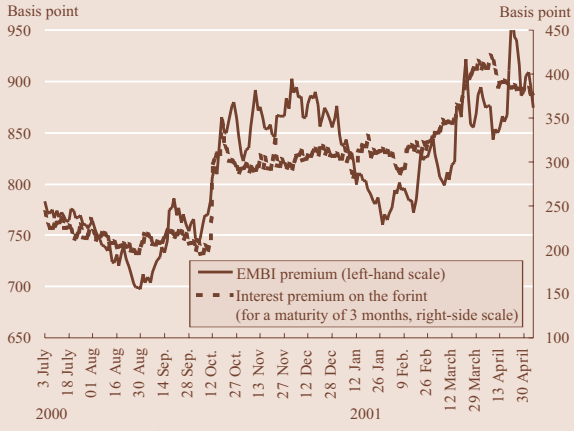
Source: European Central Bank.

Chart 1.2 **Consolidated import volume indices in the European Union**



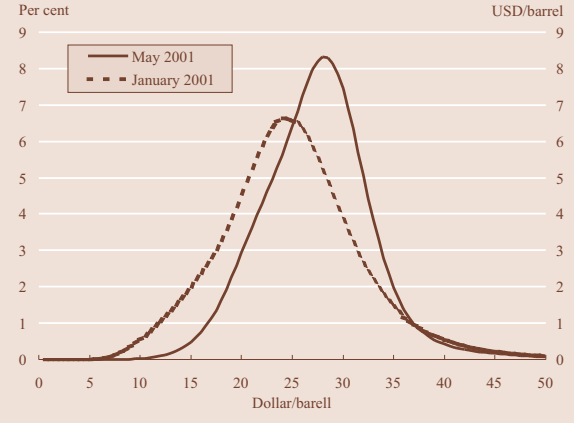
Source: European Commission
* Estimate.
** Forecast.

Chart 1.3 **Three-month interest premium on the forint and the EMBI Global index spread**



Source: JPMorgan and NBH.

Chart 1.4 **Risk-neutral probability distributions calculated from option prices with respect to the price of crude in six months**



Source: NYMEX and NBH calculations.
Note: Under certain conditions, the above probability distribution may be regarded as the expectation of the market at a given point in time concerning the level of WTI (West Texas Intermediate) crude oil upon the expiry of the options. The probability distribution was estimated from option prices on 5 January 2001 and 7 May 2001.

Table 1.B **Hungary's credit rating**
(End-of-period data)

	Japan Credit Rating Agency	Moody's	Standard & Poor's	Fitch
1994	BBB	Ba1	BB	–
1995	BBB	Ba1	BB+	–
1996	BBB+	Baa3	BBB–	BBB–
1997	BBB+	Baa3	BBB–	BBB
1998	BBB+	Baa2	BBB	BBB
1999	A–	Baa1	BBB	BBB+
2000	A–	A3	A–	A–
May 2001	A–	A3	A–	A–

crisis erupting in Turkey and Argentina; however, in view of the experiences learned so far there is little likelihood of these two countries' financial problems causing an international crisis which could jeopardise the stability of the Hungarian financial system.

The Russian economy, representing the only considerable country risk factor for the Hungarian banking sector's lending portfolio, is registering rapid growth for the first time since the start of economic transition. GDP is estimated to have grown by 8% in 2000. This can be ascribed to the weak rouble and strong exports on the back of high crude prices as well as to the recent upswing in domestic demand. In 2001, and over the medium term as well, GDP is forecast to grow at a more subdued rate than last year. But it is important for Hungarian financial stability that there have been no signs of either a collapse of world oil prices or a deep economic recession in Russia in the near future.

With global cyclical conditions worsening, the appetite of international capital markets for high-risk investments has further declined. Amongst other things, this is reflected in the high levels of risk spreads on international sovereign issues over US government securities. Despite the Fed's gradual lowering of official interest rates, the spread on the EMBI Global Index, representing the bonds of emerging market sovereign issuers, rose to 750–800 basis points towards April and May. Developments in international capital market conditions have been reflected in forint spreads as well – in February they departed from the 300 basis points level seen for some time earlier, gradually climbing to 400 basis points. Any further substantial increase in international capital market spreads can only be expected if the slowdown in US growth proves more severe than current market expectations. This would mainly have a direct impact on the economies of South East Asia, but could also exercise an influence on other emerging economies (see Chart 1.3) through the capital markets.

As regards the development of crude oil prices, which are critical to the competitive position of the Hungarian economy, market expectations have been upgraded somewhat relative to the beginning of the year, with market participants now forecasting a slight increase of around USD 2–3 per barrel in the rest of the year. The uncertainty associated with these expectations has also declined somewhat (see Chart 1.4).

All in all, global cyclical conditions in 2001 will likely help export-led growth in the Hungarian economy to continue. Financial stability, therefore, is not considered to be in danger in this respect. There is a risk, however, of the US economy experiencing a deeper-than-expected downturn. This could have an impact on capital flows into Hungary, the level of domestic interest rates, the forint exchange rate and movements in share prices, mostly via international capital market channels, thereby exposing Hungarian financial stability to potential risks. Among the sources of risk discussed above, the exchange rate definitely deserves special mention, particularly in light of the Hungarian monetary authorities' recent move to widen the fluctuation band of the currency. Consequently, changes in global risk factors may trigger increased exchange rate volatility relative to the past. Hungarian economic agents, therefore, must be prepared to manage this risk. They may be assisted by the rapid growth of derivative markets as a result of the liberalisation of short-term transactions and foreign currency futures (see Table 1.B).

Domestic macroeconomic conditions

Growth

General business conditions are closely related to developments in the banking sector's loan quality and its profitability. In 2000, the Hungarian economy registered its strongest growth rate since the start of economic transition, with GDP growing by 5.2% in real terms. Meanwhile, the banking sector's profitability developed quite favourably as well (for a detailed analysis, see Section 2.2). Nevertheless, quarterly data suggest that growth, which gathered pace up to 2000 Q1, gradually tapered off towards the end of the year, following the business cycle in Western Europe. In 2001, however, the restraining impact of external business conditions on Hungarian growth is expected to be counterbalanced by a pick-up in several components of domestic demand, such as household consumption and fixed investment.

On the whole, while GDP growth was strong, the rates at which the various economic sectors grew varied widely in 2000 (see Table 1.C). For example, the recession afflicting the agriculture sector deepened further, and manufacturing output also slowed considerably, in contrast to the rapid growth seen in earlier periods, reflecting the downward turn in external cyclical conditions. A potentially strong real appreciation of the forint may be a further risk factor for the competitive position of these sectors, due to the considerable percentage share accounted for by export markets. By contrast, construction and service industry output was stable or rose slightly. The pick-up in household consumption and fixed capital accumulation since late 2000 must have played a distinct role here. As a consequence, while business conditions are generally still seen as being favourable, the sectoral downturns and boom-bust performances in certain sectors, most notably in agriculture and the food industry, are weakening borrowers' debt service capacity and increasing banks' lending risks.

Inflation

Lack of price stability makes it more difficult to assess lending and market risks and also renders economic calculations more uncertain. Therefore, high, volatile inflation is one of the most important macroeconomic risks to the domestic banking sector. Following several years of steady decline, the fall in inflation has stalled recently, while there have been important shifts in the relative price levels of a few categories of products and services. Whereas since January 2000 the category excluding market services, non-regulated energy and foods (this category accounts for some 60% of the consumer basket) has reduced the inflation rate by 2.8 percentage points alone, the three categories mentioned above contributed 3.2 percentage points to the twelve-month consumer price index (see Chart 1.5).

From a monetary policy perspective, energy and food price increases can be ascribed to exogenous shocks. The slowdown in the disinflation of market services, followed by the increase of 1.5 percentage points in the price index since the summer of 2000 can be explained partly by cost-push pressures from higher energy (e.g. transportation) and food prices (e.g. hotels and restaurants), but it partly reflects the pick-up in domestic demand as well.

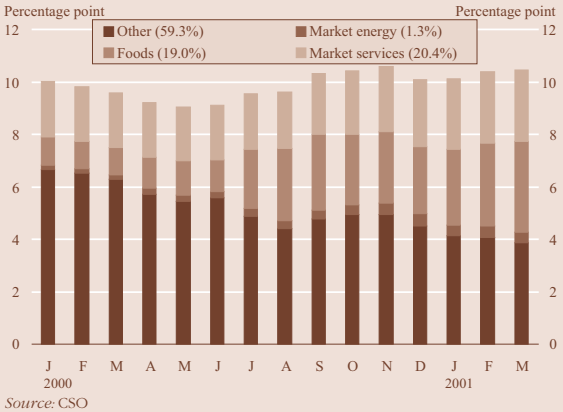
Table 1.C **Gross value added by sector**
(Volume indexes, same period of previous year =100)

Per cent

	2000			
	Q1	Q2	Q3	Q4
Agriculture	4.1	5.3	–7.0	–8.3
Industry	13.1	9.4	9.1	5.8
Of which:				
Manufacturing	15.9	11.4	10.8	6.9
Construction	5.0	5.1	5.6	4.4
Services	2.6	2.6	2.5	3.7
Total, GDP	6.5	5.6	4.5	4.2

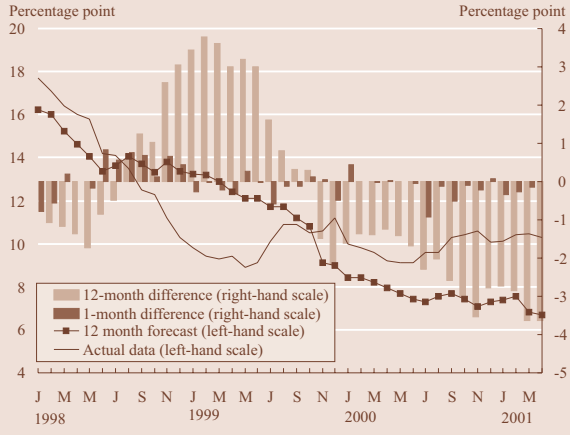
Source: CSO, preliminary data.

Chart 1.5 **Twelve-month consumer price index and contributions of the individual categories**
(Shares accounted for by product groups in brackets)



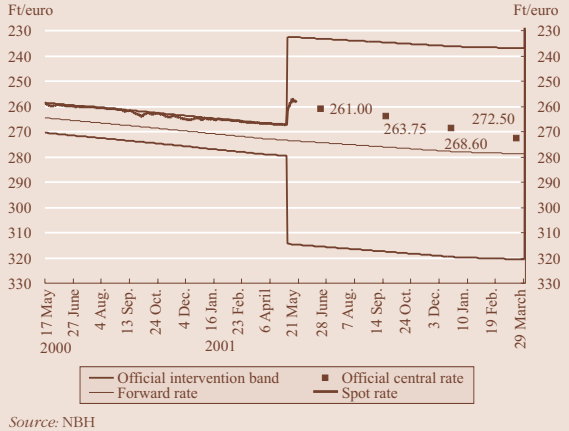
Source: CSO

Chart 1.6 **Comparison of market inflation forecasts looking forward to 12 months and one month with actual inflation**



Source: Reuters and NBH.

Chart 1.7 **Forint-euro exchange rates and forward exchange rate on 17 May**
(17 May 2000 –17 May 2001)



Source: NBH

Faced with a higher-than-expected inflation path, the Bank, in agreement with the Government, reduced the monthly devaluation rate of the forint to 0.2% in April 2001. Then, in May, it widened the official fluctuation band of the exchange rate. The reduction in the rate of crawl was not accompanied by a comparable interest rate cut. Taking account of expectations of a modest appreciation, this has raised the spread of the forint over the euro to levels not seen in the past 18 months. All these policy actions have led to a renewed appreciation of the real exchange rate and a rise in the forward-looking real interest rate. This in turn is believed to assist the expected future reduction in inflation via a tightening of monetary conditions.

Errors in inflation forecasting remain substantial (see Chart 1.6), highlighting the power of unanticipated shocks on the development of inflation. A year ago, market analysts anticipated inflation to be 3–4 percentage points lower for the past few months than the actual outturn. Even projections looking just one month ahead often estimated the increase in the consumer price index to be nearly half a percentage point lower. In the past, expectations often turned out to be more optimistic than the actual figures, which retarded inflation. But with actual inflation now tending to be higher than expectations, this is adversely affecting inflation expectations for the coming period.

Exchange rate developments

The measure of risk undertaken by the banking sector depends partly on the size of the aggregate open position in various currencies and partly on the volatility of the forint's value vis-à-vis various currencies. Section 2.3 analyses banks' foreign exchange exposure in detail, i.e. their total and on-balance sheet open foreign currency positions.

In the future, the volatility of the forint exchange rate will be fundamentally affected by the wide fluctuation band. Prior to 4 May 2001, the forint's exchange rate vis-à-vis the euro showed only minor variations above and beyond the pre-announced official rate of devaluation (see Chart 1.7). The forint appreciated by 3–4 per cent in the immediate aftermath of the move to widen the band, which may have affected banks favourably due to their aggregate net long forint position. However, there may be much larger fluctuations in the exchange rate in the future, which magnifies the role of futures markets.

Widening the fluctuation band

In agreement with the Government, on 4 May 2001 the Central Bank Council widened the fluctuation band of the forint around its central parity from ±2.25% to ±15%. The exchange rate regime with a narrow fluctuation band, introduced in 1995, played its role successfully: inflation expectations and the inflation rate have both declined spectacularly over recent years, while the sustainability of external balance has never been in question, and economic growth has remained strong. However, the narrow band limited the Bank's ability to cushion external shocks adversely affecting domestic inflation. Even though Hungarian GDP growth was steady and rapid, unemployment fell and foreign trade developed favourably, the disinflation process faltered in 2000, not least on account of rising oil prices and the weakening euro. Currently, the unfavourable developments in food and services prices constitute the biggest risk in terms of inflation. The wider exchange rate band provides central bank policy with more leeway, leaving room for a moderate appreciation of the forint. In the exchange rate system with a narrow band, the exchange rate remained near the strong edge for the most part. Proving the expectations, the forint strengthened after the band was widened, tightening monetary conditions. This is believed to have a favourable impact partly on this year's and particularly on next year's inflation.

In the past, the development of futures markets was impeded by the low volatility of the exchange rate and the fact that foreign investors were not allowed to take hedging positions. The latter was justified by the maintenance of the narrow fluctuation band, given that, if foreign speculators had had the opportunity to have access to exchange rate derivatives offering higher leverage, then it would have been more difficult to defend the currency band in crisis situations. Widening the exchange rate band, therefore, made it not only possible but necessary as well to liberalise capital transactions, as futures markets cannot be expected to be more liquid without massive participation by non-residents. It was for exactly this reason that the Bank, simultaneously with the decision to widen the fluctuation band, initiated actions to make it easier for foreign investors to take derivative positions.

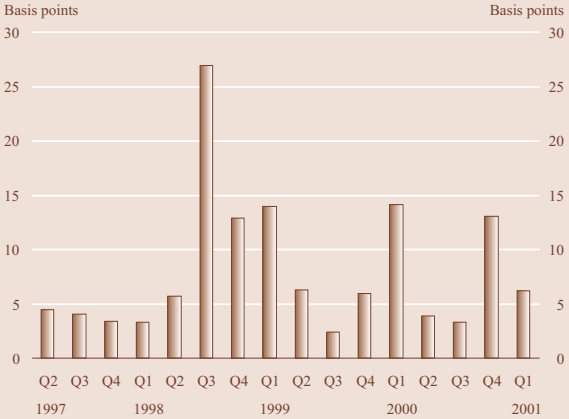
The appreciation of the forint following the widening of the band is expected to facilitate the disinflation process. Nevertheless, the competitive positions of the export (and import substituting) sectors could suffer from a significant appreciation of the forint exchange rate. This, however, will probably not cause a problem for multinationals which account for the most dynamic part of Hungarian exports, given that their profit share will likely provide adequate cover against the appreciation of the forint. Real appreciation may increase the risks facing smaller firms, most of them with domestic ownership, as borrowers. Therefore, it is absolutely vital for companies to quickly recognise the risks inherent in the wider fluctuations of the exchange rate. They will have to rely, more strongly than earlier, on the opportunities offered by financial markets in order to hedge their foreign exchange positions.

Interest rates

An important function of the domestic banking sector is maturity transformation, which involves the undertaking of interest rate risk as a business. Interest rate risk depends on the scope of banks' risk exposure on and off balance sheet as well as on the variability of market rates. (Section 2.3 considers interest rate exposures in detail.) In the crawling-peg exchange rate system with a narrow currency band, variations in forint interest rates could be traced back to exchange rate devaluation and developments in euro interest rates and interest rate spreads. As forthcoming changes in the devaluation rate were known three months in advance in most cases, unanticipated shifts in euro returns and the spread represented the relevant source of risk for banks. Of these two, the volatility of the interest rate spread was the more important. Due to the Russian and Brazilian crises in the second part of 1998 and early 1999, and the fall in country-specific risks in the beginning of 2000, forint returns have often changed significantly. However, the Bank's decision to raise official interest rates by 100 basis points in 2000 Q4 only partially fed through to the rate spread, given that the decision coincided with the two moves by the ECB to raise interest rates by a quarter of a percentage point (see Chart 1.8).

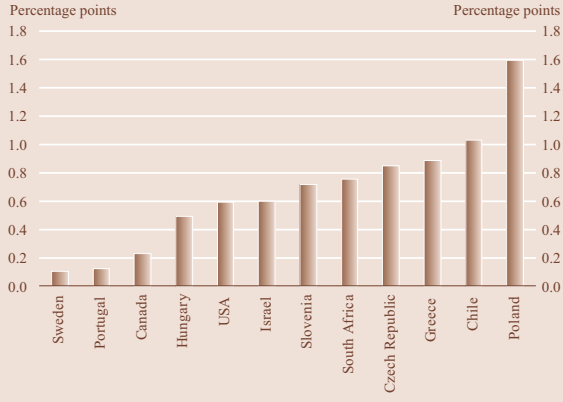
In the wake of the move to widen the exchange rate band the required risk premium is expected to rise, as foreign investors will likely require a higher premium due to the increased exchange rate risk. At the same time, anticipated future exchange rate movements will be given a greater role when evaluating the

Chart 1.8 **Quarterly volatility of three-month government securities yields**



Note: Quarterly distribution of daily changes in three-month benchmark yields of the Government Debt Management Centre.

Chart 1.9 **Standard deviation of monthly changes in money-market yields**
(January 1997– December 2000*)



Sources: IFS, money-market yields and, in the absence of such, Treasury bill yields.
*Up to December 1998 in the case of Portugal, and up to December 1999 in the case of Greece.

Chart 1.10 **Developments in three-month real interest rates**

Note: Three-month government securities yields deflated by the trend of the Bank's core inflation indicator.

yield advantage of the forint over the euro. Therefore, it may easily occur that the effect of an anticipated exchange rate movement on the forint-euro interest rate gap will overcompensate for the increase in the required risk premium.

By international standards, the volatility of short-term money market yields has been low in Hungary in the past few years (see Chart 1.9).[1] This is especially remarkable in light of the fact that the Bank was managing the exchange rate within a narrow currency band. Sterilised intervention, therefore, was capable of smoothing out fluctuations in the nominal exchange rate while interest rate volatility remained moderate and forint interest rates declined along the pre-announced exchange rate path with relatively minor fluctuations in recent years. The price for the designated exchange rate and interest rate policy mix was the relatively high volatility of official reserves and, simultaneously, of the outstanding value of sterilisation instruments. From the perspective of the stability of financial institutions, however, this situation was beneficial: while variations in the exchange rate and yields may cause serious losses to banks and there were only limited opportunities to hedge against that risk in the market, the volatility of reserves and the cost of a higher level of reserves as a consequence were borne by the central bank. The recent development of derivatives markets and the expected expansion of liquidity in the near future (due to the liberalisation of short-term capital movements) will make it unnecessary for the Government to take over market risks to the extent it did in the past. At the same time, following the move to widen the exchange rate band, the Bank's flexibility in conducting interest rate policy has increased. This may amplify the risks related to the volatility of short-term forint yields.

The fall in nominal interest rates, simultaneously with that in required premia, resulted in a rapid fall in real yields towards end-1999 and early in 2000 (see Chart 1.10). The downward impact of higher domestic inflation (caused by higher international energy and food prices) on real interest rates also contributed to this from the summer of 2000. The Bank's move to raise official interest rates by 100 basis points in October 2000, and the moderation in short-run inflation boosted real yields again. Even so, they are currently still fluctuating between 0% and 2%.

From a number of perspectives, the level of the real interest rate is an important factor for banking sector stability. An excessively high real interest rate increases the real debt service burden on borrowings, reduces the net present value of investment programmes and has a counter-productive influence on borrowers (owing to the high level of interest rates, only borrowers with programmes promising higher expected value but higher risks as well apply for funds). In the end, this may lead to an increase in qualified claims and a deterioration in banking sector profitability. The major danger of a low real interest rate is that it may cause financial savings to decline and finance for banks to dry up. Low investment loan rates can also frequently lead to the implementation of investment programmes that would not appear viable under normal circumstances. In such cases, the low earnings potential of the installed capacity and the resulting default of the debtor

[1] In countries with crawling-peg devaluation regimes, the deviation of interest rate levels estimates actual interest rate volatility, due to the fall in interest rates as a trend. Therefore, the Bank has used deviation of interest rates to measure volatility.

only become evident when real interest rates return to normal levels.

In addition to low real interest on government bond investments, real returns on bank deposits became slightly negative. This was one reason that growth in household sector forint deposits dropped below the rate of inflation recently. All this has made it difficult for banks to finance robust corporate and household sector demand for loans from domestic sources. The Bank expects core inflation to fall and, as a consequence, forward-looking real returns to rise in the second half of 2001, due to subsiding inflationary shocks (foods and energy) and the expected strengthening of the euro against the dollar and of the forint against the euro.

Investment decisions are primarily based on real interest rates prevailing over the entire time horizon of an investment programme, rather than on short-term, immediate interest rates (see Chart 1.11). The implied real annual interest rate for the entire 9 years, derived from the yield curve for May 2001, is stable, slightly above 4%, while the three-month real interest rate is expected to rise gradually from 1.5% to 3.5%–4% following a short period of decline.

Chart 1.11* Three-month and one-year real interest rates derived from the yield curve 10 years forward
(May 2001)

Source: NBH
* Based on the zero coupon yield curve calculated by the NBH assuming that 12-month inflation would drop from 7% early in 2002 to 3% by mid-2010.

Positions of the sectors

The corporate sector

Risks to the financial system stemming from the corporate sector are comprised, first and foremost, of lending risks. Corporate earnings (and their equity) serve as a buffer against a number of risk factors. In evaluating the various types of risk, it is not the measure of aggregate risk, but rather its distribution within the corporate sector, which is a matter of importance. In lack of detailed corporate statistics, the Bank's analyses are aimed at recognising the patterns behind how firms typically behave in the face of risk. However, it is not possible to break down aggregate risk into separable components.

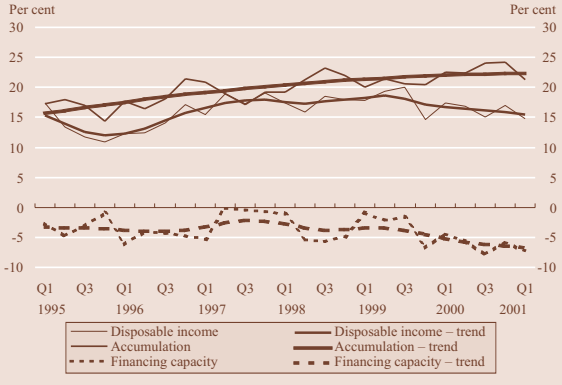
Income prospects, financing requirement

Companies' financing requirement expressed as a percentage of GDP rose in 2000. The reason for this was that their disposable income as a proportion of GDP shrank (the general government deficit turned out to be more restrictive than expected, and the deterioration in the terms of trade caused by the movements in the dollar-euro exchange rate and the rise in oil prices marred companies' income position), while investment spending increased slightly (stockbuilding offset the effect of a spectacular fall in fixed investment in the third quarter). In 2001 Q1, the deterioration in the terms of trade was no longer a burden on corporate finance as it was earlier. But the fiscal easing, expected in 2001–2002, has lagged behind a little as well (see Chart 1.12). Companies' financing requirement is expected to fall in the course of 2001, more on account of better income prospects than on curtailed investment spending.

Changes in the pattern of corporate financing

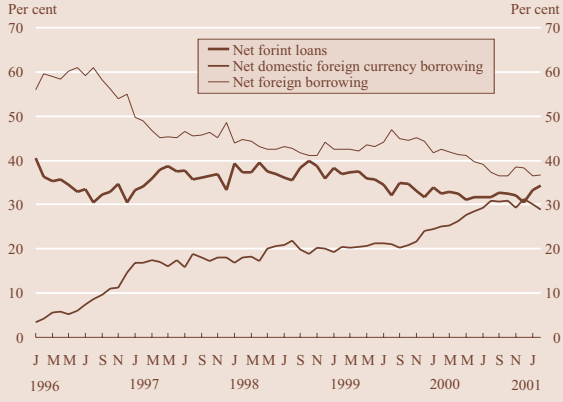
The structure of financing did not change significantly, nor did the average leverage of non-financial corporations increase

***Chart 1.12* Income, accumulation and external funding of the corporate sector, as a percentage of GDP**



Source: NBH

Chart 1.13 **Structure of net corporate sector debt**
(Excluding inter-company loans)



Source: NBH

strongly despite of the aforementioned, roughly 6% financing requirement as a percentage of GDP.[2] Over the medium term, however, it is expected that external funding will play a greater role within corporate finance. This is justified by two factors. One is the convergence with the ratios typical in the European Union. The other is that Hungary's position as a magnet for foreign capital is becoming more differentiated. Expansions in the region and foreign acquisitions result in exports of capital, which implies a higher debt-equity ratio in the corporate sector, as acquisitions are financed mainly from direct borrowing or issuing bonds.[3]

Developments in borrowing positions based on operational flows and their changes are a good reflection of the corporate sector's behaviour in the face of exchange rate risk, its responses to movements in financial and real economic parameters and its short-term readjustment (see Chart 1.13).[4]

The proportion of foreign currency loans increased somewhat within the financing portfolio of non-financial corporations in the 1999 H2 and 2000 H1. At the same time, corporate sector foreign currency positions experienced a spectacular shift from external sources of borrowing towards domestic foreign currency borrowing.[5] The dynamic growth of the export sector and companies' expectations of a change in the exchange rate regime may explain the rise in the proportion of foreign currency liabilities, while the reason for the increased role of domestic bank lending in foreign currency may have been the tightening of regulations related to commercial banks' open foreign exchange position. (For a more detailed discussion of the causes of shifts in foreign currency borrowings, see the February 2001 issue of the *Financial Stability Report*.)

This suggests that exchange rate risk is more concentrated in the Hungarian banking sector, even though it barely increased overall (thanks to the open foreign exchange positions). Under such circumstances, financial institutions are not directly affected by exchange rate risk, but rather through the increased lending risk of the companies involved. This increased lending risk reflects debtors' ability to withstand and manage exchange rate risk. By the second half of 2000, however, the above trend seems to have turned around, and the proportions of various net loans have stabilised since then.

[2] Although detailed data on the corporate sector's ratio of debt to equity are only available up to 1999 (taken from statistics released by APEH), the high inflows of foreign capital, as recorded by the balance of payments, appears to underpin our statement.

[3] The payment of USD 296 million for a 36.2% stake in Slovnaft the Slovakian oil company raised MOL's debt/equity ratio from 32% to 39%. A consortium led by Matáv purchased the Macedonian telecom company Maktel for EUR 362.5 million. Matáv plans to exercise its option to buy 49% of the mobile phone company Westel for USD 885 million.

[4] In order to be able to monitor companies' financing decisions taken in view of financial and real variables without noise, various effects have to be eliminated from developments in outstanding debts. In the case of foreign currency debts, the following have been eliminated: the effect of depreciation relative to the currency basket, and the cross exchange rate effect resulting from the different foreign currency compositions of the basket, and, in the case of forint liabilities, the effect of the increase in inflation. The time series include the values of base variables recalculated at 1995 prices.

[5] The shift in net borrowing was further strengthened by movements in the various foreign currency assets, that is, the rate at which foreign assets rose was stronger than that of domestic foreign currency deposits.

In addition to the aggregate open position, the parameters of the exchange rate regime also affect exchange rate risk. The widening of the exchange rate band from the earlier ±2.25% to ±15% will certainly cause a significant change. In the narrow band exchange rate regime, the forint exchange rate fluctuated near the strong edge of the band, apart from a few short, exceptional episodes. In this environment, foreign currency borrowers could only expect the exchange rate to weaken (any significant appreciation was inhibited by central bank intervention); however, the previous exchange rate path suggested that there was appreciation pressure on the forint, reducing the probabilities attached to depreciation. Thus, because of the low costs, borrowing in foreign currency became popular despite the threat of potential one-way risks. With the widening of the forint's intervention band the risks arising from exchange rate variations have become symmetric, and their magnitude has become several times larger.

If foreign currency borrowers regularly hedge their exchange rate exposure (for example, an exporting company incurs foreign currency debt in the same currency as its revenues), then they remain unaffected by the nominal risks arising from the change to the exchange rate regime.

For companies whose open foreign exchange position does not have a hedging role, the new exchange rate regime results in a significant increase in exchange rate risk. While the appreciation of the exchange rate within the wider band resulted in a one-off financial profit, open foreign exchange positions may cause substantial losses as well. At the moment, closing the positions causes difficulties (using credit swaps or reducing foreign currency borrowings gradually), due to the shallowness of the derivatives market. The liberalisation of foreign exchange regulations expected in conjunction with the widening of the exchange rate band may bolster the development of the futures market required to manage exchange rate risk. Even so, an increase in corporate customers' exchange rate risk is inevitable over the short term.

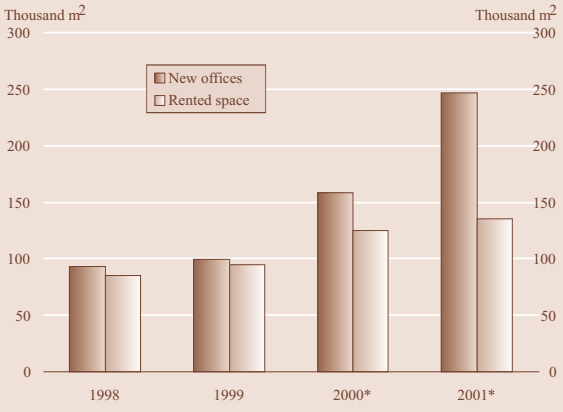
Commercial property

One of the most important sources of risk to companies active in the commercial property market is a possible collapse of prices and, in certain services, the drastic decrease in utilisation rates. Commercial property price bubbles have played a key role in a number of financial crises. The profitability positions of property developers may have a severe impact on the banking sector because their capital gearing is generally high.

Prices in the office space market have stabilised, with the market reaching a stage of price elasticity. Relatively short-term lease contracts also provide adequate leeway for minor changes in prices and additional services. At the same time though, the number of renovated, state-of-the-art offices and the office space for rent in Budapest is continuing to increase strongly. Ongoing development projects suggest a further strong increase in 2001. Therefore, temporary oversupply and a drop in vacancy rates can be expected, but taking into view the economy's expected growth path, this phenomenon is not expected to be lasting (see Chart 1.14 and Chart 1.15).

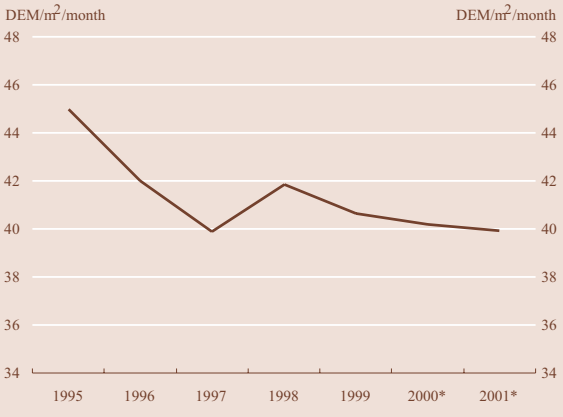
Supply in the retail property market appears to be abundant. This may lead to more intense competition between service pro-

Chart 1.14 **New office space on the market and rented in Budapest**



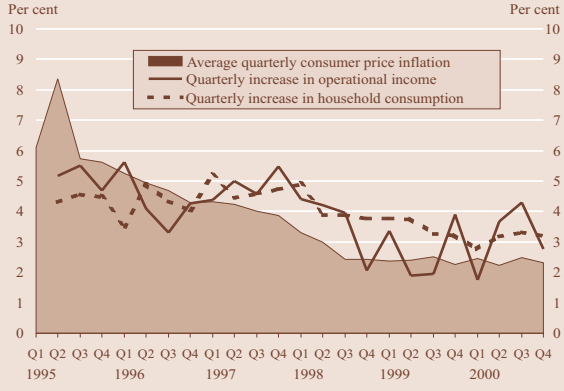
Source: DTZ Hungary
* Forecast.

Chart 1.15 **Rents for first-class offices in Budapest**



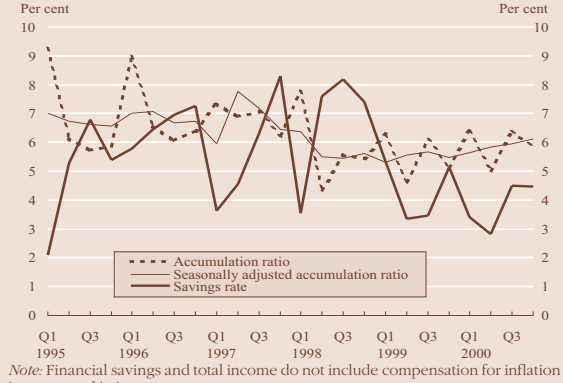
Source: DTZ Hungary
* Forecast.

***Chart 1.16* Quarterly nominal changes in households' income and consumption**



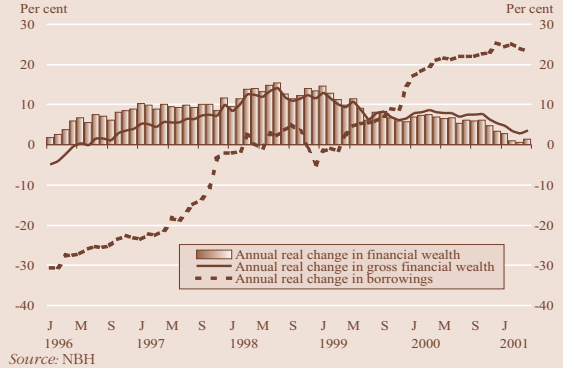
Source: CSO, NBH, seasonally adjusted data.

***Chart 1.17* Financial savings and accumulation as a percentage of income**



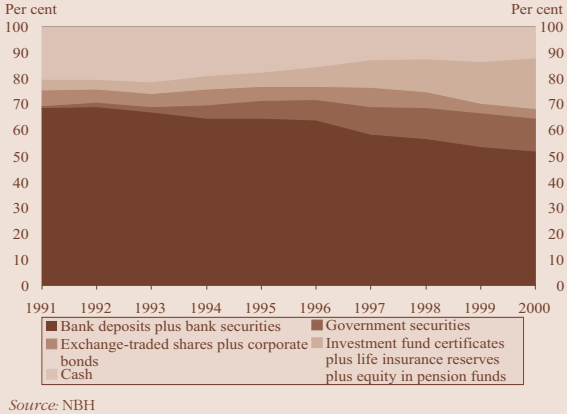
Note: Financial savings and total income do not include compensation for inflation incorporated in interest.

***Chart 1.18* Annual real change in the value of financial assets and outstanding borrowings**



Source: NBH

***Chart 1.19* Financial wealth of households**



Source: NBH

viders and developers. At the same time, continued segmentation of the market will likely stabilise prices, and strong as well as weak market centres with significant price differences will evolve.

Industrial-purpose investment is the property market segment where growth is expected to be the most dynamic. New logistics centres and facilities serving light industry are being built as financial investments. Owing to the expected temporary abundance of supply in other segments, similar prosperity is unlikely.

The household sector

Income position

Operational income growth of households[6] was above consumer price inflation in 2000, but this real income growth still lagged behind that recorded in the period end-1997 and in early 1999 (see Chart 1.16). Consumption grew more steadily than income. This suggests that households generally channel the fluctuations in income into savings, and focus on smoothing out the path of consumption. When at end-1998 the rate of inflation, which had been falling up to that point, began to stagnate and real income growth virtually ran out of steam, household consumption remained at high levels for about a year relative to earlier years, and only began to fall off when households realised that their income prospects would have to be permanently revised downwards. Similar reasons were in the background of the slight, though distinct, increase in household real income growth having only a muted effect on consumption growth from the second quarter of 2000.

A higher level of consumption as a proportion of income can be ensured by curtailing savings. From early 1999, there was a sharp decline in financial savings, from 6% to nearly 4% as a proportion of operational income (see Chart 1.17). The rate of accumulation also dropped, albeit less strongly. As this decline started in early 1998, it was probably not directly related to the fall in income growth. In 2000, accumulation began to increase markedly, which was attributable primarily to cheaper housing loans.

Eliminating the revaluation effect and compensation for inflation, financial wealth has been rising steadily in the past three years, with households channelling an average of HUF 30 billion into savings every month. Nevertheless, this represents a 25% decline in monthly financial savings in real terms over three years, if the inflation effect is taken into account. Even so, it was outstanding debt which was the dominant factor explaining the fall in growth in net financial wealth. Whereas in 1997 and 1998 operational borrowing was practically zero, it amounted to over HUF 10 billion per month for the past 18 months. This indicates very strong growth due to the low level of outstanding debt. Currently, annual real growth in household debt is 25%, which has led to a stagnation in net financial wealth, accompanied by a gradual decline in the real growth of financial wealth (see Chart 1.18).

[6] Does not include compensation for inflation incorporated in interest.

Financial assets

The relative shares of forint and foreign currency deposits, collectively accounting for nearly one-half of financial savings, depends to large extent on inflation expectations. According to evidence from sectoral surveys, households questioned considered foreign currency the most advantageous form of wealth in the period between 1995–99.[7] However, judgements about forint deposits (which initially were perceived to be much more disadvantageous) and foreign currency deposits converged in the same period (see Chart 1.19). Growing confidence in the forint, presumably due to lower inflation, was also reflected in developments in the relative shares of the two classes of deposit (see Chart 1.20). Foreign currency deposits, accounting for the equivalent of 35% of forint deposits at the beginning of 1997, gradually fell to 30% by early 2000, as a consequence of strong flows into forint deposits following the Russian financial crisis in 1998. Since then, the percentage share of foreign currency deposits has been rising, explained by the resurgence of inflation expectations.

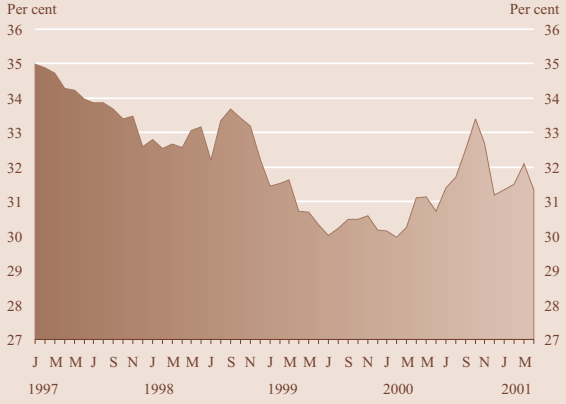
The Central Bank Council, in agreement with the Government, widened the 4.5% fluctuation band of the forint vis-à-vis the euro to 30% on 4 May 2001. With the move, the exchange rate, at least in terms of the common European currency, has ceased to be predictable. In view of the fact that, paradoxically, households have so far stored wealth in foreign currencies mainly by way of precaution, the importance of foreign currency deposits and the risk of the total portfolio are expected to diminish due to the stronger exchange rate effect.[8]

The shift to non-bank forms of savings continued in the early months of 2000, but for the most part of the year and at the beginning of 2001 the proportion of non-bank financial assets rose only slightly. As pension and life insurance schemes have played the dominant role in the process of disintermediation over the past few years, this rise was not accompanied by an increase in portfolio risk. The switch from equities into government paper, observed in 1999, turned around in the first half of 2000. But towards year-end and in the first few months of 2001 acquisitions of government paper regained dominance (see Chart 1.21). Although the declining trend of the overall risk of wealth appears to have broken for the time being, the proportion of higher-risk assets[9] did not increase last year either (see Chart 1.22).

Debt structure

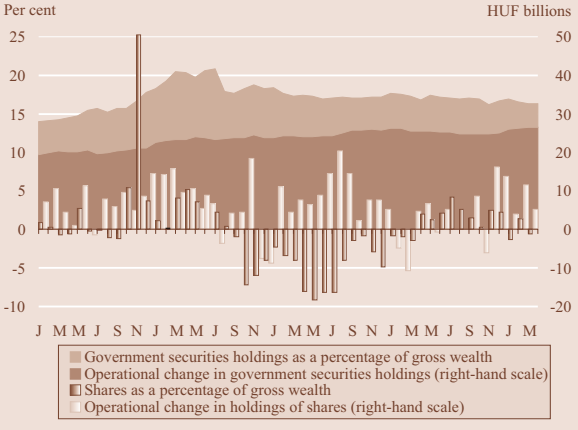
The decline in the saving rate was attributable to the rapid expansion of outstanding consumer credit in 1999, i.e. households smoothed out their consumption by borrowing. Contributing to

Chart 1.20 **Households' foreign currency deposits as a percentage of forint deposits**



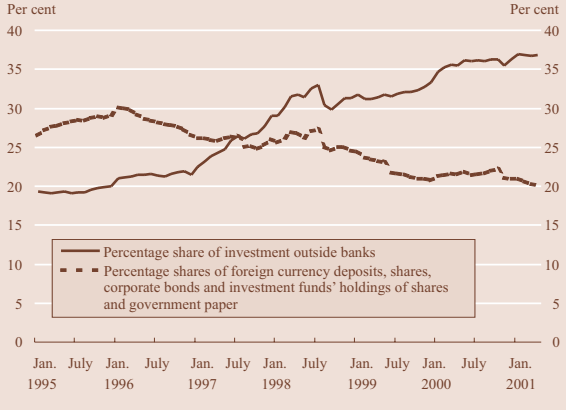
Source: NBH

Chart 1.21 **Household holdings of government securities and shares**



Source. NBH

Chart 1.22 **Percentage shares of savings outside banks and high-risk assets within financial wealth**



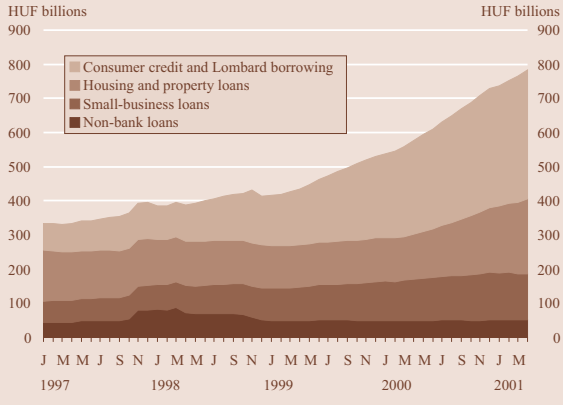
Source. NBH

[7] Nevertheless, it had a merely 10%–15% share within the portfolio.

[8] This risk, however, is regarded low relative to total financial wealth. All other cross rates remaining static, for example that of the US dollar against the euro, presuming a 10% appreciation of the forint against the euro, could cause a loss of around HUF 80 billion, calculating with the current level of foreign currency deposits, which is equal to 1.15% of gross household wealth and 1.3% of net wealth.

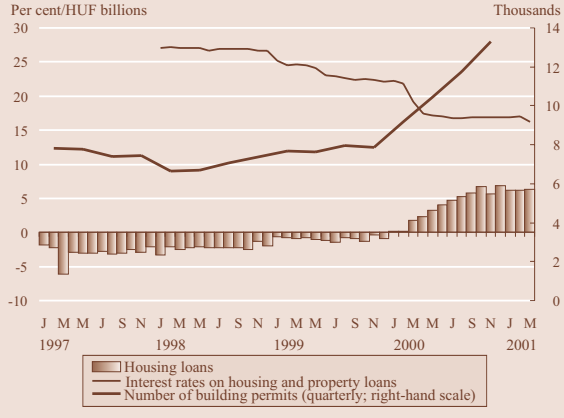
[9] Foreign currency deposits, corporate bond holdings, exchange-traded shares and government securities have caused the biggest revaluation impact on household financial wealth in the past five years. Accordingly, the assets listed, as well as the part of investment fund certificates which shares and government securities account for in the stock of assets of funds, have been classified as high-risk assets.

Chart 1.23 **Outstanding household debt**



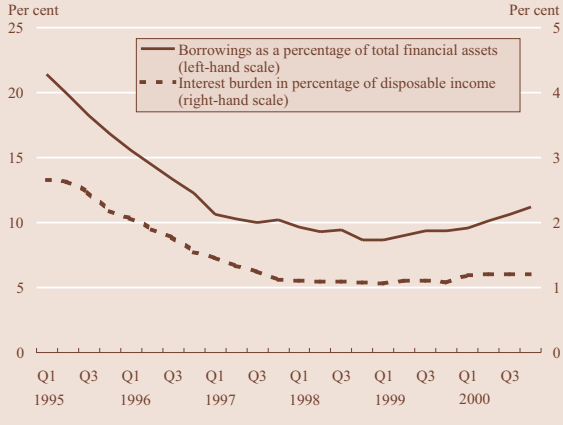
Source: NBH.

Chart 1.24 **Interest rates on and demand for property loans**



Note: Seasonally adjusted number of building permits released by the CSO. Seasonally adjusted monthly operational borrowing data.

Chart 1.25 **Debt burden**



Source: NBH

this phenomenon was the fact that commercial banks began selling increasingly more comfortable product they met strong demand a relatively wide range of customers: even though interest rates were high. The high level of real interest rates on consumer credit, which has remained steadily above 10% over the past three years,[10] reflects the fact that banks have been lending to lower-income households as well, thus raising the risk premium.

By the spring of 2000, the Government had laid the technical and legal foundations for its housing subsidy programme. Subsidies triggered a massive fall in housing and property loan rates (see Chart 1.24). After several years of calm, the combination of a rapid increase in property prices up to the summer of 2000 and lower borrowing costs prompted lively demand for loans. With home prices having peaked out, market demand was channelled from used property towards new construction, as is clearly reflected in the rapid increase in building permits. Nearly 13,000 permits were issued in the final quarter of 2000, compared with 7,000–8,000 in the same periods of the previous few years. Growth in housing loans caught up with consumer credit, and became another dominant factor of the indebtedness process.

The increase in outstanding housing loans continued in early 2001. With the evolution of a property market infrastructure and more experience in exercising property-related rights, the institution of mortgage has started to proliferate not only in the market of finance for home-building and property purchase but in that of general-purpose lending. Owing to the low level of outstanding borrowings in proportion to income and wealth and the practice of setting the ceiling for loans, mortgage finance currently does not carry considerable lending risk.

Households' interest liabilities reached very low levels towards the beginning of 1998, which is a further explanation for the increasing propensity to incur new debt. Interest burden, accounting for little more than one per cent of disposable income, is substantially lower than in developed countries or the value recorded in previous years. Interestingly, there has been a fall in the interest burden, simultaneously with the fall in outstanding debt as a percentage of financial wealth. But the full repayment of more costly old debts and their replacement for cheaper borrowing meant that the two indicators have diverged recently – the increase in relative indebtedness has not been accompanied by a comparable change in outstanding debt (see Chart 1.25).

Position vis-à-vis the non-resident sector

The current account deficit and the method of financing it play a crucial role in assessing the sustainability of the exchange rate. In the earlier regime with a narrow band, the focus was on the sustainability of the pre-announced exchange rate path. Following the move to widen the fluctuation band, however, the emphasis is on judging the movements in the exchange rate within the band from the perspective of 'equilibrium', i.e. deciding whether the market exchange rate can lead to external disequilibrium, which could only be corrected along with a significant depreciation of the exchange rate. Assessing this and monitoring

[10] Due to the non-interest type costs of borrowing, this value is actually even higher.

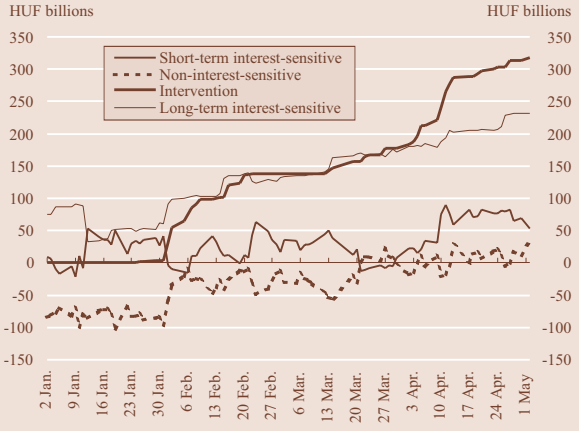
banks' and their clients' open foreign exchange positions cannot be avoided when examining the stability of the financial intermediary system. If economic agents, and in particular the financial intermediary system, underestimate potential risks (there were signs of this in the period prior to the Russian financial crisis of 1998), then the occurrence of a devaluation of the exchange rate may shock the entire banking system and may cause the real economic costs of the currency crisis to multiply.

Structure of financing

The current account deficit developed favourably in 2000, falling from 4.3% to 3.3% as a percentage of GDP. But, in addition to the actual size of deficit, the composition of financing the deficit is equally important. Foreign direct investment (FDI) and portfolio investment can be regarded as the most favourable factors from this respect (taken together with the balances on the current and capital accounts of the private sector, they are referred to as 'non-interest-sensitive' foreign exchange inflows). However, there are further major differences among interest-sensitive investments which account for the remaining portion of financing, depending on the extent to which they can be regarded as non-volatile financing items. The possibility of speculation arises most sharply at times of an increase in holdings of government securities with terms to maturity of less than a year and intervention triggered by shifts in the open on-balance sheet foreign exchange position of the banking sector (short-term interest-sensitive items). Although they can be described as interest-sensitive capital flows, purchases by non-residents of government securities with maturities of more than a year and corporate sector direct borrowing abroad are 'less hot' by nature, as they evolve in a more stable manner over time (long-term interest-sensitive items).

In 2001, prior to the move to widen currency band, the monetary authorities conducted interventions amounting to more than HUF 300 billion (see Chart 1.26). While other components of non-interest-sensitive capital inflow financed the current and capital account deficits of the private sector throughout the entire period, the major source of foreign exchange market intervention remained long-term interest-sensitive foreign exchange inflow, although in April short-term interest sensitive inflows picked up as well. Speculation about an immediate change to the exchange rate regime and a resulting appreciation intensified at the beginning of the year, but the cumulative amount of short-term interest-sensitive capital inflow remained at around only HUF 50 billion. So the move to widen the currency band on 4 May 2001 did not take the market entirely by surprise; however,

Chart I.26 **Components of foreign exchange market intervention, 2001**
(Cumulative daily data)



Source: NBH

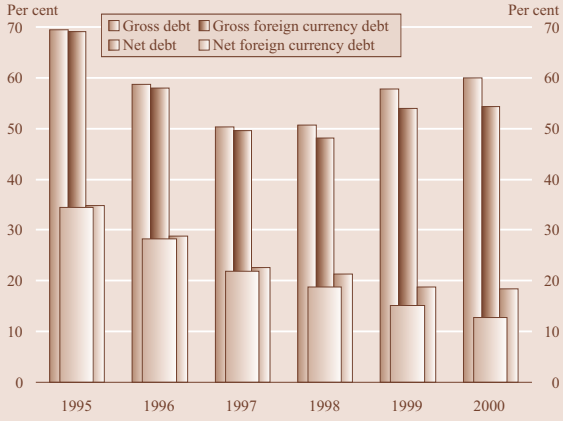
Table 1.D **Foreign liabilities as a percentage of GDP**

Per cent

	1995	1996	1997	1998	1999	2000
I. Hungary's net foreign liabilities (II+III)	62.8	63.2	62.3	61.2	67.0	63.1
II. Of which: Non-debt liabilities	26.3	30.7	35.9	34.9	42.2	38.4
III. Debt (a+b)	36.5	32.6	26.4	26.4	24.9	24.7
a) NBH and government	24.1	17.6	10.6	9.3	6.5	5.2
b) Private sector (1.+2.)	12.4	14.9	15.8	17.1	18.4	19.5
Memo items:						
International reserves	27.1	21.8	18.9	19.1	24.0	24.4
Gross foreign debt	52.5	41.2	30.9	29.5	33.5	32.4

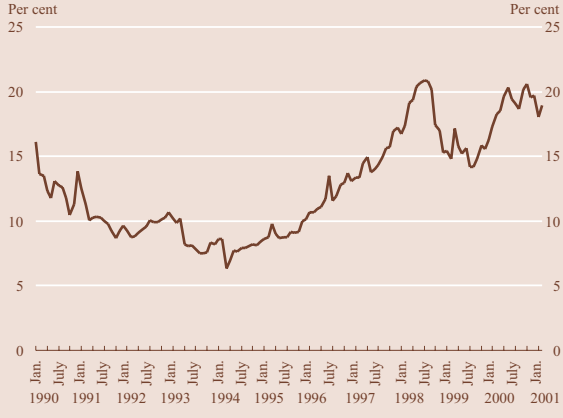
Source: NBH

***Chart 1.27* Foreign debt as a percentage of GDP**



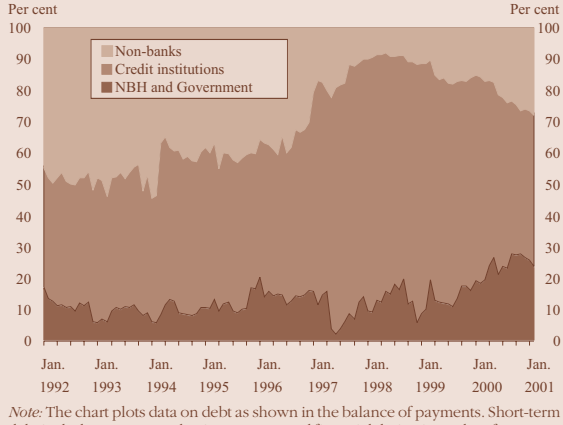
Source: NBH

***Chart 1.28* Short-term foreign liabilities as a percentage of Hungary's total foreign debt**



Note: The chart plots data on debt as shown in the balance of payments. Short-term debt includes money-market instruments and financial derivatives taken from portfolio investments, and liabilities maturing in less than one year according to original maturity from other foreign debt. The long-term component of debt comprises bonds, and long-term liabilities from other liabilities.

***Chart 1.29* Short-term foreign by sector**



Note: The chart plots data on debt as shown in the balance of payments. Short-term debt includes money-market instruments and financial derivatives taken from portfolio investments, and liabilities maturing in less than one year according to original maturity from other foreign debt. The long-term component of debt comprises bonds, and long-term liabilities from other liabilities.

many investors had not been speculating on the strengthening of the forint exchange rate.

Looking at the long-term developments of deficit financing, Hungary's net foreign liabilities expressed as a percentage of GDP remained broadly static in the period between 1995–2000 (see Table 1.D). However, the composition of liabilities underwent a marked change during the same period. The proportion of non-debt liabilities, such as FDI and acquisitions of shares, increased, but net debt fell by one-third as a percentage of GDP. All this suggests that the current account deficit was financed by non-debt-type inflows of capital during the period. Another favourable development was the strong fall, from 61% to 21%, in the ratio of sovereign debt to net debt, the decrease in public sector gross foreign debt being the most important explanatory factor. The dominant share of the private sector within foreign debt is seen as favourable because investment programmes, financed from borrowing, and the associated loans are more closely related, with a greater chance of the debtor borrowing abroad only if the operating surpluses of the enterprise provide adequate cover.

Characteristics of foreign debt

Whereas in 2000 whole-economy gross foreign debt rose further as a percentage of GDP, the foreign currency part of debt remained broadly flat due to massive purchases by non-residents of forint-denominated government debt securities (see Chart 1.27). However, there was a further decline in net foreign debt, particularly in its foreign currency denominated component. The increase in the forint-denominated component of foreign debt is seen as favourable. This is because the foreign investor bears the exchange rate risk when lending to residents (mostly the Government), and so the potential loss caused by a devaluation does not burden the domestic debtor.

In 2000, the maturity structure of foreign debt returned to its pre-Russian crisis level (see Chart 1.28). The share of short-term debt has grown gradually for several years, pausing only in the year following the Russian crisis in September 1998. However, the current ratio of around 20% can still be considered low by international standards.

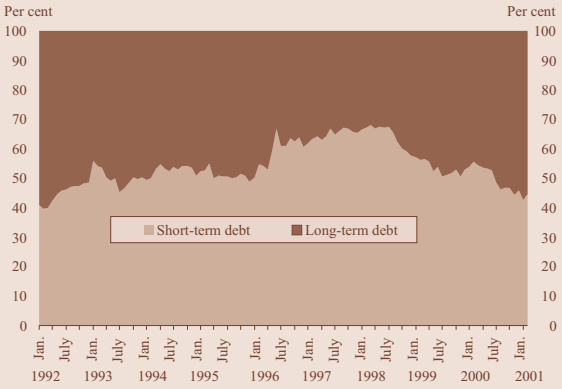
The share accounted for by the banking sector within short-term debt has been falling since the 1998 Russian crisis, while those of companies and the Government have been rising (see Charts 1.29 and 1.30). Another factor facilitating the process was the announcement by the Bank in March 2000 that reserve requirements would apply to banks' short-term liabilities. After the decision, banks' short-term foreign debt fell by nearly 20% (the equivalent of more than half a billion euros).

Foreign exchange reserve indicators

With the widening of the currency band, the role of the level of official foreign exchange reserves has fallen significantly. However, reserves may play an important part in the future in preserving the credibility of the exchange rate regime. The current level of reserves is seen as secure compared with economies of similar risk. Their amount relative to the size of the economy (nearly one-fourth of GDP) and its 40% ratio to imports allow the conduct of a relatively active intervention policy.

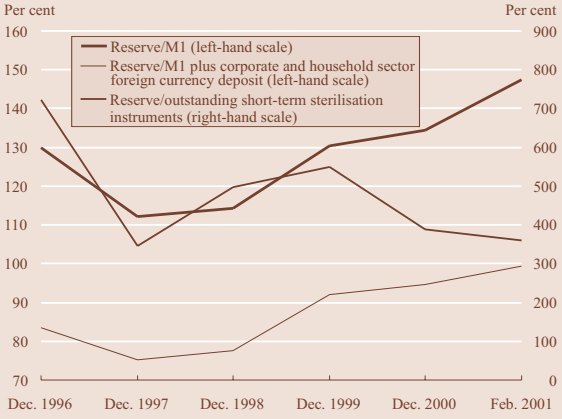
In addition to the traditional gauges of foreign exchange reserves, it is useful to look at the proportion of the liquid monetary aggregates and the outstanding value of short-term sterilisation instruments (see Chart 1.31). At times of exchange rate speculation, these (or a part of these) represent a source of funds that can be mobilised for purchases of foreign exchange over the short term. While the ratio of foreign exchange reserves to M1 and the monetary aggregate M1, broadened to include corporate and household sector foreign currency deposits, have been rising for years, their ratio to the outstanding value of short-term sterilisation instruments has been falling slightly in the past twelve months.

Chart 1.30 **Maturity structure of domestic credit institutions' debt**



Note: The chart plots data on debt as shown in the balance of payments. Short-term debt includes money-market instruments and financial derivatives taken from portfolio investments, and liabilities maturing in less than one year according to original maturity from other foreign debt. The long-term component of debt comprises bonds, and long-term liabilities from other liabilities.

Chart 1.31 **Reserve indicators**



Source: NBH

2 The stability of the banking sector

***Chart 2.1* Changes in qualified assets and profitability**

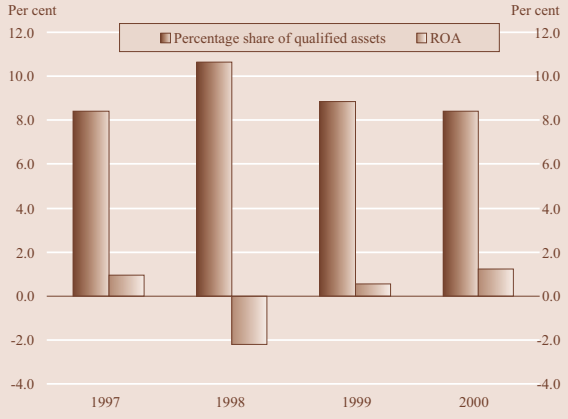


***Chart 2.2* Banking sector annual average balance sheet total as a percentage of GDP**

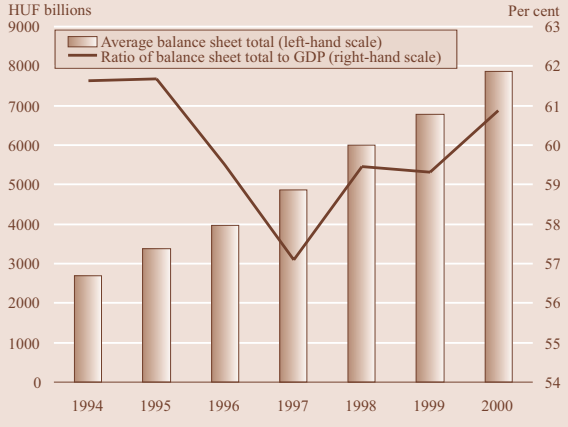
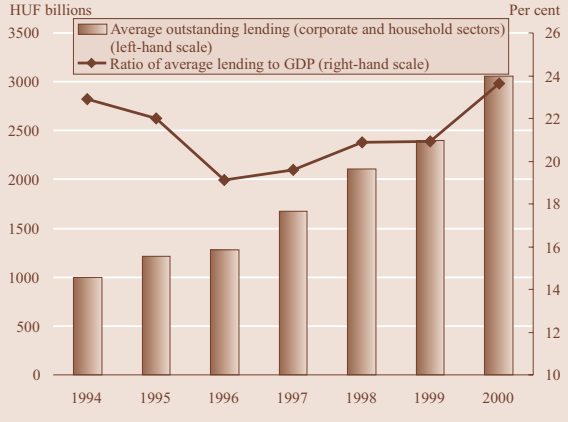


***Chart 2.3* Banking sector average stock of outstanding loans as a percentage of GDP**



In 2000, the performance of the Hungarian banking sector improved relative to earlier years on various measures – its balance sheet total rose by 14.7%, higher than the rate of inflation, and its after-tax profit tripled in comparison with 1999.[1] Spreads stopped shrinking and the ratio of interest-bearing assets to interest-bearing liabilities rose, favourably influencing results in interest income. With the reduction in interest rate exposure, the sector managed to counteract the negative influences from increased interest rate volatility and the break in the general downward trend of interest rates. The pick-up in lending activity was not accompanied by a deterioration in the loan portfolio over the short term, so there was no need to form large provisions for lending (see Chart 2.1). The substantial improvement in the sector's cost efficiency was beneficial for profitability. Return on equity, at 10.9%, was slightly higher than the average annual inflation rate, which meant that the process of capital loss in real terms came to an end in 2000. There was a moderation in the strong differences among banks in terms of profitability, observed in earlier periods.

The sector's average balance sheet total as a percentage of GDP rose slightly, reaching 61% by year-end, but still remained quite low in an international comparison (see Chart 2.2). The driving force behind business expansion was robust lending activity, so traditional banking intermediation deepened significantly, following the pause in 1999. The stock of outstanding lending to the corporate and household sectors was 23.7% as a percentage of GDP at end-2000 (see Chart 2.3).

The ownership structure of the domestic banking sector has been stable for several years now. In 2000, regulatory capital rose in proportion to the additional risks arising from the pick-up in lending, and the capital adequacy ratio did not fall. This underlines the commitment of high-quality, well-capitalised professional investors towards their Hungarian subsidiaries.

The lending boom which began in the second half of 1999 was reflected in the sector's asset structure. The increase of nearly 8 percentage points to 43.8% in the share of loans in two years time was due in large part to the expansion of lending to corporate clients, but the vigorous increase in lending to the household sector also played a role. There were much more modest shifts in banks' liability structure. The increase in the share of own funds was accompanied by a slight drop in that of deposits, while the central bank's role as a lender to the banking sector diminished further. Some banks were forced to borrow additional funds from the interbank market in order to finance the strong pick-up in lending activity, which caused the share of interbank liabilities to rise.

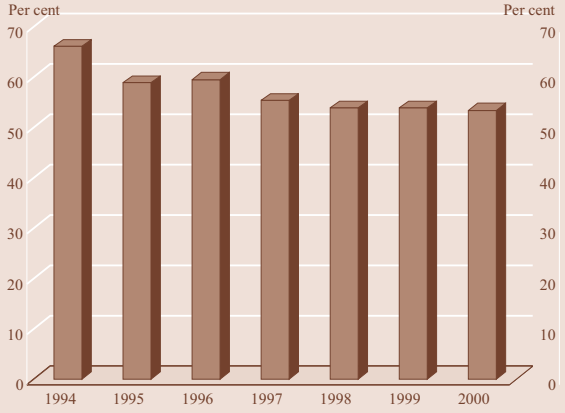
[1] Preliminary, unaudited data for end-2000.

In addition to the general upswing in the business cycle, the operating environment of the banking sector saw increasingly keen competition among market participants and further headway by non-bank financial intermediaries. The decline in the degree of concentration in the banking sector, seen over the past decade, continued (the Herfindhal index calculated from the balance sheet totals declined from 942 points in 1999 to 904 points towards the end of 2000). The reduction in concentration can be attributed to a slight realignment in the upper segment of the market. The number of banks was 42 at year-end, declining by one. The number of savings cooperatives continued to drop, due mainly to the wave of mergers in the sector, prompted by regulation (see Chart 2.4).[2]

On the whole, the Hungarian banking sector is judged to be stable, albeit banks' liquidity position has become a little tighter due to the very strong upswing in lending activity. Pro-cyclicality, an underlying feature of operations, may be a source of risk over the longer term via a deterioration in the loan portfolio, in the event of a turnaround in the current cyclical upturn.

The cooperative sector is still regarded as carrying high risks,[3] although it does not represent a major threat to the entire system of credit institutions because of its small size. The exposures facing cooperatives continued to mount in 2000 – they returned poorer financial results than banks, although their lending activities expanded at a faster rate. Their much worse portfolio continued to deteriorate even further. Any further negative development in the event of a break in the cyclical upturn may expose them more than before, due to their low level of capital endowment.

Chart 2.4 **Percentage shares of the five largest banks within banking sector assets**



Regulatory changes and risks

Work to implement regulations on the trading book has been underway for years now, but their introduction has suffered several delays recently. The Hungarian banking sector has been universal since 1 January 1999, however, rules on the trading book entered into force only in January 2001, and its provisions have been normative since April 2001. Regulations on the cooperative sector have also lagged behind. In the Bank's view, the proper legal regulation of this sector, which bears a number of risks, would be especially important.

The change to reserve regulations, which entered into force on 1 July 2000, affected the nominal reserve ratio, the range of assets available to meet required reserves and the base of required reserves as well. The nominal reserve ratio fell from 12% to 11%;[4] however, only 50% of cash held in forints can be taken into account when meeting the reserve requirement. Required reserves apply to 50% of short-term liabilities originating from abroad, but the resulting increase in costs has been reduced by a correction interest rate introduced for foreign currency liabilities, both domestic and foreign. As a consequence of the modifications, while the burden on earnings caused by required reserves remained unchanged, the drain on forint liabilities fell and the cost of reserves for short-term foreign currency liabilities increased, which moderated their inflow.

The amendment to regulations on open positions on balance sheet also came into force on 1 July 2000. The size of banks' aggregate long open forint position exceeded that judged by the Bank as desirable, so the Bank modified the interest remunerated on required reserves. Accordingly, in the case of banks whose balance sheet long forint position exceeded 30% of regulatory capital, the Bank reduces the amount of interest to be remunerated by the number yielded by multiplying the amount in excess of the limit, the reserve ratio and the so-called correction rate.[5]

[2] The Act on Credit Institutions (hereinafter referred to as Banking Act) provides for a gradually rising, though still very low, minimum capital requirement.

[3] For an analysis of cooperative credit institutions' lending risks, see the August 2000 *Report on Financial Stability*.

[4] The reserve ratio is currently 7%.

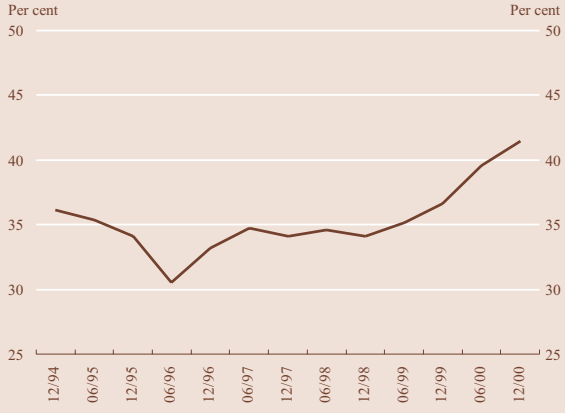
[5] The NBH abandoned the correction interest rate on 31 May 2001.

When calculating regulatory capital, since 2000 subordinated loan capital may be taken into account only up to 50% of core capital elements, instead of 100%, as was formerly the case. In the case of banks with state ownership, since 2000 loans to state-owned companies, as related loans, must be subtracted from regulatory capital.

In the future, the changes to regulations introduced on 1 January 2001 will affect banks' indirect risks related to the activities of banking groups. The latest, comprehensive change to the Banking Act extended the supervision of financial institutions to banking groups and financial holdings. In practical terms, this means that the supervisory authority has the right to supervise enterprises categorised by the law as falling within the scope of banking activities, including non-bank financial intermediaries, either via data enquiry or on-site inspection. Hence, credit institutions no longer have the opportunity to take activities and risks restricted by the Act outside the bank, and to integrate such into the activities of members of the group. In addition to observing the rules related to large exposures and investment limits at the group level, the amendment of the Banking Act also provides for meeting capital adequacy requirements at the group level. (The controlling credit institution is obliged to manage and coordinate the activities under its control in order to ensure prudent operation as separate entities, and as a banking group or a financial holding collectively.) While rules on reporting risk exposures as they actually arise have been formulated, enforcing compliance with capital adequacy at the group level has been delayed, due to the necessary modification of the regulations on calculating the capital adequacy ratio.

Credit risks

***Chart 2.5* Combined share of loans outstanding to the corporate and household sectors within the balance sheet total**

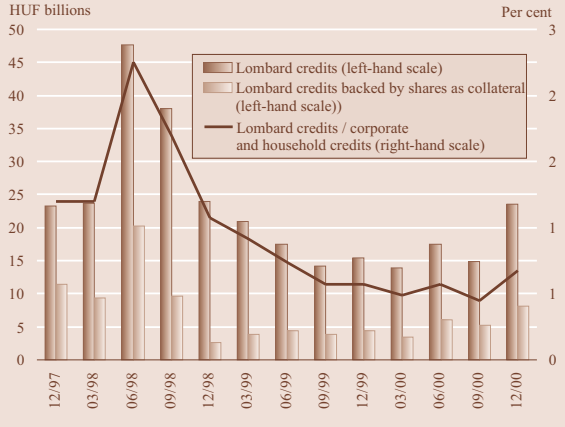


The backbone of growth in credit institutions' operations was the strong upsurge in lending activity. Companies' appetite for loans grew further, continuing the trend that began in the last third of 1999. Outstanding borrowings of the household sector continued to reflect attempts to satisfy delayed demand. As a result, lending to the corporate and household sectors continued to increase strongly last year. Banks' loan stock[6] grew by 31.6% in nominal terms, and that of credit cooperatives by 43.1% relative to end-1999 (see Chart 2.5).

Banks were able to finance only a small part of the very strong increase in lending from clients' funds, so they rearranged their assets significantly. In 1999, they reduced government securities holdings and, a year later, claims on the central bank and non-residents. As a consequence, the growth rate of risk-weighted balance sheet items, at 27%, was significantly stronger than that of the balance sheet total.

Lending against securities as collateral resumed rising last year following the temporary decline in the aftermath of the Russian crisis. Despite a 30% growth, the volume of outstanding lending remains low, therefore, the risk of a potential price bubble evolving in the securities market is currently seen as negligible (see Chart 2.6).

***Chart 2.6* Lombard credits**



Corporate lending

In 2000, total bank loans to the corporate sector increased by 15% in real terms. The 13% rate at which lending by credit cooperatives grew was somewhat more modest. Bank finance to companies continued to be dominated by loans, with finance by issues of shares and debt securities accounting for 8% at the end of the year. Looking at the maturity profile of outstanding loans, the

[6] The stock of lending includes the loans outstanding to the central government and other sector, the corporate sector and the household sector.

percentage share of long-term loans increased further, mainly within foreign currency loans, to account for 53% of total outstanding lending.

As segmentation of the corporate market was virtually finished by the mid-90s, market concentration did not change significantly, with both the lending and deposit markets characterised by a low degree of concentration. In the corporate lending market, seven banks hold dominant shares, accounting altogether for some 60% of outstanding bank lending to the corporate sector. The majority of banks with shares between 1%–5% in the market of corporate lending lost some of their shares during the period (see Chart 2.7).

Following the race for the household market which began a number of years ago, small and medium-sized enterprises (SMEs) became the major target for banks last year. At 33% at year-end, the proportion of outstanding lending to SMEs within total loans to the corporate sector barely changed, so the pick-up in lending activity affected this more risky segment of the market as well.

Rising by 49% relative to the beginning of the year, foreign currency lending played a dominant role in the increase in total corporate lending. Its percentage share within total corporate lending rose from 34.7% to 39%.[7] Looking at the currency profile of lending by banks, euro loans have been gaining ground relative to the US dollar. Lending in the euro or the national currencies of euro area countries accounted for more than 80% of the change in the volume of loans, after eliminating exchange rate effects. As regards foreign currency loans, preference for borrowing in euro is seen as a natural phenomenon, as following the decision to peg the forint to the euro, borrowers do not have to reckon with cross exchange rate risk. Another favourable development for risk management is the fact that more than one-half of the increase in lending in US dollars is related to syndicated loans. Due to their size, corporate borrowers of syndicated finance are highly likely to have an organisational background which is sound enough to manage potential exchange rate risks, in the absence of adequate export cover.

The stock of forint denominated loans grew by 22% in real terms in 2000. The increase in lending activity is not only directed towards the highest-quality clients but increasingly towards clients carrying more risks as well. The spread between corporate sector short-term forint borrowing rates and risk-free market yields (three-month discount treasury bill yields) was below the level of previous years, fluctuating around 1.5%. It is to be feared that, in the event of a slowdown in the economy, this thin spread would not provide adequate cover for the requirement to form provisions due to a deteriorating portfolio.

The volume of commercial property development loans more than doubled in 2000, up HUF 73 billion; however, its share within total lending remained insignificant. Thus, the risk which may arise from a property price bubble does not constitute a serious concern for the sector as a whole. Four banks with considerable shares in the corporate loan market account for the vast bulk of outstanding loans, but their share within total outstanding cor-

***Chart 2.7* Corporate loans and deposits, market concentration of the balance sheet total**
(Herfindhal index)

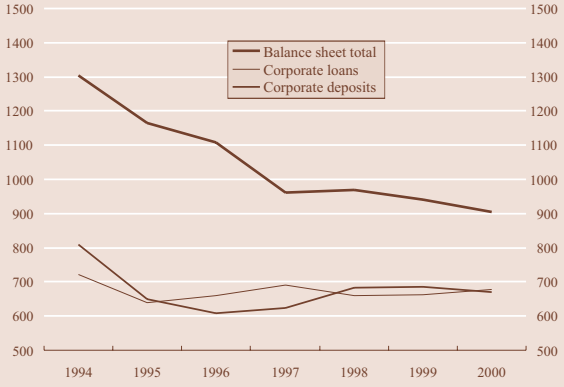
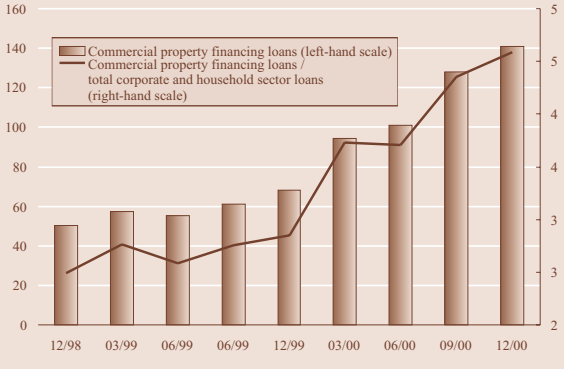


Chart 2.8* Property development loans



* Loans to finance construction and development of commercial property (office building, shopping centres, etc.).

[7] A study in the February 2001 *Report on Financial Stability* considers in detail the risks related to the pick-up in foreign currency lending and its causes.

***Table 2.A* A breakdown of outstanding lending by the major economy sectors**

Per cent

Sectors	1999	2000	Change
Agriculture, hunting and forestry; fishing	8.89	7.74	–1.15
Manufacturing	29.20	28.41	–0.79
of which: a) Food industry	11.19	8.89	–2.30
b) Manufacture of coke, refined petroleum products; chemical industry	6.06	7.29	1.23
Trade, repair of motor vehicles and household goods	21.24	21.65	0.41
Transportation, storage and communication	9.88	10.02	0.14
Real estate and business activities	16.48	16.86	0.38

***Chart 2.9* Loans outstanding to the household sector as a percentage of GDP**

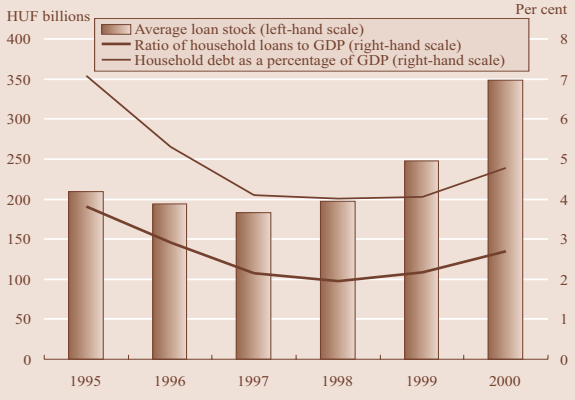
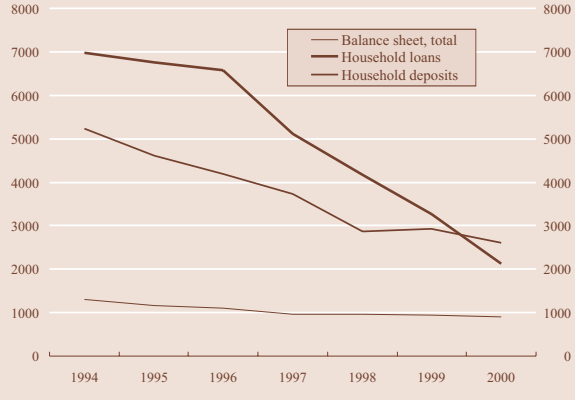


***Chart 2.10* Market concentration of household loans and deposits**
(Herfindhal-index)



porate lending is low, except for one bank (9.4% taken collectively), carrying no serious risk (see Chart 2.8).

In terms of the sectoral breakdown, the volume of loans to refined oil product and chemical product manufacturers and to the trade sector and the real estate and business activities sectors grew saliently. Foreign currencies accounted for the most part of new lending (see Table 2.A).

There was a sharp fall in the share accounted for by lending to agriculture and the food industry. Banks judge the position of companies active in these two industries to be the most risky. This negative view may be explained by a chronic shortage of capital and technological backwardness as well as uncertainties surrounding the payment in cash of passive owners' shares in agricultural cooperatives.

Lending to households

Starting from a low base, in 2000 the stock of bank lending to the household sector grew significantly, by nearly 32% in real terms. Outstanding loans extended by cooperative credit institutions to households rose by 45% in real terms, at a rate exceeding the banking sector average. Thus, looking at the banking sector as a whole, lending to households accounts for around one-fifth of total lending. Despite this strong growth, the stock of bank lending to households amounted to only 5.9% of the balance sheet total at the end of last year – a fairly low figure by international standards. Excluding credit cooperatives, this ratio is even lower for the banking sector, not quite 5% (see Chart 2.9).

The rapid growth in this line of business is expected to continue in coming years, as the current low level of household 7% indebtedness[8] falls well behind the comparable indicator (over 50%) for member states of the European Union. This process will probably receive strong impetus from the rapid development of information technology, assisted partly by the development of credit assessment mechanisms and partly by the proliferation of lending via the Internet. However, this latter represents a serious source of risk. Due to the intensifying competition, the only obstacle to growth in lending will be provided by households' effective demand for bank credit, as banks participating in costly developments and investment programmes are keenly interested in giving a boost to their business activity, and there is no quantitative barrier to the supply of credit. If, however, clients' creditworthiness falls short of the pace of business expansion by banks, then risks may increase significantly as a result in coming years.

Although credit institutions have stepped up their activities in this segment in recent years, market concentration is currently still regarded as high, despite the sharp reduction in the degree of concentration, particularly in the past five years. The 10 banks most active in lending to households account for 84% of the total stock of loans (see Chart 2.10). Just as in the case of lending, the bank card business also features a high degree of concentration. Although 24 financial institutions are now involved in the issuing business, five banks continue to dominate this segment as re-

[8] The ratio of households' financial liabilities to disposable income.

gards both the number of cards issued and their share of total turnover. The number of cards issued has continued to grow, but the rate of growth is slowing as the market gradually begins to show signs of saturation. Most bank cards continue to function basically as debit cards, but the number of credit cards and charge cards almost doubled last year, reaching 6% of the total.

The lion's share of the rise in loans outstanding to households was accounted for by long-term loans. As a result, the share of such loans within total lending amounted to 87% at year-end.

Consumer credit and other loans (the latter include car purchase finance as well) continue to grow at a high rate (50%), although it appears to have slowed relative to the previous year. The amount of the monthly instalment is regarded as the most important aspect by households instead of the amount of interest rate charged by banks.

That has been a strong contributing factor to the recent increase in outstanding consumer credit. Interest rates charged on consumer credit are still very high, the total cost of a number of loan facilities exceeding even 30%. The battle for private customers, therefore, is being fought by introducing new facilities, linked with current accounts and bank cards, and the administration of loan and deposit transactions, satisfying customers' comfort requirements, rather than prices. The gradual fall in consumer credit rates during the earlier part of the year stopped in November due to the rise in official rates and strong demand for credit towards year-end. With competition intensifying, household real borrowing rates are expected to fall in coming years, although not spectacularly, owing to strong demand, the high fixed service charges, the higher probability of default on the part of households relative to companies, and a shift towards segments carrying more risks.

Last year saw a breakthrough in credit institutions' housing finance activity. The percentage share of mortgage loans increased modestly, by 3.5% in the first half of the year, but over the year as a whole, such loans surged by 35%. Introduced in February 2000 as part of the Government's housing strategy, the special, subsidised interest rate home loan facility is combined with the issue of mortgage. It appeared in the market as the rival to credit institutions' loan products carrying normal conditions. A number of commercial banks, active in personal lending, entered the market by selling the product as agents. The easing of the originally strict criteria for subsidised home loans in July resulted in a jump in the range of applicants and the number of accepted loan applications. This helped the market to find new vigour in the latter part of the year.

The stock of mortgage-backed home loans of the entire banking sector soared by HUF 60 billion, to a total HUF 188 billion at year-end. Credit cooperatives' outstanding housing loans more than doubled, amounting to HUF 39 billion towards the end of the year. A genuine increase is expected during 2001, with special regard to clients having entered into contracts with home savings institutions earlier. In order to remain competitive in this segment, banks markedly reduced the interest rate on housing loans, by a total 5 percentage points.

The use of mortgages is characteristic of home loans. Nevertheless, the risk arising from a price bubble in the property mar-

ket is limited, as banks take properties serving as collateral into account at well below market prices.

Off-balance sheet exposure

In conjunction with the expansion of bank lending, the off-balance sheet activities of banks increased significantly as well. The rise in forward liabilities was particularly strong. Outstanding stocks show large within-year variations,[9] especially those of forward liabilities. Accordingly, the total amount of outstanding contingent and forward liabilities was only 8.6% higher than at the end of the previous year, while the average outstanding stock in 2000 was 29.5% higher than in 1999. There was a nearly 44% rise in average stocks, weighted by transaction risk,[10] in one year (see Table 2.B). The stock of forward liabilities grew dynamically from the start of the year up to May, finally settling at a somewhat lower level in the second half, when contingent liabilities rose. Outstanding forward and contingent liabilities both fell slightly at year-end, as banks usually close some of their positions at the end of the year. The robust within-year change in the outstanding amount of off-balance sheet liabilities, taken into account at contract value, is significantly distorted by the weights used for calculating credit equivalents, given that the credit equivalent of forward liabilities accounts for only 16%–19% of contract value. Therefore, the large volatility of forward liabilities has only a slight effect on transactions-weighted values (see Charts 2.11 and 2.12).

The outstanding total of off-balance sheet liabilities, measured at contract value, rose much more moderately in 2000 than in 1999, the most significant transactions continuing to be guarantee undertakings and various credit line agreements. The outstanding stock of the latter was just 10% higher at end-2000 than at end-1999. Judging from this, the growth rate of lending will presumably fall.

The exceptionally strong rise in the average outstanding stock of forward liabilities, measured at contract value, can essentially be ascribed to the increase in foreign currency agreements. The outstanding value of interest rate agreements rose much more modestly and showed much less volatility within the year. In 1999, approximating the international trends, the percentage share of interest rate agreements rose; however, in 2000 it was foreign currency forwards that increased at a faster pace, with their percentage share reaching levels seen prior to the Russian financial crisis. Securities transactions accounted for 5% in 1999, falling almost to zero to the end of 2000. Banks did not transact in index futures at all in the course of the year (see Table 2.C).

There was a slight shift in the maturity pattern of forward liabilities in 2000 towards shorter maturities. Forward agreements with maturities of less than one year make up nearly 90% of total forward contracts and the increase in volume is essentially the

Table 2.B **Off-balance sheet activities of banks**
(Average stock data)

Per cent

	1999		2000		
	HUF billions	As a percentage of balance sheet total	HUF billions	As a percentage of balance sheet total	Index
Balance sheet, total	6,782.3		7,866.9		116.0
Contingent liabilities					
– at contract value	1,879.0	27.7	2,243.6	28.5	119.4
– at a value weighted by transaction risk	808.4	11.9	1,073.1	13.6	132.7
Forward liabilities					
– at contract value	914.0	13.5	1,373.5	17.5	150.3
– at a value weighted by transaction risk	102.3	1.5	237.8	3.0	232.5
Total liabilities off balance sheet					
– at contract value	2,792.9	41.2	3,617.1	46.0	129.5
– at a value weighted by transaction risk	910.7	13.4	1,310.9	16.7	143.9

Chart 2.11 **Banks' off-balance sheet liabilities at contract value**

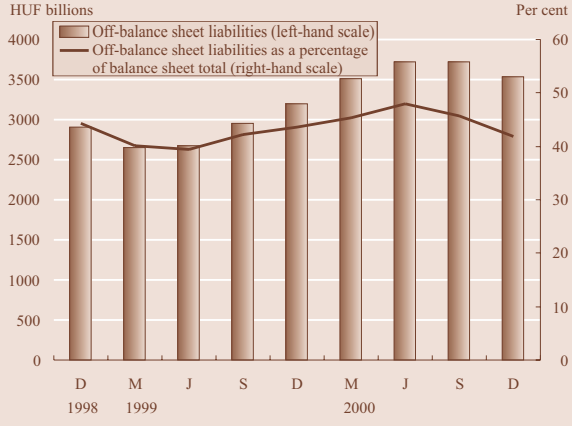


Chart 2.12 **Banks' off-balance sheet liabilities weighted by transaction risk**

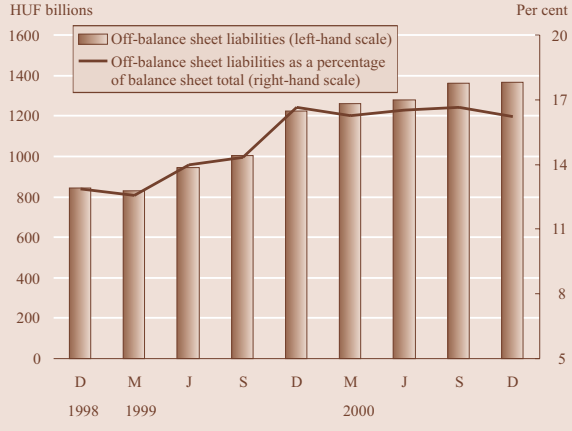


Table 2.C **Composition of future liabilities**
(Based on average stocks)

Per cent

	1999	2000	2000/1999
Interest rate agreements	18.2	13.4	110.8
Foreign currency forwards	76.7	85.4	167.3
Securities futures	5.1	1.2	35.3
Total forward liabilities	100.0	100.0	150.3

[9] Therefore, the annual average stocks, calculated from the month-end values, have also been analysed.

[10] The risk weights used are higher than the international standards due to the Hungarian environment (for a boxed description, see the August 2000 *Report on Financial Stability)*, but the new regulation, in force since April 2001, is consistent with international practice.

main source of potential risk. Nearly two-thirds of interest rate agreements are accounted for by agreements with maturities of more than 2 years. Banks transact more than one-half of forward contracts in the OTC market and around one-third with non-financial corporations.[11]

Portfolio quality

Lending expansion caused the total of banking sector portfolio to be qualified[12] to rise by 16% in 2000. Within this, items on balance sheet were up 21.5%, at HUF 5,639 billion, and their share of the total portfolio exceeds 62%. The proportion of problem assets fell slightly, from 8.8% to 8.4%. In view of the fact that 97% of off-balance sheet liabilities are problem-free, and the majority of qualified assets are classified into the special-watch category, this analysis will not cover off-balance sheet items. Instead of the total portfolio, the analysis of items on balance sheet better reflects actual lending risks, as off-balance sheet liabilities are taken into account at contract values and not at credit equivalent values in the portfolio.[13]

The proportion of banks' on balance sheet problem items fell from 13.2% to 11.6% within the total portfolio (see Chart 2.13). Roughly one-half of assets sold in the course of the year are presumed to belong to poorer asset categories, as there are major differences between book value and sales value. Eliminating the effect of asset sales and write-offs,[14] banks' portfolio improved much more modestly, by a mere 0.8 of a percentage point.

The proportion of risk-weighted rated assets[15] in the portfolio of balance sheet items fell from 3.3% to 2.6%, explained in part by a drop in the stock of items classified into lower categories, and in part by the strong increase in problem-free assets. When lending activity increases, the vast majority of new loans are classified into the problem-free category (see Chart 2.14).

The improvement in portfolio quality caused a reduction in total risk provisions. The cover for classified assets provided by provisions fell in the special-watch and substandard categories, and rose in the doubtful and bad classes.

Loans outstanding to households increased by 44.6% in the course of the year. As a result of the vast majority of this increase being classified as problem-free, the ratio to the total of classified assets fell from 14.2% to 13.1%, while assets classified as substandard nearly doubled, those in the special-watch and doubtful cat-

Chart 2.13 **Quality of banks' balance sheet items**

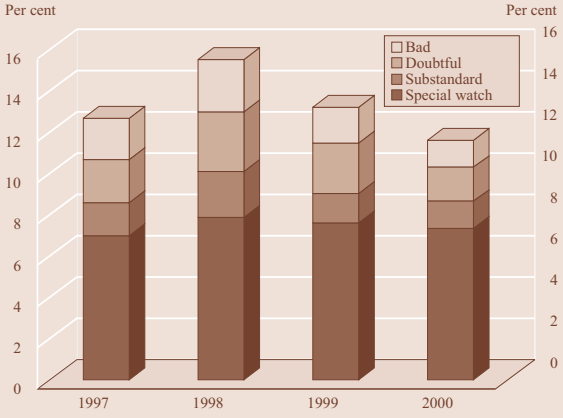
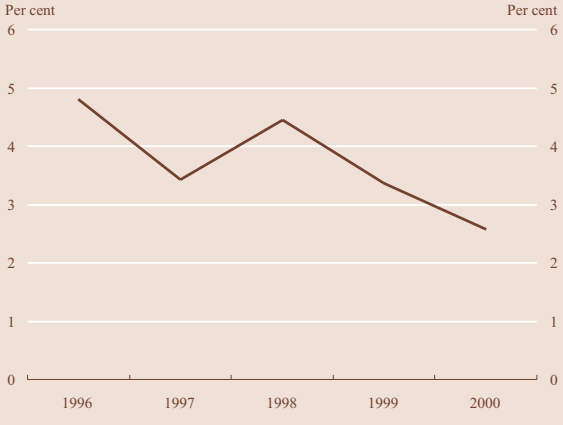


Chart 2.14 **Weighted rated assets as a percentage of the portfolio***



* Balance sheet items.

[11] Analysis of banks' activities in the market of foreign currency derivatives can be found in the February 2001 *Report on Financial Stability*.
[12] Banks' portfolios to be qualified do not include securities issued by the Hungarian State Treasury, deposit placed with the NBH, and bills issued by the NBH, but do include contingent and future liabilities at contract value.
[13] The considerable change in off-balance sheet liabilities at contract value would significantly alter the value for the indicator measuring portfolio quality, even if the total of off-balance sheet items barely changed, measured at credit-equivalent value.
[14] The numerator and the denominator have been adjusted by the value of assets written off or disposed of in the course of the year.
[15] The asset categories mean different degrees of risk, therefore, the assets have been weighted by the arithmetic average of the provisioning interval for the various categories. Accordingly, the weights used are 0.05 for the special-watch category, 0.2 for the substandard, 0.5 for the doubtful, and 0.85 for the bad asset categories.

Table 2. D **Household loan portfolio quality**

Per cent

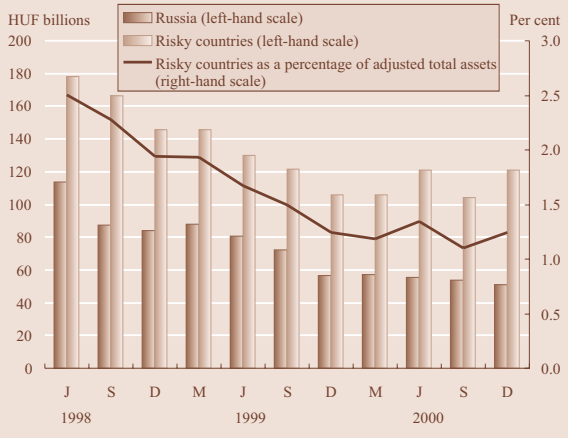
	1999		2000		Index
	HUF billions	Percentages	HUF billions	Percentages	2000/1999
Problem-free	252.3	85.8	369.8	86.9	146.6
Special watch	22.9	7.8	32.6	7.7	142.3
Substandard	3.3	1.1	6.5	1.5	195.4
Doubtful	4.0	1.4	5.1	1.2	128.4
Bad	11.7	4.0	11.4	2.7	97.3
Total	294.1	100.0	425.3	100.0	144.6

egories rising as well. The stock of bad assets fell slightly relative to the previous year[16] (see Table 2.D).

Cooperative credit institutions exhibit much worse overall portfolio quality than credit institutions operating as companies limited by shares. The total portfolio expanded by 32%. Here, classified assets rose at a more rapid rate than problem-free assets (25%), except for bad assets. As a result, the percentage share of problem assets rose to 33.6%, exceeding the previous year's value by nearly 4 percentage points.

In analysing the portfolio quality of banking sector assets, it should be noted that a potential worsening of the macroeconomic situation may have adverse effects on portfolio quality due to pro-cyclical characteristics of operations. The increase in problem assets naturally accompanying the pick-up in lending and the resulting need to allocate provisions, therefore, passes through with a significant delay (as much as several years), even though it stems from the current years' activities.

Chart 2.15 **Country risk exposure of banks**



Country risk exposure

Risk exposures to non-residents fell significantly, by 12% in nominal terms in 2000. Their ratio to the total adjusted stock[17] also fell following the tentative rise in earlier years, due partly to the increase in foreign currency lending to domestic firms. Despite the decline in bank transactions in risk-free countries,[18] exposures exist mainly to these countries. A large part of exposures to countries categorised into group three is related to a commitment in Turkey, which, however, does not constitute a genuine increase in risks, as it is counter-guaranteed by the Hungarian State. The vast bulk of exposures continues to be interbank deposits and loans. Contingent and future liabilities also represent a large amount, but 95 per cent is practically vis-à-vis risk-free countries (see Chart 2.15 and Table 2.E).

Although the concentration of risk by country reduced, it continues to be significant. Four countries account for more than one-half of banking sector exposures to non-residents. That, however, does not represent a serious risk, as each of these countries belongs to category 1, qualified as carrying no risk. Around 90% of exposures is vis-à-vis 15 countries, 12 of which are categorised into the risk-free class.

Risk exposures to Russia constitute the only notable source of risk for the banking sector as a whole. Despite the fact that a number of banks have significantly cut back on their transactions in Russia, the amount of exposures to Russia was HUF 55 billion, barely falling in 2000. In the Bank's view, country risk exposures for the banking sector as a whole are low.

According to a Ministry of Finance Decree on country risk exposures, domestic credit institutions are obliged to form provisions against their country risks, taking into account the risks represented by the individual countries, and the amount of expo-

Table 2. E **Composition of banks' risk exposures to non-residents**

Per cent

	1999	2000	2000/1999
Category 1	89.8	86.8	85.2
Category 2	3.1	3.5	99.7
Category 3	0.7	3.2	385.2
Category 4	6.4	6.6	90.6
of which: Russia	5.4	6.0	97.5
Total	**100.0**	**100.0**	**88.1**

[16] The February 2001 *Report on Financial Stability* considers in detail the characteristics of banks' household lending portfolio.
[17] The percentage weights given to on-balance sheet items, contingent liabilities and future liabilities are 100, 50 and 10 respectively.
[18] Risk-free countries are categorised into class 1 and those carrying the highest risk into class 4.

sure relative to the bank's capital strength. The increase of 38% in the banking sector's country risk provisions in 2000 was explained in large part by the exposure of one bank to Russia. Country risk provisions, formed in accordance with the Decree, pulled down pre-tax financial results of the banking sector by HUF 4.3 billion in 2000. When amending the legislation on credit institutions, accounting and the related decrees, the regulations on country risk exposures were reconsidered. Country risk provisions will be abolished in 2001, their role being taken over in part by capital requirements. The HUF 13.4 billion in country risk provisions, allocated by the banking sector so far, will be released, and will contribute to pre-tax financial results.

Market risks

The Hungarian banking sector's exposures to potential losses due to market risks have remained moderate so far. However, in the long run an increase in the weight of these types of risk must be reckoned with, simultaneously with the pick-up in foreign exchange market activities.

Interest rate exposure

In contrast with the relatively even decline in 1999, market returns and bank interest rates showed increased volatility in 2000. Presumably influenced by the uncertainties surrounding interest rate expectations and the reversal of the interest rate trend, banks reduced their open interest rate positions, moderately in H1 and then more strongly in H2, as the earlier wider negative re-pricing gap constituted a potential source of loss. However, the reduction in spreads stalled, in parallel with the pause in the disinflation process, and the proportion of interest-bearing assets rose relative to interest-bearing liabilities. The percentage share within the balance sheet of forint assets with re-pricing periods of less than 90 days rose from 76% at end-1999 to 79% at end-2000. By contrast, the share of forint liabilities with re-pricing periods of up to 90 days fell from 94% to 91%.

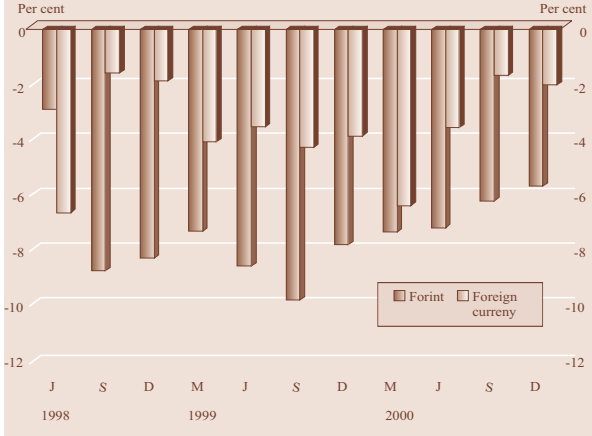
The proportion of foreign currency denominated balance sheet items with short re-pricing periods changed only slightly relative to forint assets and liabilities – the percentage share of foreign currency assets with pricing periods of no more than 90 days rose from 72% to 73%, while that of liabilities with pricing periods of up to 90 days fell from 83% to 82% (see Table 2.F and Chart 2.16).[19]

Paradoxically, despite the negative gap, banks not only avoided a decline in their interest income in the final quarter of the year, but realised better interest income in the final quarter relative to earlier periods. This cannot be explained by favourable within-year changes in the structure of assets and liabilities,

Table 2.F **Major indicators of banking sector interest rate exposure**[20]

	1999	2000 H1
90-day cumulated forint gap (HUF billions)	–577.0	–481.0
90-day cumulated foreign exchange gap (HUF billions)	–284.9	–170.9
90-day cumulated forint gap/balance sheet total	–7.9%	–5.7%
90-day cumulated foreign exchange gap/balance sheet total	–3.9%	–2.0%
Average of interest-bearing assets/average of interest-bearing liabilities	108.1%	108.9%
Interest margin (interest income/average balance sheet total)	4.08%	3.95%
Spread (interest income/average of interest-bearing assets – interest expenditure/average of interest-bearing liabilities)	3.68%	3.70%

Chart 2.16 **Banking sector cumulated 90-day re-pricing gaps as a proportion of the balance sheet total**



[19] There is a limited potential in Hungary to reduce off-balance sheet risks relative to with countries with developed financial intermediary systems.

[20] The re-pricing gaps exclude those of Takarékbank. The explanation for this is that savings cooperatives' credit lines, arising from umbrella bank operations and related to meeting reserve requirements, are significant, although negligibly exploited. Moreover, utilisations were reported differently in the past two years.

as, taking the year as a whole, the improvement in the ratio of interest-bearing assets to interest-bearing liabilities was largely due to changes in the first six months. On average, the spread was the widest in the final quarter, which partly explains the favourable change. Taking into account the structure of the re-pricing balance sheet, this is attributable to the fact that, whereas lending at variable interest rates accounts for 86% forint loans (most of them pegged to market reference rates), the same ratio for forint deposits is only 56%.

This means that, when pricing deposits, banks have a greater room to decide how much of market interest rate increases they incorporate into prices. In addition, banks have attempted to 'smooth out' household deposit rates. Therefore, in 2000 H2 banks adjusted their deposit rates less than their lending rates to the turnaround in the interest rate trend. Corporate sector borrowing rates were more volatile in 2000 H2, similar to market returns. Household deposit rates, on the other hand, followed movements in market rates much more moderately.

The potential effect of the foreign exchange re-pricing gap on results is much more limited due to the size of the gap and the small magnitude of interest rate movements. The narrowing of foreign exchange re-pricing gaps in the banking sector in 2000 can be explained by the rise in foreign interest rates, although while euro interest rates rose almost uninterruptedly during the year, the upward trend of dollar interest rates stalled around mid-year, before reversing towards year-end.

Chart 2.17 **Percentage shares of foreign currency assets and liabilities in banks' balance sheet**

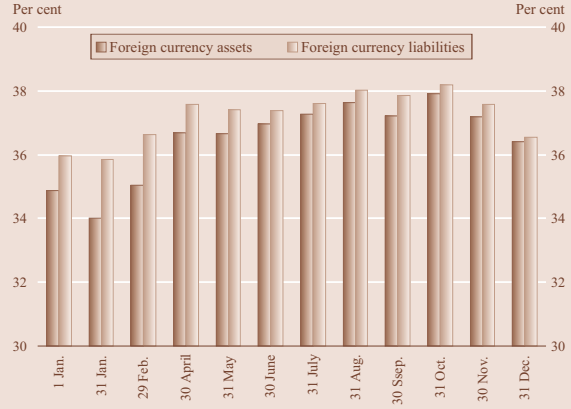


Chart 2.18 **Total and balance sheet open position of the banking sector**

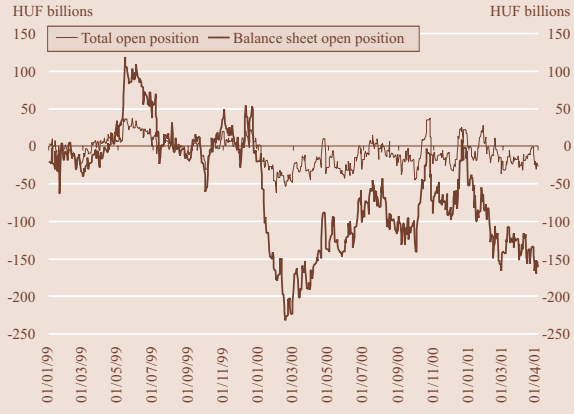
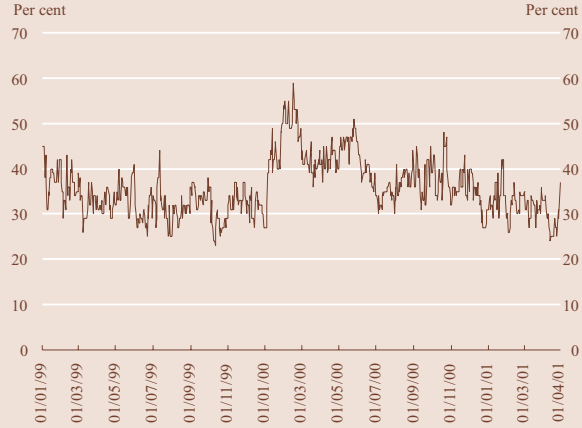


Chart 2.19 **Utilisation of limits for open position**



Exchange rate exposure

Looking at the denomination composition of the balance sheet, the banking sector's open foreign exchange position reversed once again from a long into a short foreign exchange position in 2000, as seen in the period preceding the Russian crisis. Nevertheless, the size of this foreign currency surplus on the liabilities side was only a fraction of the value observed in the summer of 1998 (see Chart 2.17). Starting from end-1999, banks began to speculate increasingly in favour of the forint, and by mid-February 2000 they had built a HUF 180 billion forint long open position according to the balance sheet. The open position was the result of a slight fall in foreign currency assets (in particular in short-term foreign currency assets held with the central bank) as well as a modest increase in foreign currency liabilities. This also implied that in the first three months of the year the percentage share of foreign currency fell on both the assets and liabilities sides relative to the strongly expanding balance sheet total. Judging these developments as unwelcome, the Bank reacted by reducing the two-week deposit rate in several steps in the first quarter, which helped alleviate speculative pressures. As an effect of the reductions in the deposit rate and the change to the system of required reserves, banks gradually liquidated their foreign exchange open positions, owing primarily to the strong increase in foreign currency assets, and foreign currency loans in particular.

The percentage share of foreign currency remained in a narrow range of 37–38% on both the assets and liabilities sides. There was a slight drop on both sides only in the last month of the year, so banks' balance sheet position remained closed.

The banking sector's total open position (on and off-balance sheet) peaked in January 2000, then began to fall gradually. By early August, the total open position had become neutral and remained so until year-end, with the balance sheet open position shrinking to a level of around HUF 50 billion. Banks' behaviour took an abrupt turn in January 2001, when the balance sheet open position opened up significantly, reaching HUF 143 billion towards end-February. But, unlike in the first two months of 2000, this did not entail a massive increase in the total open position, so exchange rate exposure did not increase considerably at the level of the entire sector (see Chart 2.18). Based on their total open position at end-April 2001, banks would realise profits amounting HUF 200–300 million from a 1 per cent appreciation of the forint. If banks cover their forward positions entirely with clients from their own business interests, then the balance sheet position itself is a better gauge of the sector's open position. Thus, banks would book a total HUF 1.3 billion profit from a 1 per cent appreciation.

The utilisation of the open position limit, set at 30% of regulatory capital, jumped to nearly 60% by mid-February 2000 as a result of pro-forint speculation. This stood in contrast with a low level of risk-taking characterising 1999 (30%–40% limit utilisation). Together with the reduction in long forint positions, limit utilisation returned to the level customary in 1999 (see Chart 2.19).

Banking sector liquidity

Banks' liquidity position tightened a little. The increase in customers' deposits (household sector forint deposits, accounting for the largest share, rose by only 13% in nominal terms during the year) could not keep pace with lending expansion. This resulted in the customer loan-to-customer deposit ratio rising to its highest level in six years towards the end of 2000, albeit it lagged behind the critical level (see Chart 2.20). The banking sector is in a comfortable position in terms of liquidity on both the assets and liabilities sides. On the one hand, despite the fall in the proportion of liquid assets as a percentage of the balance sheet total in 2000, this ratio remains sufficiently high. On the other hand, the proportion of borrowing in the money market within liabilities is low (see Charts 2. 21 and 2.22).

The decline in liquid assets as a percentage of the balance sheet total was attributable to increased business activities on the assets side. The simultaneous strong rise in 1998 H1, followed by a fall in the shares accounted for by liquid assets and foreign interbank liabilities, was primarily a reflection of the pick-up and subsequent decline in foreign currency–forint conversion activity aimed at deriving profits from the spread between forint and foreign currency interest rates. Although coupled with more modest conversion, the same phenomenon was reflected in 2000 H1, as indicated by the change in the composition of liquid assets – the share accounted for by forint deposits with the NBH increased up to end-February, then, under pressure from the Bank's deposit rate reductions taken in several steps, forint de-

***Chart 2.20* Loan-to-deposit ratio in the banking sector**
(Using average stocks)

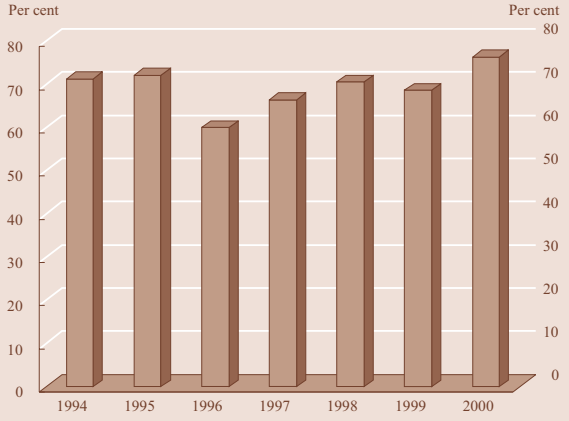
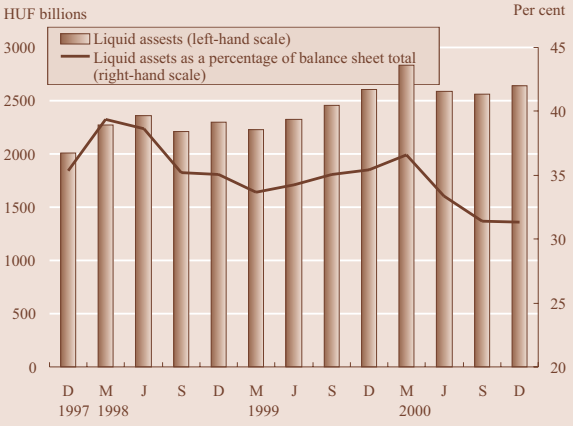
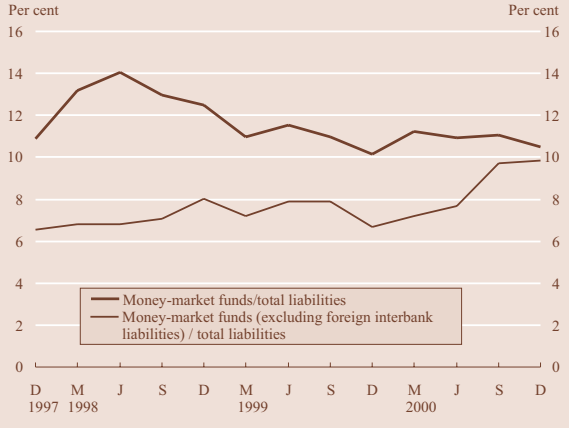


Chart 2.21* Liquid asset ratio



* Liquid assets: short-term interbank forint and foreign currency assets plus short-term forint deposits with central bank plus government securities holdings (excluding consolidation bonds) plus settlement accounts and cash.

***Chart 2.22* Money market exposure**



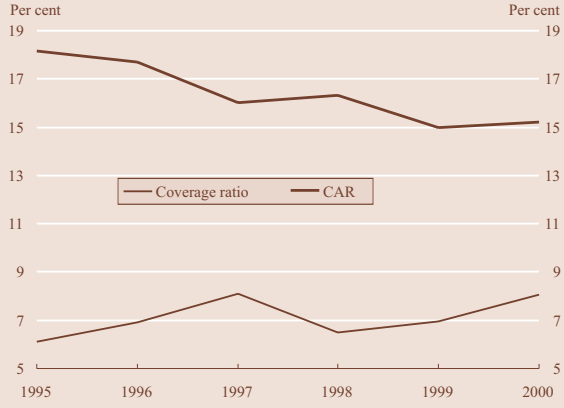
posits dropped off, with banks switching their surplus liquidity into other assets, including government paper and NBH bills.

The amount of maturity transformation banks undertook has increased year by year, except in 1999. The increase in long-term liabilities was unable to keep pace with that in long-term assets (see Chart 2.23).

In terms of individual banks and banking groups, there are large differences. The customer loan-to-customer deposit ratio of a number of banks, including many large banks as well, is currently around 100%. This fairly high value is coupled with the low level of some banks' liquid assets as a percentage of the balance sheet total, and with a considerable degree of money-market exposure of some others, which may cause liquidity problems in the future.

Chart 2.23 **Long-term assets and liabilities of the banking sector**

Chart 2.24 **Capital adequacy and coverage ratios***



* [(Equity + provisions on substandard, doubtful and bad assets) – (substandard + doubtful + bad assets)] / [(total assets – (substandard + doubtful + bad assets) + provisions on substandard, doubtful and bad assets)]

Table 2.G **Composition of regulatory capital**

Per cent

	2000/1999	1999	2000
Primary (Tier 1) capital	131.3	86.2	90.0
Supplementary (Tier 2) capital	98.6	21.2	16.6
Amount of limit excesses to be covered by capital	112.2	7.3	6.5
Regulatory capital	125.8	100.0	100.0

Table 2.H **Composition of the adjusted balance sheet total**
(risk-weighted assets)

Per cent

	2000/1999	1999	2000
20 per cent weighting	106.7	5.7	4.9
50 per cent weighting	150.7	1.2	1.5
100 per cent weighting	128.5	71.1	73.8
Sum of weighted balance sheet items	127.2	78.0	80.1
Weighted value of contingent and other future liabilities	113.2	21.9	20.0
Weighted value of forward claims	86.8	1.8	1.2
Risk provisions (–)	103.0	1.7	1.4
Adjusted balance sheet total	123.9	100.0	100.0

Banks' capital position and capital adequacy

At 22%, own funds of banks grew more strongly than inflation and the increase in balance sheet total in 2000. Favourable results and capital increases both played a role. The sector's coverage ratio improved significantly in the course of the year, with aggregate capital providing adequate cover in the event of an external shock to the assets side (see Chart 2.24).

Taking into account the estimated result according to the balance sheet,[21] the sector's capital adequacy ratio (CAR) was above 15%, thus the decline in this indicator seen for the last several years came to an end in 2000.[22] Specialised credit institutions and home savings institutions significantly improved the entire sector's capital adequacy ratio, as it would be only 13.5% excluding these two types of financial institutions. The CAR value is satisfactory in international comparison, suggesting that banks are suitably equipped with capital. It should be noted, however, that the value of the indicator would be lower if banks formed surplus provisions at times of a lending boom in order to cushion the impact of the pro-cyclical nature of portfolio quality and the need to form provisions.

In 2000, the sector's regulatory capital rose by 25.8%, exceeding the pace of risk-weighted asset growth (23.9%). Consequently, the sector's regulatory capital increased in proportion to the additional risks caused by the pick-up in lending activity. This adequate increase in regulatory capital was based on the rise in primary capital. In this respect, capital injections (registered capital rose by HUF 45 billion and capital reserves by HUF 33 billion), profit accumulation by banks booking profits in 1999 (profit reserves rose by HUF 23 billion), the HUF 46 billion increase in profits according to the balance sheet in 2000 and the

[21] As banks' results are expected to be lower when the financial statements are audited, dividend payments have been estimated from above, starting from profit-making banks' dividend policies in the previous three years (taking into account dividend/registered capital ratios).

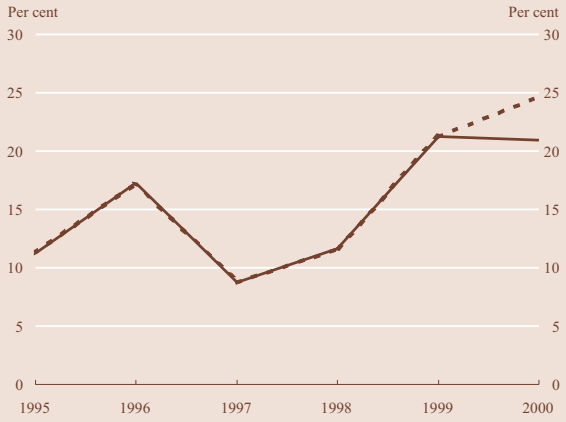
[22] The new change to regulations, under which subordinated loan capital can be taken into account up to 50% of core capital elements, instead of the earlier 100%, reduced the aggregate capital adequacy ratio negligibly.

HUF 18 billion decline in banks' investments in financial undertakings, all played a role (see Table 2.G).[23]

The stock of risk-weighted balance sheet items grew by 27% in 2000, with the stock of off-balance sheet items, weighted by transaction and customer risks, rising more modestly, by 11%. Unlike the experience of 1999, the rise in risks undertaken by banks primarily affected items on balance sheet, due to the pick-up in lending to clients. The recent fairly high growth rate of risk-weighted items on and off balance sheet deserves special mention from the perspective of risk management and prudential operations, although it is a natural factor accompanying economic and banking sector development (see Chart 2.H).

Analysis of banks' capital position naturally reveals marked differences. At end-2000, the combined market share of banks with CAR outcomes below 10% was 24.7%. That was higher than the value of 21.3% recorded at end-1999, because of the effect of changes to regulations relating to state-owned companies. Eliminating the impact of regulatory changes, the market share of banks with low CAR records, taken collectively, fell to 20.9%. In the Bank's view, this does not represent any systemic risk, taking into account owners' commitment to secure adequate capital strength. In the case of a few banks with the strongest contributions to the pick-up in lending, low outturns for CAR may hinder future credit expansion, unless they receive additional capital injections (see Chart 2.25).

Chart 2.25* Market shares of banks with CARs below 10%



* Taking no account of changes to regulations on state-owned companies when calculating lower extremes for 2000.

Profits/losses in the banking sector

Following the poor results in 1999, the sector registered spectacular improvements in profitability in 2000. Lending expansion, fuelled by beneficial economic conditions, favourably influenced credit institutions' financial results last year (see Table 2.I). Profits after taxation more than tripled, amounting to HUF 78 billion. Banks posting stable performance in earlier years continued to improve their profitability. The number of loss-making entities fell from 16 to 12 in one year, and the sizes of losses incurred also declined. Improving results helped to narrow the previously wide gaps among banks in terms of profitability. For the first time in many years, banks were able to preserve their capital. At 10.9%, return on equity (ROE)[24] slightly outperformed annual average inflation. However, more than one-half of credit institutions (26), including mostly small banks, suffered a partial loss of capital.

The wide gap between the sector's profits in the first and second halves of the year, observed for several years, narrowed substantially in 2000. Playing a partial role in this was the fact that interest rates began to rise in the final quarter of the year, which banks built more into loan prices than deposit rates, thus being able to book good interest income. On the other hand, banks' practice to postpone generating loan-loss provisions less se-

***Table 2.I* Banking sector profits/losses**

	1999	2000	Index, per cent
	HUF billions		
Net interest income	276.8	310.8	112.4
Change in provisions	–3.5	–1.2	
Other profits/losses	32.8	94.6	288.7
of which: Net commission revenue	60.8	78.8	129.8
GROSS PROFIT FROM FINANCIAL AND INVESTMENT SERVICES	306.1	404.2	132.3
Costs of banking operations	271.0	296.8	109.8
PROFIT FROM FINANCIAL AND INVESTMENT SERVICES	35.0	107.4	304.4
Profit from other non-financial and investment services	–0.8	1.3	
ORDINARY TRADING PROFIT	34.2	108.7	315.1
Extraordinary profit	2.8	–11.1	
PRE-TAX PROFIT	37.0	97.5	260.9
Tax liability	13.0	19.4	150.0
AFTER-TAX PROFIT	24.0	78.1	319.8

[23] Under the rules currently in force, regulatory capital must be reduced by the value of such investments.
[24] After-tax profit/average shareholders' equity.

Table 2.J **Decomposing spread**

	1999	2000	Per cent
Average stock of interest-bearing assets (HUF billions)	6,191	7,256	117.3
Average stock of interest-bearing liabilities (HUF billions)	5,725	6,665	116.5
Interest income (HUF billions)	872	791.7	90.8
Interest expenditure (HUF billions)	596	480.9	80.7
Interest income/interest-bearing assets (per cent)	14.1	10.9	
Interest expenditure/ interest-bearing liabilities (per cent)	10.4	7.2	
Spread (per cent)	3.7	3.7	

Table 2.K **Impact of generating and releasing provisions on profits**

HUF billions

	1999	2000
Net provisioning for securities (excluding government paper)	8.3	–0.1
Net provisioning for loans and interbank deposits	17.6	26.8
Net provisioning for other assets to be classified	20.8	9.2
Risk provisions for on-balance sheet items, total	46.7	35.9
Risk provisions for off-balance sheet items, total	4.4	–7.5
Other provisions	5.8	4.9
General risk provisions	17.4	11.5
TOTAL	74.4	44.9

verely marred the sector's results for the second half, owing to the less pressing need to build provisions for lending losses.

The narrowing of spreads which lasted for several years and fundamentally determined the profits of banking operations stopped last year. Interest rates on consumer credit even rose. As a result of unchanged spreads and a significant expansion of business activities, net interest and commission revenues[25] rose by nearly 16%. Contributing to the increase in net interest income was the rise in interest-bearing assets outpacing that in interest-bearing liabilities (see Table 2.J).

The shifts in the sector's asset structure are clearly reflected in the developments in the composition of interest income. The strong pick-up in lending helped interest income from lending to rise by 10 percentage points, to 54%, while interest income from the central bank fell in nominal terms.

The fall in government securities yields and the change in data reporting requirements[26] resulted in interest income from securities falling significantly, to nearly one-half of that recorded a year earlier, with the added result that its proportion in total interest income fell by some 12%. The change to data reporting rules was also instrumental in the substantial drop in other interest expenditure. Eliminating this effect, the composition of interest expenditure did not change materially – interest remunerated on deposits continued to account for 55%–60% of interest expenditure.

Non-interest income of the banking sector rose very strongly, by some HUF 62 billion, within trading profits last year. Although this amount rose to nearly one-third of net interest income, it still continued to lag behind the banking sector averages of the European Union. Net commission revenue was up 30%, with most banks booking higher profits from foreign currency trading. It was mainly large banks that registered increases in net commission revenue as a percentage of the balance sheet total. Although 11 credit institutions received licences to provide full-scale investment services, exploiting the opportunities offered by the

[25] Including profits/losses from foreign currency trading and exchange rate changes as well as forward transactions.

[26] In the profit and loss statement to be submitted to the Supervisory Authority from 2000, accrued interest paid on the purchase of a security (an expenditure item) and the related interest income must be recorded on a net basis, in the line 'Interest and interest related income from securities'. (In the previous year, the rule was to record expenditures within other interest related income.)

amended legal regulations from 1 January 1999, this had a barely noticeable effect on profitability. Despite the rise in non-interest income, interest income continues to be dominant in banks' operating results, its share within operating results varying between 70%–80% for several years now.

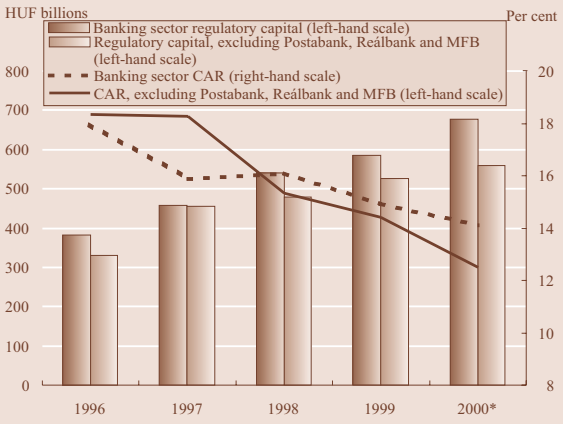
The changes in portfolio quality and, as a consequence, the costs of provisioning have not yet affected negatively the upsurge in profits. It should be noted, however, that, when lending soars, portfolio quality generally shows a rosy picture. But it may deteriorate abruptly when the cyclical upturn falters, which may worsen the sector's future results and profitability significantly. On balance, net costs of loan provisioning placed a much lighter burden on banks' profitability in 2000 than in 1999. This, however, was attributable in part to the high reference value, which, in turn, was owing to large one-off losses incurred in the base year as an after-effect of the Russian crisis. Banks released HUF 25 billion less in provisions on loans[27] than a year earlier, building HUF 16 billion less provisions as well (see Table 2.K).

The vast improvement in banks' cost efficiency was favourable for profitability last year. The increase in operating costs, at 9.8%, did not exceed the inflation rate for the first time for a long spell. Accompanied by a reduction of 2,000 in staff, savings were registered mostly in payments to personnel. Banks' personnel management efficiency also improved, with the balance sheet total and operating profits, calculated per head, both rising. Another factor contributing to the improvement in cost efficiency was the nearly 11% drop in expenses relating to IT developments.

The majority of banks revised their computer systems, and replaced or modernised their communications networks already in 1998–99, ahead of the millennium date change.

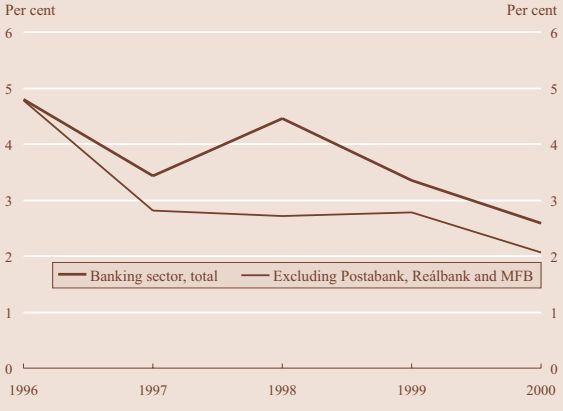
The financial results before taxes of cooperative credit institutions were 25% higher in 2000 than in the previous year. ROE was 16.2%, showing an improvement of 1 percentage point. Due to the deterioration in the lending portfolio, the balance of provisions meant a much larger burden on results than in 1999. As regards cost efficiency, cooperatives lagged behind banks. Their operating costs rose more rapidly (by 20%) than that of the banks.

Chart 2.26* Banking sector capital strength



* CAR calculated not taking into view results for 2000.

***Chart 2.27* Ratio of risk-weighted classified assets to total portfolio**
(Only balance sheet items)



Impact of the financial results of Postabank, MFB and Reálbank on the long-term time series of the banking sector

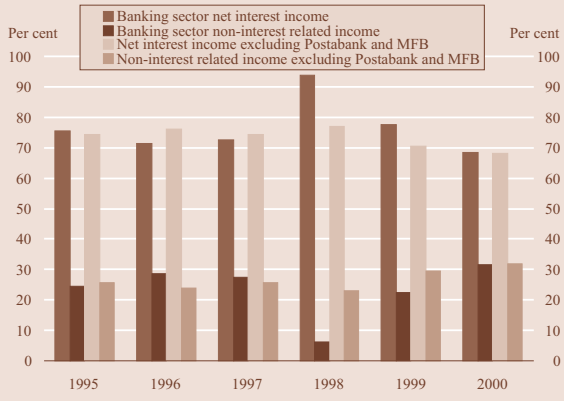
Individual effects may often change trends underlying the entire Hungarian banking sector, due to the small size of the community. The problems arising at Postabank and Reálbank in 1998 had been accumulating for many years, resulting in losses in 1998 comparable with those recorded during the consolidation of 1993.

In order to improve the reliability of analyses of the long term trends of portfolio quality, capital strength and profitability of the banking sector, the data for the two banks, already noted, and those for MFB, playing a role in the consolidation of Postabank, were eliminated from the data base from 1998. The financial consolidation of Postabank has virtually been completed. Today, there is no reason to treat these banks separately. However, it may cause problems in

[27] Loans to the corporate and household sectors, other loans and interbank deposits.

the case of a few time series that, due to the huge losses incurred in 1998 as a one-off shock, a number of the Bank's charts and tables, mainly those on profitability and provisioning, present different data from those in earlier analyses. In the following, the Bank will present the differences from the aggregate data for the banking sector and data calculated eliminating those of the aforementioned three banks (see Charts 2. 26–2.30).

Chat 2.28 **Ratio of interest and non-interest related income to operating results**



Char 2.29 **Loan loss provisioning and its effects on results**

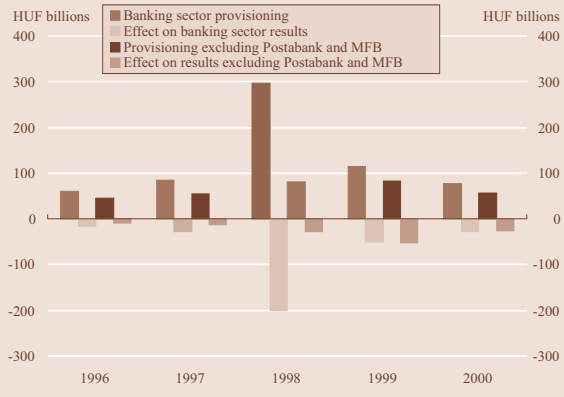
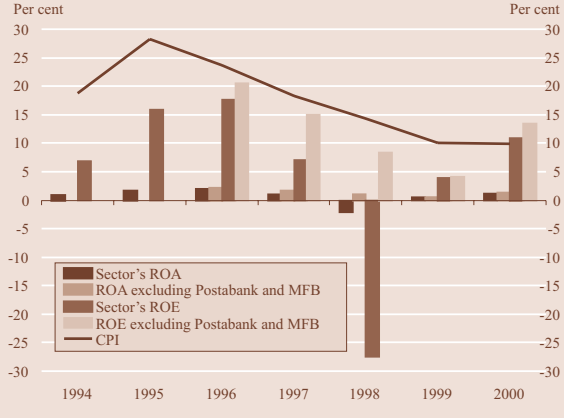


Chart 2.30 **Banking sector ROA and ROE**



3 The position of non-bank financial intermediaries in 2000

General overview

The depth of non-bank financial intermediation can be analysed from two perspectives. One is to look at the size and growth of intermediaries, either relating them to themselves or to credit institutions or even to GDP. The other is to take a view of the pattern of household savings or financial wealth and its time profile. The following is a description and analysis of non-bank intermediation from the perspective of the intermediaries. Analysis of household savings and financial wealth is included in Section 1.

Non-bank financial intermediaries grew similarly in 2000 as in the previous year. The aggregate value of investment funds' net assets, pension funds' assets, and investment firms and financial enterprises' balance sheet totals rose by 32% in 2000, compared with 37% in the previous year. That was more than double the growth registered by credit institutions. Measured in real terms, non-bank financial intermediaries registered a 20.3% growth. Pension funds, at 63%, performed the most saliently, as in the previous year. That was due mostly to the low base. At 5%, investment firms registered a very low growth rate. Here the poorer performance and worse profit outlook of companies listed on the stock exchange, and the withdrawal by investors on account of the appreciation of the dollar were the explanatory factors (see Table 3.A).

Indicating the growth potential of pension funds, their total assets can amount to some 30–40% of GDP in developed countries.[1] The total wealth of Hungarian funds, at HUF 405 billion at the end of 2000, accounted for 3% of Hungary's GDP (see Table 3.B).

Taking only the three non-bank types of institutions re-channelling household and corporate sector savings, i.e. investment funds, pension funds and insurance companies, their percentage share within the entire institutional system attracting financial savings rose from 20.6% to 24% in 2000. That was basically due to the robust increases in households' equity in pension funds and insurance premium reserves. Investment funds registered strong growth in the first quarter, but suffered a major slowdown during the remainder of the year due to a slack equities market (see Chart 3.1).

[1] In countries with the most advanced fund-based pension systems (the US, Great Britain, the Netherlands, Switzerland) this ratio is close to or even higher than 100% of GDP.

Table 3.A **Decomposing the financial intermediary sector**

Per cent

	Balance sheet total		
	1998	1999	2000
Credit institutions	84.6	81.9	79.7
Non-bank financial intermediaries	15.4	18.1	20.3
Investment firms	2.0	1.8	1.6
Net assets of investment funds	4.1	4.5	4.9
Insurance companies	5.4	5.9	6.4
Pension funds	1.6	2.6	3.6
Financial interprises	2.2	3.3	3.8
Total	100.0	100.0	100.0
Total (HUF billions)	8,180	9,534	11,249
Excluding credit institutions (HUF billions)	**1,258**	**1,727**	**2,287**

Table 3.B **Balance sheet total as a percentage of GDP (1997)**

Per cent

	Investment funds	Insurers and pension funds	Credit institutions
United Kingdom	16		296
Ireland	36	26	195
Belgium	23	26	278
Germany	16	32	222
France	33	40	224
Austria	14	23	230
Netherlands	16	124	194
Denmark	5	66	203
Portugal	17	23	184
Sweden	11	86	179
Spain	17	17	182
Italy	7	17	150
Finland	1	38	122
Greece	9	12	96
Hungary*	4	5	61

* 2000 data.

Chart 3.1 **Distribution of household and corporate sector savings by intermediary**

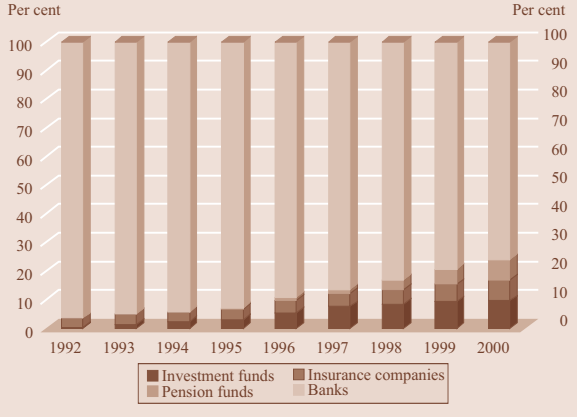
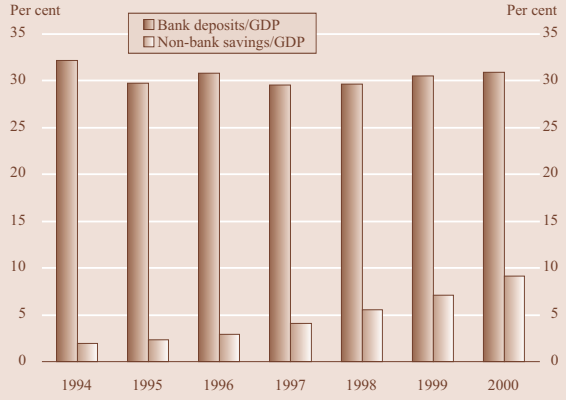


Chart 3.2 **Bank deposits and claims of the household and corporate sectors on non-bank financial intermediaries as a percentage of GDP***



* Yearly average stocks in the numerator.

Chart 3.3 **Percentages of government securities, and corporate shares and bonds in non-bank financial intermediaries' portfolios**

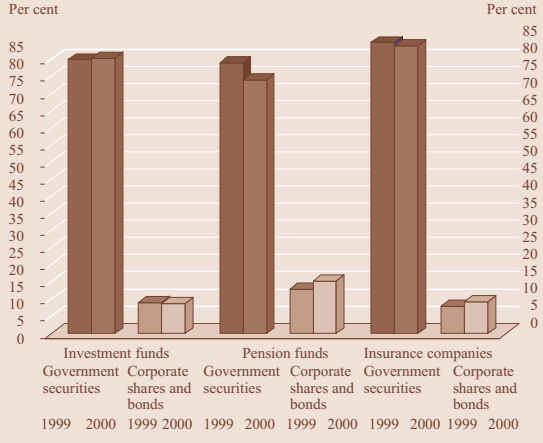
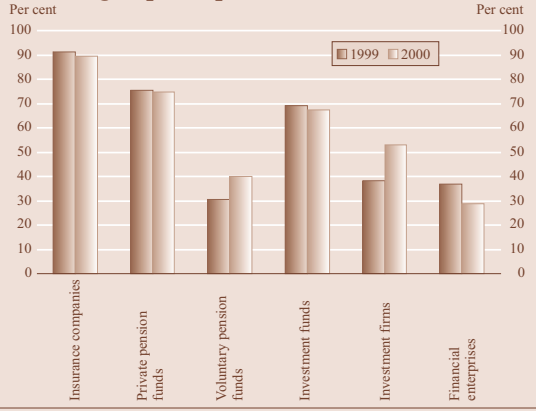


Chart 3.4 **Concentration of non-bank financial intermediation – combined market share of the 5 largest participants**



Savings with non-bank intermediaries can be compared to GDP as well. The ratio of savings to GDP was 9.1% in 2000, following 7.1% in 1999. By comparison, the bank deposits-to-GDP ratio was 30.9% in 2000 and 30.5% a year earlier (see Chart 3.2).

Investment funds, pension funds and insurance companies continued to channel some 74%–84% of savings into government securities. The proportion of shares within pension funds' and insurers' portfolios rose. When formulating their investment policies in 2000, pension funds' objective was to focus strongly on boosting returns. To this end, they stepped up their holdings of shares. However, the nosedive in share prices appears to have foiled their plans, at least for the time being. The percentage share of unit-linked insurance rose further within insurers' activities, causing a slight shift towards products carrying higher risks. Nevertheless, due to the risk-pooling characteristics of the facility, investors continue to shoulder most of the related risks (see Chart 3.3).

The market of investment firms saw increased concentration in the year under review. But that was still less than in the banking sector. There were only minor shifts in the other segments of non-bank financial intermediation, with evidently no massive rearrangement or drastic changes taking place (see Chart 3.4).

Non-bank financial intermediation is not independent of banks' activities. In 2000, growth registered by financial intermediaries linked to banking groups outpaced the performance of the entire sector. This appears to buttress the view that banks, particularly large banks, can provide a better background as regards the provision of finance and services, and that investor confidence in such institutions is higher. Instead of undertaking developments in business segments, banks focussed increasingly on customer service. Market competition forced almost all groups of banks not only to seek progress in the classic lines of bank business, but to complement their services on offer with non-bank savings products as well.

Regulatory changes

Tax preferences on contributions to pension funds were reduced in 2000. Instead of the earlier 50%, only 30% of surplus payments into private pension funds and voluntary funds are deductible from the tax base. In addition, the rules on originally planned payment rates were also changed. Therefore, members of private pension funds have another two years to decide whether they wish to accumulate savings in private pension funds or re-enter the social security pension scheme. Private pension fund members are obliged to pay a 6% membership fee to the fund and another 2% contribution to the state pension fund until 2003. (Originally, the membership fee would have been raised by 1% annually, thus reaching the statutory maximum, which the employer or the member would have chosen to complement to 10%.)

Regulation of non-bank financial intermediaries was far from adequate in 2000. To remedy the problem, a new package of legislation entered into force.

The amendment of the Insurance Act, effective since 1 January 2001, allows insurance companies to invest part of the insurance premium reserve in mortgages. Insurers may provide mortgage lending exclusively to their insured clients with regular payment of fees. The claim arising from the loan may not exceed 60% of the value of property (credit insurance value) serving as collateral for the loan. Complementing insurers activities with mortgage lending constitutes a type of risk which is not as yet widespread. It will entail the emergence of a new type of risk, as the upper limit of such a loan will be provided by the insured amount in the life insurance policy, in contrast with the policy loan, the amount of which may not exceed the repurchase price of the insurance. Accordingly, insurance companies will have to pass serious prudential tests – in order to start their mortgage lending business, they will have to apply for permission from the supervisory authority, classify their individual risks exposures, receivables and collaterals relevant for the activity, and also record all lending losses arising from the activity as a loss of value. Insurers may lend 5% of their insurance premium reserves as mortgage loans, but the total amount of their investments in property funds, properties and mortgages may not be higher than 20% of assets providing the coverage for the actuarial reserves and working capital.

In order to contain the risks undertaken by insurers, the provisions of the new Securities Act should be extended to unit-linked guaranteed return insurance schemes, complementing the general regulations on guaranteed return insurance schemes.

Amendment of the Banking Act will bring the following important changes for financial enterprises from 2001:

Financial holding companies will be classified as financial enterprises.

Minimum registered capital will be raised from HUF 20 million to HUF 50 million. The minimum registered capital of a financial holding company will be HUF 2 billion.

The regulation, whereby the amount of equity may not fall below the amount of minimum registered capital, will also be extended to financial enterprises.

According to the law, financial enterprises, except for financial holding companies, shall develop their own risk management guidelines.

Financial enterprises may collect funds by issuing bonds, backed by state or bank guarantee.

As a result of changes to accounting regulations, they must observe the following:

Making interest contingent.

According to the Government Decree on accounting, financial enterprises are obliged to classify their assets on the accounting date of the balance sheet, and to record value losses and retrievals, based on the classification of assets. However, the extent to which such value losses and retrievals must be recorded is defined in a separate Decree only for credit institutions. The Banking Act does not provide for the classification of assets either.

Investment funds

Size and growth of the market

The number of open-end investment funds rose from 86 at the start of the year to 107 towards end-December. The number of closed-end funds fell from 8 at end-1999 to 3 at end-2000. Based on past years' data, closed-end funds have been losing ground, both in terms of their number and the amount of assets managed. The first funds to start business were mostly closed-end, but with the changes to regulations (the extension of tax credits to open-end funds) the market has meanwhile begun to prefer open-end funds, capitalising on the advantage of much higher liquidity they offer (see Chart 3.5).

The total value of assets managed by investment funds was HUF 555.4 billion at the end of 2000. That represents a 29.4% increase in one year. Most of the increase occurred in the first quarter, as the investment fund market stagnated throughout the re-

Chart 3.5 **Number of investment funds and net asset value**

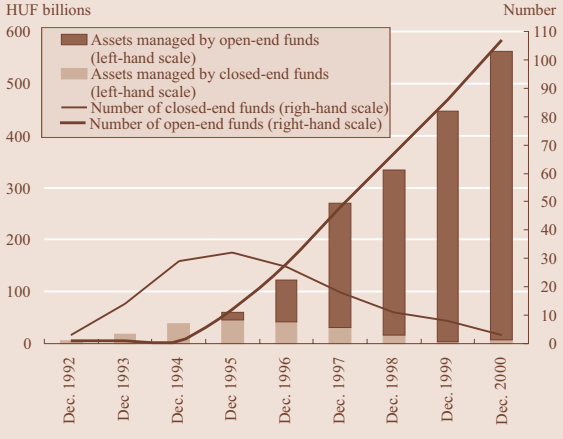


Table 3.C **Investment units held by main ownership categories**

Per cent

	1998	1999	2000
Credit institutions	2.1	1.8	2.1
Other legal entities	16.3	14.8	14.1
Households	79.4	81.6	81.5
Non-residents	2.1	1.8	2.3
Total	**100.0**	**100.0**	**100.0**

mainder of the year. Almost all of the increase was accounted for by the more secure money-market funds and bond funds. International and domestic equity funds continue to be insignificant despite the gradual rise in their aggregate capital.

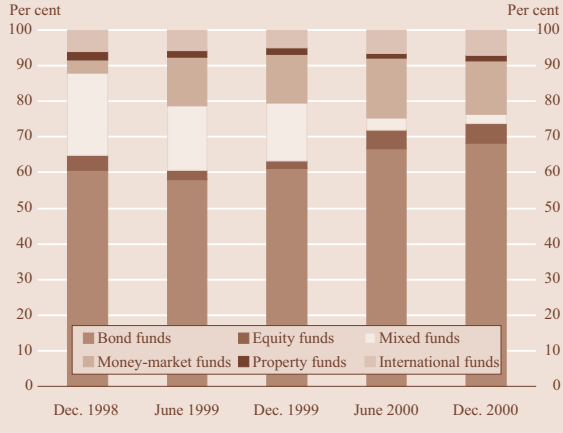
The mood in the Hungarian market was optimistic in the early months of the year. A number of foreign funds entered the Budapest exchange. That was fairly unusual after the modest investment activity seen earlier. Share prices rose up until the end of 2000 Q1, with the BUX reaching its peak at 10,492 on 10 March 2000.

However, prices slumped throughout the remainder of the year. Nevertheless, the proportion of shares within equity funds' assets did not fall below 50%, because, according to the recommendation of the association of funds which the industry observed, equity funds must hold at least 50% of their assts in shares.

The percentages of investment unit holders broken down by institutional sector does not show major variations. Households continued to increase their share, buying more than 80% of investment units. Unit holdings accounted for 6.5% of households' gross financial wealth at end-1999 and 7.1% at end-2000 (see Table 3.C).

The portfolio of investment funds

Chart 3.6 **Market shares of different types of investment funds**



Investment funds' portfolios varied according to the types of funds. Decomposing funds by type, the dominance of bond funds is evident. There has been a major shift towards money-market funds in the last two years. The most likely explanation is that investment funds' clients often hold temporary surpluses due to their direct participation in the capital market. Placing these surpluses on current accounts involves a relatively costly transaction requiring a transfer, which a low-risk investment fund, offering higher returns than the sight deposit rate, may easily save for the client. Under the given circumstances, investors turned towards liquid, low-risk assets, which must have assisted investment funds in gaining ground.

Mixed funds shrank at an accelerating pace in 2000 H1, providing bond funds, money-market funds and equity funds with an opportunity to make strong headway. The loss of market share by a number of mixed funds is an indication of investors' expectations of impending changes in share or bond prices, so they are more and more reluctant to trust professionals with making a choice between the two markets (see Chart 3.6).

Domestic financial assets continue to dominate funds' investments. The percentage of direct investments abroad was less than 5% in 1999, but rose to 7.2% towards end-2000.

Government securities, discount Treasury bills and NBH bills, carrying the lowest risks, account for the larger part of domestic investments. Their share in total domestic investments has fluctuated around 80% over the last two years. Treasury bills, and particularly NBH bills, account for 70 per cent of government paper and NBH paper holdings (see Table 3.D).

The exchange and currency market shocks of past years have had an impact on investment funds' assets. The proportion of equities within total holdings have fallen the most strongly. Even the increase in the proportion of equity funds in the total market

Table 3.D **Composition of investment funds' assets**

Per cent

	1998	1999	2000
Cash and bank accounts	0.8	1.1	1.5
Government securities, NBH paper	76.3	80.3	80.4
Bank deposits, bank securities	2.0	3.1	0.2
Shares	8.4	4.6	5.5
Bonds (corporate, financial inst., etc.)	4.7	4.6	3.2
Property	1.9	1.2	1.1
Investments abroad	4.0	4.1	7.2
Other	1.8	1.0	0.9
Total	**100.0**	**100.0**	**100.0**

in 2000 could not turn this process around, as, simultaneously with equity funds gaining ground, there was a fall in the assets of mixed funds holding equities as well.

Owners of investment fund managers

Most fund managers are owned by banks. Credit institutions are not represented in only a handful of fund managers. The market is dominated by managers with a background of majority (direct or indirect) bank owners. In 2000, they accounted for 96.7% of the market in terms of total assets managed.

The strategy of banks dominating the market increasingly features the aim that a fund manager should supply the widest possible range of open-end funds, offering opportunities for investors to choose an investment unit which befits their appetite for taking risks. A number of investment funds, together with their banks, offer opportunities for investors to buy or sell investment units from a current account (or a special investment account) maintained by the bank, or to reallocate their savings among various funds.

Profitability, returns

Returns were mixed last year. Due to the adverse climate in the domestic share market, equity funds registered negative returns. However, most of them incurred smaller losses than those suffered by the indexes used for the purposes of comparison (the BUX and the RAX, which measures the performance of domestic equity funds). But this was mainly the result of the fact that the portfolios of most of the funds did not exclusively contain shares. The scale of returns on international equity funds was wide, which, in turn, was a function of how fund managers had given weights to regions, currencies and sectors. The picture was also diverse with mixed funds holding at least 50% of assets in shares. There were instances of both positive and negative returns, but only funds that minimised their share purchases were able to achieve positive returns.

Only one bond fund managed to outperform the return on MAX, an index of Hungarian government securities, although a number of others booked results which came quite close to the mark. This suggests that few funds were able to return profits from the rises and falls in interest rates, and that the 1%–2% annual average cost of funds plays a much more important role in returns than for equity funds.

Taken together, in 2000 returns on international bond funds were the highest, owing mainly to the fall in interest rates internationally as well as to expectations (and, perhaps, the rise in international bond yields on account of the expectations).

Risks

Risks related to investment funds are not directly carried by the funds but by those who purchase the investment units. Only funds offering guaranteed returns carry direct interest and exchange rate risks, but the number of such is very low.

With respect to risk exposures, equity funds showed the most scattered daily yields in 2000. However, there were very wide dif-

ferences among the funds. The risks of domestic equity funds were lower than those of their counterparts active in international markets, presumably because the latter kept the percentage of shares within total assets at the maximum 85%, due to the much wider range of investment opportunities.

Insurance companies[2]

Size and growth of the market

The number of insurers operating as companies limited by shares increased to 23 in 2000, with one new participant entering the market. Bankassurance has been gaining more and more ground in Hungary. In addition to contractual cooperation agreements, an increasing number of insurance companies backed by a bank as the owner are being established.

Owing to the strong rise in unit-linked insurance products since 1998, life insurance fee income rose above average. That helped the relative percentages of the two branches of the insurance business undergo a shift towards life insurance, with life insurance fee income accounting for 46.4% of total gross revenue in 2000. By international standards, however, this is still seen as very low. In 1999, life insurance accounted for 61.4% in the OECD countries and for 62.9% in the countries of the European Union. The percentage of unit-linked insurance within life insurance shows a varied picture (see Table 3.E).

The increasing popularity of unit-linked insurance in Hungary is due to a great extent to regulatory arbitrage. Although the amended legislation in effect since 2001 has somewhat tightened the rules of disclosing information about life insurance linked to investment units, insurers continue to enjoy competitive advantages in the area of investment rules relative to investment funds despite the very striking similarities between savings products on offer.

Table 3.E **Percentage of unit-linked insurance within life insurance in selected European countries in 1999**

Per cent

Austria	7.3	Spain	29.5
Belgium	40.3	France	31.2
Germany	3.7	Great-Britain	44.3
Italy	43.7	Luxembourg	74.0
Netherlands	22.5	Norway	4.5

(Hungary: 24.5% in 1999 and 42.6% in 2000.)

Contract values

Insurance companies had 12.2 million insurance contracts at end-December 2000, up only 1.6% on the start of the year. This stagnation resulted from the different developments in the two branches of insurance – the number of contracts fell in the life business, while it rose somewhat in the non-life business due to the maturity of large numbers of old but low-value insurance contracts (for example, group life insurance schemes). There was a massive rearrangement among the various branches of life insurance – the number of endowment policies and mixed life contracts, the latter including elements of both risk and savings, fell significantly. By contrast, unit-linked life insurance continued to be the most successful branch. Growth here was not retarded even by the fact that, from among unit-linked funds, only a few conservative government paper and bond funds were able

[2] The analysis focuses on the presentation of life insurance, as this branch can be considered as a financial intermediary activity.

to produce positive real returns. To some extent, the 20% tax allowance and the fact that it is a popular form of optimising tax management hold the explanation for the success of unit-linked products.[3]

Premium revenues

In 2000, insurance companies recorded HUF 384.2 billion in premium revenue. That represents an increase of 17.6% in real terms.[4] Reinsurers accounted for a 1.1 percentage point lower share of gross premium revenue, suggesting no significant changes in insurers' risk exposures relative to 1999.

Premium revenue of the life business showed a 35% real increase in one year. The percentage share accounted for by life insurance contracts rose from 40.4% in 1999 to 46.4% in 2000. It is important to note that single premium contracts made a strong contribution to the robust increase in premium revenue of the life business relative to the previous year: hence this strong growth probably cannot be viewed as a lasting trend.

As in earlier periods, unit-linked life insurance continued to be the leading product of the life insurance branch, providing the vast bulk of the increase in premium revenue. A number of companies were successful with the product, prompting others to enter the market with similar products, or to widen their own range of products.

Technical reserves and solvency margin

At the end of 2000, insurance companies held a total of HUF 557.4 billion in technical reserves and investments serving as coverage for the solvency margin. That amount was 26.5% higher than at the start of the year, representing an increase of 14.9% in real terms.[5]

The focus of insurance companies' investment policies has remained on ensuring the highest degree of security – government paper accounted for 83% of their investments in 2000, with the re-appearance of NBH bills, accounting for 1.3% of the total portfolio at the end of the year.

As regards government securities, longer-dated paper continued to gain ground, shorter-dated paper falling as a percentage of holdings. Assisted by a strong pick-up in unit-linked insurance, the proportion of equities issued by businesses grew within the total investment portfolio (see Table 3.F).

Table 3.F **Composition of insurance companies' investments**

Per cent

	1998	1999	2000
Cash and bank accounts	0.5	0.3	0.5
Government securities, NBH paper	79.8	84.7	84.0
Bank deposits and securities	3.9	1.8	2.3
Shares	4.7	4.5	6.3
Bonds	5.7	3.8	3.0
Other	5.4	4.9	3.8
Total	**100.0**	**100.0**	**100.0**

Profitability

According to preliminary results, insurance companies recorded a total of HUF 18.4 billion in pre-tax profit in 2000, more than double the result for the previous year. There were 12 companies

[3] This explains that single-amount unit-linked schemes are dominant and that the year-end cancellation rate and the beginning-of-year contracting rate are high.
[4] Calculated with a 9.8% annual average consumer price index.
[5] Calculated with a 10.1% year-end consumer price index.

ending the year with a profit, 9 registered negative results and 1 was in balance. Profitability was closely related to market shares held on the basis of premium revenue, as all of the loss-making companies had market shares of less than 3% calculated on the basis of premium revenue.

The claims ratio[6] and the cost ratio both played a role in the improvement relative to the previous year. The cost ratio fell from 35.7% to 31.6% in one year. Within total costs, those related to acquiring customers rose very strongly, indicating the keen competition for clients. Rising from 18% to 21.6% in the life business and falling from 62.9% to 53% in the non-life branch, the claims ratio fell from 44.8% to 38.4% on the whole. The life contracts concluded during the early period of the Hungarian insurance market are about to mature these days, as most of them had maturities of ten years. This provides an explanation for the worsening in ratios in the life branch.

Risks

As regards market risks, the investment rule that insurance companies may invest their technical reserves and solvency margins in foreign currency-denominated securities, issued in OECD countries, suggests a possible future increase in the equities and exchange rate risks insurers are willing to undertake. However, a new regulation imposes limits on undertaking exchange rate risk, stipulating that insurers must invest 80% of assets providing coverage for technical reserves in the currency of commitment arising at the time the case of insurance occurs, apart from a couple of exceptions.

As the majority of insurers' contracts commit them to perform in forints, the rule, noted above, may hinder insurers in making swift reallocations in favour of OECD securities.

Interest rate risk exists only in relation to bond investments for insurers. That may arise when investing life insurance reserves, including non-unit-linked elements of savings as well, for the long term.

Here, the insurer undertakes risk by not realising the technical interest rate on bond investments.[7] At the same time, however, this interest rate exposure is not significant, as currently the related Ministry of Finance Decree allows a maximum technical interest rate of 5.5% to be used. As with investment funds, it is the client who bears the risk in unit-linked insurance. The only exception is provided by facilities which offer guaranteed returns. But these are very rare.

[6] Claims ratio = payment on claims/premium revenue x 100.

[7] Actuarial reserves of the life insurance branch are a certain percentage of its net income from investments which the insurer returns to the insured voluntarily.

Pension funds

Size and growth of the market

The pension fund market entered a new phase of development in 2000. The wave of establishing pension funds came to an end, with the market of operating funds increasingly characterised by mergers.

Total assets managed by pension funds rose above HUF 405.5 billion to the end of the period under review. That represents a 60.6% increase relative to the end of the previous year.

At the end of 2000, there were 25 licensed private pension funds which were in operation. Of the 25 funds, 12 were backed by banks or insurance companies, 8 were employer-founded, and another 5 were jointly established, i.e. involving voluntary funds and/or a number of small employers.

Whereas in 1999 there was a spectacular rise in the number of private pension funds' members, the rise in new entrants has been slowing since the final quarter of 1999. The end to the period of voluntary entries is undoubtedly the explanation for this. According to the data released by the CSO, more than 52.5% of economically active people opted for the two-pillar pension fund scheme and membership in private pension funds up to end-2000. The growth rate of private pension fund members was 4.5%, with membership fee revenue rising by 95%. Despite the modest increase in the number of members, membership fees provided 88% of the rise in assets (see Table 3.G).

The operation of private pension funds spurred on the operations of voluntary pension funds comprising pension funds, health funds and mutual funds. As seen in previous years, there were material shifts in the breakdown of voluntary funds according to type of fund – pension funds account for more than 90% of fund members and more than 98% of total assets. Therefore, pension funds continue to set the trends in the voluntary fund market.[8]

The number of operating, licensed voluntary pension funds fell from 145 at end-1999 to 117 towards the end of 2000. Despite the increase of 7.4% in the number of members, membership fee revenue rose by only 4.8%. Explanation for this, according to the evidence of audits, is in the high and continually rising number and share of voluntary pension fund members who do not pay membership fees. In contrast with private pension funds, the role of employers in voluntary pension funds is more emphatic relative to the financial sphere. Simultaneously with the more important participants increasingly gaining strength, a large number of non employer-operated voluntary funds may wind up their operations. Fund analysts believe a fund should have at least 70–80 thousand members to operate profitably.

Table 3.G **Aggregate data for voluntary and private pension funds**

	Voluntary pension funds			Private pension funds		
	1998	1999	2000	1998	1999	2000
Number of operating funds	294	188	167	38	30	25
Membership (thousands)	984.3	1,102.0	1,210.0	1,346.7	2,064.1	2,157.5
Assets (at book value, HUF billions)	102.4	162.7	230.2	28.8	89.8	175.3

Funds' investment activities

Funds have continued to pursue conservative investment policies recently. They avoid exploiting the investment limits on investment facilities offering more risks but higher returns.

[8] Operations of health and mutual funds cannot be regarded as financial intermediation as those of the other types of institution considered, so they are excluded from the analysis.

Table 3.H **Composition of private pension funds' assets**

Per cent

	1998	1999	2000
Cash and bank accounts	10.9	3.2	1.1
Government securities, NBH paper	76.7	84.0	78.0
Bank deposits and securities	3.5	0.5	0.2
Shares	6.6	9.8	14.0
Bonds	1.7	1.6	2.0
Foreign assets	0.0	0.0	0.7
Other (investment units, etc.)	0.4	0.9	4.0
Total	**100.0**	**100.0**	**100.0**

Table 3.I **Composition of voluntary pension funds' assets**

Per cent

	1998	1999	2000
Cash and bank accounts	3.8	2.8	1.6
Government securities, NBH paper	73.4	77.8	69.9
Bank deposits and securities	3.6	1.6	2.8
Shares	10.9	10.8	11.5
Bonds	4.7	3.4	3.1
Foreign assets	0.0	0.0	1.4
Other (investment units, etc.)	3.6	3.6	9.7
Total	**100.0**	**100.0**	**100.0**

Table 3.J **Private pension funds' key data, efficiency ratios and profitability indicators**

	1998	1999	2000
Fee revenue (HUF billions)	28.6	56.3	84.3
Operating costs (HUF billions)	2.9	4.2	5.3
Return (HUF billions)	1.1	8.5	8.0
Per capita assets (HUF thousands/capita)	21.4	43.5	81.3
Membership fee revenue per capita (HUF thousands/capita/month)	1.8	2.3	3.3
Return/average assets (per cent)	7.5	13.8	6.0
Operating costs/membership fee revenue (per cent)	10.1	7.5	6.3

Table 3.K **Voluntary pension funds' key data and efficiency ratios and profitability indicators**

	1998	1999	2000
Fee revenue (HUF billions)	41.8	54.4	57.0
of which: Fee paid in by members	12.6	14.2	16.4
Contributions by employers	23.5	28.5	31.2
Operating costs (HUF billions)	2.5	2.9	3.2
Return (HUF billions)	9.6	20.7	14.0
Per capita assets (HUF thousands/capita)	108.1	153.6	208.3
Membership fee revenue per capita (HUF thousands/capita/month)	3.7	4.5	4.4
Return/average assets (per cent)	12.1	16.2	7.4
Operating costs/membership fee revenue (per cent)	6.0	5.3	5.6

Analysis of the structure of private and voluntary pension funds' assets reveals a drop in the percentage accounted for by government securities and a slight increase in that of shares and investment units. Funds had the opportunity to invest abroad for the first time in 2000. Despite the fact that pension funds invest for the long term, securities with maturities of less than 2 years account for more than 50% of private pension funds' holdings of government paper (see Tables 3.H and 3.I).

Profitability

Performance differed widely across the sector in 2000. The gaps in returns were caused by funds' divergent investment policies. Investment activities and the profits earned were in the focus of both members and the supervisory authority. Funds are mandated to formulate and acquaint members with their investment policies, including statutory elements, and asset management guidelines, by 31 March 2001. The primary objective of their investment activities must be to preserve the long-term stability of the value of savings for old-age pensions, to establish compatibility between performance indicators and to ensure the transparency of such indicators for all members. From 1 January 2002, all funds must change over to asset valuation on a daily basis. Currently, this and the performance of the fund is measured quarterly.

Net revenue of private funds' investment activities were very low in 2000. By their nature, funds do not provide annuity services at present, so they do not incur service expenditures.

Favourably, though, the operating costs-to-fee revenue ratio has been falling year after year. In 2000, amounts deducted from membership fees and transferred to operating reserves provided full cover for operating costs. Financing requirement was secured from donations by founders and supporters (see Table 3.J).

Voluntary pension funds' net revenues from investment activities were low in 2000. The return as a percentage of average assets fell significantly relative to the previous year, but was still was higher than the average return registered by private pension funds.

In respect of voluntary funds, the amounts deducted from membership fees and transferred to operating reserves also almost completely covered operating costs. The financing gap was secured from donations by founders and supporters.

Voluntary pension funds provided pension services amounting to HUF 6.7 billion in 2000. The value of services provided was slightly lower than 3% expressed as a percentage of assets. Single-amount payments account for 95% of total pension services, annuity services accounting for the remaining 5% (see Table 3.K).

Risks

In the case of funds, market risk is equal to the investment risk of reserves, i.e. the total of individual accounts, which in turn is carried by members. It does not affect the solvency of the fund. In principle, funds should register returns in excess of inflation as a

minimum requirement, so clients should experience at least that amount of increase on their individual accounts. It is expected, however, that a real return will be credited to none of Hungarian fund members' voluntary or private accounts after assets invested in 2000.

Of the various market risks, pension funds' share price risk has been rising. Despite the 11%–14% percentage currently accounted for by equities, the adverse movements in the prices of exchange-traded shares, particularly in the second quarter, have had a massive impact on the value of funds' investments. Funds do not actively manage their government securities holdings, which exposes them to significant interest rate risks. Therefore, net revenue from investment activities has been low, in addition to other factors affecting their performance.

However, it would be wrong to judge the profitability of funds' investment activities from a short-term perspective, given that they seek long-term investments, because they must register an accounting loss if prices fall; however, these are unrealised losses, as these securities remain in their portfolios. Funds record the amount of holding gains arising from price increases at above the book value, as a valuation differential, which is funded to a member when he/she switches for a new fund, draws on pension service, dies, or re-enters the social security system.

Funds' fairly high operating risks are closely linked with the imperfections in recording and computer systems. More efficient supervisory activity following the merger of the supervisory authority into a new body may assist in reducing the risks of pension funds in the future. Probably one of the most important sources of risk from the perspective of pension funds is the three-directional relationship of funds, asset managers and custodians, which essentially means developing accurate recording methods, adequate and real-time flow of information and rules for procedures. Here, the process of choosing the asset managers deserves special mention, with special regard to risks and costs related to their operations.

Pension funds virtually operate as cooperatives, i.e. on a one member/one vote basis, which opens opportunities for fraud. The overwhelming majority of members do not participate in general meetings, probably because of a failure to notify them, so most funds are managed by a board representing the interests of the sponsor, without members exercising genuine control.[9] Managing this outdated ownership structure in a modern way is almost impossible, which implies a serious operating risk.

The current discussion about the future of the pay-as-you-go system and private pension funds, and the uncertainties surrounding the issue represent a regulatory risk.

[9] The Hungarian market is notorious for the use of a HUF 2,000–12,000 'quota' paid by funds for each member to the board of another fund they acquire, to buy their votes. This severely infringes on the interests of members the acquiring fund. The fact that this practice is still tolerated indicates the weaknesses of supervision.

Investment firms[10]

Size and growth of the market

A number of negative influences have affected the economic environment of investment firms recently. The uncertain business outlook, the worsening performance of listed companies and the slowdown in the increase in profits of a few blue chip firms all pointed in the direction of a withdrawal by international institutional investors who mobilise large amounts of capital. As a result of passivity on the side of the largest investors, turnover volumes and prices both fell in the exchange market. Therefore, the significant narrowing of opportunities, the intensification of competition and, simultaneously, a period of strong restructuring characterised the market of investment service providers in 2000.

In 2000, the number of operating investment firms fell more strongly than in the past (see Table 3.L)

Table 3.L **Number of investment firms with operating licence**

1997	1998	1999	2000
89	87	74	51

Of the 51 firms, 3 were being suspended at year-end. Of the remaining 48 operating firms, 5 were operating as commission brokers, 23 as securities traders and 20 as investment companies. There were 20 firms owned by banks or insurers, as compared with 26 in 1999. The number of independent firms fell from 39 to 28.

Developments in the balance sheet totals provide only a rough picture of investment firms' activities, due, among other causes, to their significant off balance sheet operations. Nevertheless, other reliable information is not available.[11] The balance sheet total of investment service providers amounted to HUF 175 billion at end-December 2000, showing a 8.2% nominal increase, but a decline of 1.7% in real terms.

The market share of investment companies with more capital strength, where the share of firms with a financial institution in the background (83%) is the highest, rose further. Only one of the top ten firms did not have a banking background (see Table 3.M).

Table 3.M **Balance sheet total of investment firms**

	1999	2000	Index	1999	2000
	HUF billions		Per cent	Percentages	
Investment companies	122.1	156.4	128.1	75.3	89.1
Securities traders	39	18.7	48	24	10.6
Commission broker	1.2	0.5	41.4	0.7	0.3
Total	162.3	175.6	108.2	100.0	100.0

Asset-liability structure

The most important change in investment firms' balance sheet was the shift in focus from exchange market transactions towards off-exchange transactions. The value and share as a percentage of balance sheet total of claims and liabilities related to OTC transactions multiplied, in contrast with the proportion of claims and liabilities arising from exchange market deals, which fell. It should be noted that, in comparison with the HUF 33 billion

[10] Under the provisions of the law, an investment firm either may be a commission broker (minimum capital requirement: HUF 20 million), a securities trader (HUF 100 million) or an investment company (HUF 1 billion), and may pursue activities related to brokerage, commission agency, trading, portfolio management, guarantee undertaking etc, using various investment assets (transferable securities, financial futures, interest rate forwards, interest rate, currency, asset swaps etc.).

[11] According to unofficial turnover data which still need to be checked and recalculated, total turnover of investment enterprises declined by some 90% in 2000 relative to 1999. Trading for own account and commission agency turnover also fell back by nearly 90%.

value of liabilities arising from OTC deals, the value of claims was only HUF 20 billion, suggesting large amounts of speculation by firms for their own-account. Another shift on the assets side was the rise in the proportion of securities holdings and the fall in that of liquid assets. On the liabilities side, there was a marked decline in the proportion of equity.

Capital strength

Total shareholders' equity of investment firms mounted to HUF 58 billion at end-December 2000. That was 4% lower than at the previous year's end. Registered capital experienced an even deeper decline, falling by 10.5%, from HUF 44.9 billion to HUF 40.2 billion. Firms that pulled out of the market had a significant role in this. There were 14 firms at year-end, whose shareholders' equity did not reach the level of registered share capital, 8 of them with a non-bank background.

Profitability

The effects of a shrinking market and the related process of concentration are clearly visible in the financial results of investment firms. As a result of market pull-outs and mergers, the number of loss-making firms fell significantly, from 30 in 1999 to 19 a year later, with the amount of total loss also falling from HUF 2.2 billion to HUF 1.4 billion. However, total profits of the profitable firms, at HUF 8.2 billion, was also lower than a year earlier when it amounted to HUF 10.1 billion.

Investment companies accounted for HUF 5.1 billion, traders for HUF 1.5 billion and commission brokers for HUF 72 million of total profits earned. There was a extremely strong differentiation within the individual categories of enterprise.

Profits of investment services, firms' basic activities, fell by nearly 8% in 2000 relative to the previous year. Within investment services, the largest drop occurred to profits of securities issuance.

That was mainly due to the decline in issuance activity. The shrinking market and declining turnover, caused by a large portion of clients retreating from exchange market, both contributed the fall of more than 30% in profits of trading activities. Profits of the less important activities, including custodianship, portfolio management, investment services, advising on acquisitions etc., rose considerably, but were insufficient to counterbalance the declines recorded in other segments.

Despite lower profits of investment service provision, pre-tax profits saw a slight increase. This was clearly attributable to the fact that investment firms offset the loss of revenue by reducing their costs. The most important area of cost reduction was staff cuts. Personnel expenses were 14% lower than in 1999. The number of investment firms' employees fell nearly to one-half in one year.

The decline in losses on other activities and extraordinary losses suggests that one-off losses that are not backed by provisions or are not adequately provisioned have been falling (provisions for losses must be recorded within profits/losses on investment services) (see Table 3.N).

Table 3.N **Financial results of investment firms**

	31 Dec. 1999 (audited	31 Dec.2001 (un-audited)	Index, per cent
	HUF billions		
Profit (loss) of commission brokerage	13,095	12,997	99.3
Profit (loss) of trading	9,889	6,869	69.5
Profit (loss) of securities issuance	1,306	757	58.0
Profit (loss) of safe custody services, custodianship, portfolio manament	3,189	3,797	119.1
Profit (loss) of other investment services	882	1,749	198.3
Profit (loss) of investment services	28,361	26,170	92.3
Other profit (loss)	–1,036	–323	68.9
Operating costs	21,489	19,490	90.7
Trading profit (loss)	5,837	6,357	108.9
Profit (loss) of financial transactions	1,245	726	58.3
Ordinary trading profit (loss)	7,082	7,084	100.0
Extraordinary profit (loss)	–348	–330	95.0
Pre-tax profit (loss)	6,734	6,753	100.3

Table 3.O **ROEs of investment service activities**

Per cent

	1999	2000
Commission brokers	28.7	20.6
Securities traders	1.3	9.7
Investment companies	14.9	10.8
Total	12.4	10.7

There were 18 investment providers registering higher ROE than inflation. Taken together, however, they just managed to preserve the value of their equity (see Table 3.O).

Risks

The most significant risks facing the sector are the shrinking market, drastically declining turnover and risks arising from the restructuring of market participants.

From the perspective of credit risks, it is favourable that there was a fall in the amount of customer claims, carrying high risks, including deferred payments and fees not yet settled by clients related to the provision of investment services. Another factor mitigating risks is that both deferred payments and other claims vis-à-vis clients are concentrated at investment firms with a banking background. These firms manage risks in a more professional manner. However, the increase in the proportion of speculation for own accounts has had the opposite effect.

There is no adequate information as regards the actual market risks of investment firms. It is expected, however, that the introduction of the trading book will solve this problem.

Financial enterprises[12]

Size and growth of the market

The number of financial enterprises fell dramatically from several hundred in 1998, following which it resumed rising in 1999. That was closely linked to the provision of the Banking Act, in effect from 31 December 1998, which narrowed the scope of financial enterprises' activities to exclusively financial activities. There were 81 financial enterprises in the Supervisory Authority's records at end-1998, 151 at end-1999 and 176 at end-2000. Services provided by most financial enterprises continue to be money lending and financial leasing.

Owners of financial enterprises continue to be leading banks and companies established for the purpose of achieving various economic objectives (see Table 3.P).

The sector's balance sheet total rose robustly in 2000, showing an increase of 36% relative to 1999. The driving force behind growth was the swift expansion of claims.

The majority of the sector's assets are short and long-term claims on businesses.

Table 3.P **Financial enterprises operating with banking backgrounds**

	Balance sheet total				Profits/losses	
	31 Dec. 1999		31 Dec. 2000		1999	2000
	HUF billions	Per cent	HUF billions	Per cent	HUF billions	HUF billions
Bank-owned enterprises	165	52	229	54	3.6	2.5
Joint bank and state owned enterprises	58	18	62	14	–20.0	+3.6
Total	223	70	291	68	–16.4	6.1
Financial enterprises, total	317	100	430	100	–13.5	10.7

[12] The definition of financial enterprise in provided by the Banking Act of 1996. Accordingly, a financial enterprise is a financial institution which provides one or more financial services, except the following:
– collection of deposits and (without state or bank guarantee) collection of other repayable funds from the public which could exceed its shareholders' equity,
– provision of payment transaction services,
– issuance of money substitutes and the provision of related services.

Leasing claims account for a significant portion, but not the majority, of assets.[13] It is difficult to define the actual increase in the value of claims due to changes in the balance sheet structure. By introducing financial leasing in the balance sheet, firms have reclassified items not only from claims on clients but from other claims as well (see Table 3.Q).

The value of shareholders' equity fell below the statutory minimum of HUF 20 million at 12 firms at end-1999 and at 19 firms at end-2000. Of these, 3 firms had negative equity at end-1999 and 8 at end-2000. With the exception of one, all entities are bank-owned leasing companies. This stems partly from actual losses incurred from operations and partly from an accounting rule, the effect of which cannot be quantified on the basis of available data (see Table 3.R).

A number of leasing firms, mostly those owned by banks with adequate financing background, extend foreign currency-based loans. They set the annual amount of claim and the size of instalments in foreign currency, but the actual repayments are effected in forint, with the lending transaction recorded as a forint claim in the balance sheet. In order to keep exchange rate risk in check, they borrow in foreign currency from banks, the transaction being shown as a foreign currency borrowing in the balance sheet. On the balance sheet date, the leasing firm registers an exchange rate loss due to the different foreign currency profile of the assets and liabilities sides. That, however, does not cause a real loss to the firm, because it continually passes exchange rate losses on to the client throughout the entire life of the leasing contract.

Provisions are judged to provide only minimum cover and do not reflect the real risks of the portfolio. As the asset classification rules of banks do not apply for financial enterprises, they may have assets with firms which would not be eligible for a bank loan, taking into view their financial indicators. This can be essential for financial enterprises owned by banks, given that, at the end of the day, any loss incurred by the subsidiary will weaken the position of the bank. But until such losses are realised, the risk remains concealed in the bank's books.

Loans received and other liabilities account for the majority of the sector's liabilities. The increase in liabilities financed the expansion of balance sheet total.

Borrowing from banks is dominant and its role continues to grow. Firms within the sector were not able to fund growth from other sources in 2000. The amount raised by securities issuance fell from HUF 52 billion to HUF 40 billion in one year, its proportion of the rapidly growing balance sheet total falling considerably. All this sheds light on the sector's dependence on bank finance. Its future development is determined to a large extent by banks' willingness to lend funds (see Table 3.S).

Table 3.Q **Composition of financial enterprises assets**

Per cent

	1999	2000
Total claims	**100**	**100**
Credit institutions	2	1
Clients	78	49
Other clients	20	8
Financial leasing		42

Table 3.R **Components of financial enterprises equity**

	31 December 1999		31 December 2000	
	HUF billions	Per cent	HUF billions	Per cent
Shareholders' equity	**26.6**	**100**	**68.2**	**100**
Registered capital	19.8	74	29.7	43
Capital reserve	9.7	36	10.2	15
Profit reserve	10.0	38	16.9	25
Valuation reserve	1.0	2	0.7	1
General reserves	0.0	0	0.0	0
Balance sheet profit (loss)	–13.5	–50	10.7	16

Table 3.S **Financial enterprises' liabilities**

Per cent

	1999	2000
Total liabilities	**100**	**100**
Credit institutions	72	78
Clients	11	4
Other liabilities	17	18

[13] The evasion of the open foreign currency position rule may, in principle, explain the large volume of outstanding leasing claims. Leasing companies, acting as a kind of intermediary, may repackage foreign currency funds borrowed from the parent banks into forint assets, making it possible for the parent bank to observe the provisions of the new regulation.

Profitability

Taken together, financial enterprises were profitable in 2000, in contrast with the previous year when they posted losses. The very large number of firms that commenced business in the first half of 1999 became really active and boosted their revenues in the second half and in 2000. That played an important role in firms' financial results turning from losses to profits. Costs increased by 28%, in which the rise in the number of firms definitely played a part.

The value of ROA, based on financial enterprises' data as at 31 December 2000, was 3.9%, that of ROE being 20%. This was much better in comparison with the banking sector. The fact that firms practically did not allocate provisions for risks played an important role in the sector's favourable profitability ratios.

Risks

Financial enterprises' lending risks are judged to be significant. Although the Government Decree on accounting provides for the preparation of various by-laws required for operation, their content depend on firms' discretion. Outstanding claims grew significantly in 2000, with no limits imposed by strict regulations.

Firms were not interested in forming large provisions for expected losses, as the Act on Corporation Tax recognised only a small margin of provisions as expenditure. (For delay of less than one year: 2%–5% of the claim; for delay in excess of one year: 25% of the claim.)

At end-2000, financial enterprises had only HUF 1.1 billion in provisions for their outstanding assets, in comparison with HUF 420 million at end-1999. The amount of provisions on the liabilities side fell from HUF 26.6 billion to HUF 9.5 billion in 2000. If provisions for general risks and other provisions are taken into account as a coverage for expected losses, firms would have a total HUF 4.3 billion in provisions at the end of the year.

No reliable information is available on actual risks in financial enterprises' portfolios. Nevertheless, we assume their outstanding claims are of no better quality than those of banks. On 31 December 2000, banks had provisions for lending losses 2.36% as a percentage of total assets to be classified. Using the same percentage gives a HUF 8.7 billion requirement for financial enterprises to build provisions.

That is more than twice as much as the amount of provisions currently allocated. Probably, though, the quality of financial enterprises' portfolios is worse than that of banks due to the lack of a more stringent regulation, therefore the shortfall in provisions may be several times higher.

The regulatory risk of financial enterprises is also judged to be considerable. As a consequence of the provisions of the Banking Act, the whole sector underwent a transformation around end-1999, and the more stringent regulations, put into effect in 2000, will likely take their toll.

As a result of changes to the regulations, more austere provisions will apply for financial enterprises from 2001, mainly in respect of capital requirements; however, the regulations probably will not be sufficient to report and cover the risks of operations.

The Act on Corporation Tax, just as with provisioning, will not allow for the entire amount of actual expected loss of value to be accounted as expenditure, and it will continue to recognise 2%, 5% and 25% of the amount of claim.

4 Articles

PROBABLE IMPACT OF HUNGARY'S ACCESSION TO THE EU ON THE HUNGARIAN BANKING SECTOR

by Balázs Zsámboki

Introduction

The Hungarian economy, and the Hungarian banking sector in particular, have undergone a very spectacular development and structural transformation in the past decade. This development has spanned a wide range of events from adjusting the legal environment to conform with EU legislation, through improving banks' efficiency and developing their technological infrastructure, to upgrading the quality of services and rearranging market structures. Nevertheless, Hungary has yet to reach the level of EU member countries' financial systems, and joining the European Union requires further adjustment by Hungarian banks. Assessing the potential impacts of EU integration, therefore, is an important task. The experiences of countries that joined the European Union earlier provide a useful context within which to assess those influences. The experiences of the countries which participated in the latest two rounds of the enlargement, namely Spain and Portugal, who joined in 1986, and of Austria, Finland and Sweden, which became members of the EU in 1995, may be relevant for Hungary.

These two enlargements happened in fundamentally different macroeconomic and legal environments and at different stages of market integration. When drawing conclusions from these enlargements, therefore, all these factors should be taken into account. Assessment of the challenges facing the Hungarian banking sector not only must cover the banking market at the time the states mentioned joined the EU, and the major international trends of that period, but also the European market at the time of Hungary's expected accession. It is imperative, therefore, to present the current developments, and particularly the experiences of EMU so far.

This study seeks to address the following issues:

1 How did the transformation of the legal environment affect the development of the banking sector, being primarily focused on liberalisation in the 80s and then on uniform banking regulation in the 90s?

2 How did the structure of the banking market transform in certain European countries, with special regard to changes in market shares and concentration?

3 What are the underlying trends of changes in banks' activities and profitability?

4 What processes has the Economic and Monetary Union set in motion, and how will this affect the future opportunities of the Hungarian banking sector?

1 Liberalisation in the European Community

The development and transformation of financial structures in countries that joined the European Community in the 80s[1] are inseparably associated with the international trends of that era, which can be best described by liberalisation and deregulation. In past decades, the banking sector in countries operated under strict administrative controls, and price (interest rate) and quantity (credit quota) controls were widespread. The internal market of the European Union, too, was far from being uniform. The financial sector was particularly segmented, and the links to national markets were strong. The first wave of liberalisation affected capital transactions. This forced countries to gradually open their national banking markets and to dismantle the barriers to market competition. All this led to the unification of the variegated national regulations by the end of the decade, in order to secure the free movement of services, in addition to the unrestricted flow of capital, within the European Community.

Liberalisation did not only affect Europe, but the entire OECD region as well, where the Anglo-Saxon countries played the dominant role. Generally, the goal of liberalisation was to mobilise domestic savings and to in-

[1] Greece: 1981; Spain and Portugal: 1986.

crease the efficiency of financial intermediation. This was associated with the need to develop international or regional financial centres in a number of countries. Another important objective was to restore the efficiency of monetary policy, which, amid the increasingly unrestricted flows of capital across borders, could not adequately discharge its tasks with the instruments it used in the 60s and 70s.

However, there were a number of hurdles to liberalisation, including both macroeconomic and institutional factors.[2] Some of the major macroeconomic hurdles included countries' substantial budget deficits in the 80s, high inflation and the often unrealistically high exchange rates. Among the institutional barriers, the most notable were the obsolete institutional structure (inefficient state-owned savings societies and banks collected the bulk of savings in most countries), the old-fashioned mentality of regulators (which strongly relied on assistance from the state or the central bank in crisis situations), the narrow, underdeveloped financial market, banks' considerable bad loan portfolios inherited from the past, the significant foreign currency and/or interest mismatch as well as undertrained management and staff. All these were accompanied by outdated taxation rules in most countries.

The countries joining the European Community, similarly to other OECD countries, were faced with the need to address the strategic issues related to scheduling and speed, when dealing with the problem of liberalisation. Experience shows that the pre-requisite for success with liberalisation is a stable macroeconomic environment. Another important factor is that foreign exchange liberalisation should be preceded by the reform and deregulation of the financial sector. Failing to do so may provoke the risk of substantial speculative capital inflow, which generally is associated with consumption and credit booms, and eventually leads to a jump in imports of consumer goods.[3]

If, however, speculative inflows are sterilised in order to arrest the build-up of abundant liquidity and credit expansion, then this may cause high quasi-fiscal costs. In addition, liberalisation results in more intense competition, causing a decline in banks' profits. In the past, banks often reacted to this by switching into activities carrying more risks.

A number of countries, for example, Ireland and Portugal, only removed the barriers to capital flows as late as the 90s. Elsewhere, however, there remained certain symbolic foreign exchange restrictions, warning speculators that the regulations could be tightened anytime, and that the authorities would use this weapon if necessary.

While liberalisation of financial markets has been a widespread phenomenon in past decades, there has been a simultaneous increase in the frequency of systemic banking crises. Apart from liberalisation, a number of other factors influence the stability of the banking sector, including adverse macroeconomic environments, misguided economic policy and balance of payments strains. All these have contributed considerably to the evolution of crises. A few econometric analyses have pointed out that although liberalisation of the financial sector, *ceteris paribus,* affects the soundness of the banking sector negatively, financial distress rarely appears in the period immediately following liberalisation, but rather with a one or two year lag.[4]

At the same time, however, experience has also shown that a properly functioning, up-to-date legal environment, coupled with efficient banking supervision, may indeed cushion negative shocks. Gradually implemented liberalisation is more advantageous than shock treatment from the perspective of risks.

When assessing liberalisation, the development of the broad economy must be taken into account, in addition to analysis of the impacts on the financial sector. Demirgüc et al. (1998) have found that liberalisation has a favourable influence on the expansion of savings and long-term economic growth, despite the risk factors noted above.

Liberalisation was implemented amid different starting conditions and at different speeds in OECD countries. Studies written in the early 90s[5] argue that in countries where the financial sector was less confined to narrow barriers and the sector functioned rather efficiently, e.g. in Germany, Great Britain and the Netherlands, there were barely demonstrable changes in banking sector performance.

In countries, where financial liberalisation was accomplished as part of the preparation for the single market, e.g. in Belgium, France and Spain, banks' behaviour changed significantly, which was reflected in shrinking interest margins, improving efficiency ratios and falling wage costs. In Italy, by contrast, where the banking sector was constrained the most and liberalisation progressed slowly, the financial sector remained fairly closed and inefficient even towards the end of the 80s.

In the less developed countries and/or those that joined the European Community later, liberalisation primarily affected the following areas.[6]

Interest rate restrictions

The OECD countries started to lift the existing restrictions on interest rates in the 70s, but the scope of liberalisation was fairly narrow. In the 80s, however, liberalisation was a general tendency, with the countries that joined later being no exceptions. By the 90s, there were only rare examples of direct interest rate controls in these countries (see Table A).

[2] For a detailed discussion, see the study by Turner – van 't Dack (1996).

[3] Finland could be an example, where a large-scale liberalisation was implemented at the late 80s, which contributed to the emergence of a serious economic and financial crisis in the early 90s.

[4] See Demirgüc et al. (1998), which compared the data of 53 developed and developing countries.

[5] For example, Hoeller (1994), provides a summary of the studies.

[6] For more details, see Edey-Hviding (1995).

Table A **The process of lifting interest rate controls**

	1960	1980	1987	1990
Austria	X	X	X	–
Finland	X	X	X	–
Greece	X	X	X	X
Portugalia	X	X	X	X
Spain	X	X	–	–
Sweden	X	X	–	–

Source: Edey – Hviding (1995).
X = Official or privately agreed interest rate controls are in force.
– = No interest rate controls.

Restrictions on securities

The wave of deregulation in the 80s and 90s was mainly aimed at facilitating market entry, lifting fixed commission rates, removing the obstacles to the sector becoming international and promoting the development of new products.

Quantitative restrictions

Controls on banks' operations applied universally in countries that joined later. The restrictions included, for example, the rule for banks to hold a portion of their assets in government securities, which not only served prudential goals, but represented secure, cheap financing for the central budget, as interest paid on government securities was held artificially low. There are a number of examples of banks having been obliged to lend to a few specialised credit institutions which in turn secured cheap funding for certain economic sectors. This compulsory refinancing mechanism worked even in the 80s, and was replaced by the practice of granting explicit subsidies towards the late 80s. Quite often credit ceiling rules narrowed banks' room and hindered free competition. Restrictions on lending served primarily monetary policy goals.

Business and ownership restrictions

The removal of barriers separating certain types of institutions and business activities was implemented on a much smaller scale than that of the actions to liberalise, noted above. Partly the requirement to preserve the stability of the entire financial system and that of the individual institutions and partly the concern over financial conglomerates emerging and gaining excessive power to promote their own interests were in the background. In addition to separating traditional banking from securities trading activities, a number of countries gradually moved towards removing the sharp distinctions between commercial banks, savings institutions and specialised mortgage institutions. By the same token, the removal of barriers to opening branches also proceeded gradually, and full liberalisation was not accomplished until the early 90s.

In addition to imposing restrictions on business activities, restraints on ownership structure, especially those between banks and non-bank financial intermediaries, were and continue to be a general phenomenon. Most of these are anti-trust rules. In many cases mergers and acquisitions are subject to government or supervisory permission.

Barriers to market entry by foreign banks

Liberalisation was accomplished on a large scale in this respect in the OECD countries, particularly in the early 90s. It was primarily the Second Banking Directive, taking effect in 1993, which had a massive impact in Europe. It introduced the principle of the 'Single European Passport'. This meant that a bank authorised in one member state of the Community could establish branches in any other member, or supply cross-border services. The Mediterranean countries incorporated the provisions of the Directive into their legal systems when they were already members, while those countries that joined in 1995 did so before accession.

Barriers to capital flows

The OECD countries have accomplished almost full liberalisation in this area. Spain and Portugal maintained restrictive rules for the longest time in Europe, which they lifted in 1992 as a result of the directives on the single market and joining the ERM.

2 European banking in the 80s and 90s

Following, and in part simultaneously with, the wave of deregulation and the elimination of administrative barriers to the provision of various banking services, uniform prudential regulations were enacted in European countries. The grounds for these regulations were provided by the international standards formulated by the Basle Committee on Banking Supervision. The standards, which soon became an integral part of international banking, are an important constituent of market regulations in developed countries today. All these actions precipitated a major development of the financial sector, not only in Europe but in the entire OECD region as well. This is not only reflected in the increase in institutions' balance sheet totals but in the numbers of staff and their contribution to GDP as well. Growth affected particularly those countries where credit ceilings and interest rate controls were in force. Naturally, technological development and a number of financial innovations contributed to growth, so the states which

had liberalised earlier also took a share of development, although to a smaller extent. However, despite the vast changes, the financial systems of the individual countries continue to show a fairly varied picture, particularly as regards the sources of finance for businesses, given that the relative importance of the bond, equity and banking market varies strongly by country.

Market liberalisation led to more intense competition in every country, which the various indicators of bank efficiency clearly demonstrate. Declines in the ratio of net interest margins and fee income to equity, the ratio of operating costs to gross profits, and personal expenses in particular, were a general tendency.

Sharp competition increased the number of bank failures, which affected mostly the Scandinavian countries within Europe. However, all bankruptcies cannot be blamed on liberalisation and deregulation, as macro reasons and insufficient prudential regulations also had a strong effect in many instances.

The key indicators for the banking systems in states that joined or were waiting to join the European Community showed a completely different picture in the mid-90s than a couple of decades earlier. The increasing role of the financial sector is well illustrated by the fact that an increasing portion of the working-age population were employed in the sector. The rise in the number of employees continued until the early 90s, when many countries started to downsize employment, as a result of rapid advances in technology. This process is still going on today.

Growing competition precipitated a decline in profitability, which had implications for cost management as well, leading to strict rationalisation and cost reduction in many areas. This was reflected in the curtailment of personnel expenses and the reduction in operating costs expressed as a percentage of gross profits. But technological innovation allowed banks to return robust increases in balance sheet totals without boosting staff levels. This tendency was universal in all countries of Europe; however, there were and still are major differences between banks in terms of average size and number of staff.

Taken together, in the last few decades the financial sector has produced more dynamic growth than other sectors; apart from banks, this growth has particularly affected other financial intermediaries. Market concentration is fairly high in most national markets, as indicated by the average 50%–75% shares accounted for by the 5 largest banks. In countries, where concentration is low, this stems primarily from the strong regionalisation of collecting deposits (Germany and Italy). Analysing the regions, one again finds that the degree of concentration is very high. This is mainly the result of the differing economies of scale of banking via branches, although it is increasingly a vague indicator of the keenness of competition, as electronic and telephone banking gains ground.

Despite liberalisation of market entry, market penetration by foreign banks is very subdued; indeed, it is absolutely minimal in the retail banking business. Participation of foreign banks is observable only in the corporate business, which does not require branch networks.

As regards state ownership, ratios above 50% are not a rare occurrence in OECD countries. The wave of privatisation gained momentum across Europe, particularly in France and Italy. In Germany, state-owned regional banks (Landesbanken) have a leading role. This explains the around 50% state ownership.

In terms of the sources of finance for companies, the picture is also varied, with the difference between the Anglo-Saxon and German systems being particularly sharp.

At the turn of the 80s and 90s, the directives of the European Community, introducing standardised prudential regulations and rules for market entry, laid the foundation for the integration of European financial markets. With the establishment of Economic and Monetary Union (EMU), this process received further impetus and opened new opportunities.

3 Effect of EMU on the banking sectors of the European Union

The introduction of the euro can be interpreted as a change to the economic regime, and as such it may cause fundamental changes to the structure of European banking sectors. However, it is difficult to distinguish the impact of the euro from the recent very strong pick-up in technical development and from the regulatory, macroeconomic and demographic factors, which makes it difficult to analyse the transformation process.

The primary impact of technological development is that it restructures the market by influencing the relative costs of the various banking and other financial services. The costs of collecting, processing and using information have fallen dramatically recently, which has led to the more accurate assessment of risks and to appropriate price setting. Naturally, all this has reduced banks' information advantage relative to other institutions and forms of financing. This, in turn, has led to a greater pressure on banks' lending rates, especially on those for large companies which can seek alternative sources of finance more easily.

As regards regulations, the Second Banking Directive was a break-through with the introduction of the 'Single European Passport' in the early 90s. The current changes to regulations actually represent the ongoing adjustment, actualisation and modernisation of the wave of liberalisation and deregulation. Liberalised markets made a strong contribution to the fact that globalisation affects the financial sector most strongly and that global competition is increasingly creating opportunities to make the most of scale and scope efficiency. Globalisation affects not so much lending activity as investment banking and portfolio management activities.

Demographic factors have an impact via the gradual ageing of the population, and there is a simultaneous increase in the average measure of wealth in the European states, which channels savings towards portfolio investments. Many countries are gradually moving from the pay-as-you-go pension scheme towards fund-based systems, which is a contributing factor. Banks are not really suitable for meeting the demand for such investments. This is clearly illustrated by the continuously declining percentage of deposits within household savings in developed countries. At the same time, however, this process gives banks the opportunity to expand their fund management and advisory services, which results in non-interest income rising. Institutional investor penetration is observable in every country, which, at first glance, seems to be paired with serious negative effects for banks. However, taking into account the fact that most of these institutions operate under bank influence and that in most cases they are a member of a banking group, the picture is quite a bit different. In fact, this means that the relative roles of the various activities have changed within groups recently, so banking groups do not come off worse in terms of profit. It has to be taken into account as well that institutional investors sell their products and offer their services by exploiting banks' infrastructures, which is a source of income for banks.

As a direct influence of EMU, financial markets have started to integrate more strongly, although they are still far from being fully integrated. It should be noted that the economic convergence of EU member states is contributing considerably to the success of the integration process.

Currently, the financial structure of the euro zone is much more bank-oriented than in the United States or Japan, although there is a large diversity in this field even within the euro zone.

On the whole, the stock of outstanding bank lending slightly exceeds aggregate GDP in the 11 member states of the euro zone (September 1999: 101.5%). The percentage shares accounted for by debt securities and equity finance raised in the stock exchange were 89.6% and 90.2% of GDP at end-1999.[7] When explaining the data, it should also be noted that the largest issuer of debt in the entire region is the state. By way of comparison, in the US the bank finance-to-GDP ratio is a mere 47.2%, while the proportions of bond finance and equity finance are 160.7% and 188.9% respectively. The comparable data for Japan are between the two (see Table B).

Table B **Bank debts as a percentage of non-financial companies' total debt liabilities**

Per cent

	Total non-financial institutions	The 239 largest manufacturing firms
Benelux countries	83.2	48.1
France	80.2	44.3
Germany	85.1	63.2
Italy	94.6	73.9
Spain	77.3	–
United Kingdom	49.4	34.1
United States	32.4	9.4
Japan	–	56.4

Source: Danthine et al. (2000).

The nearly decade long consolidation process which began in the sectors providing financial services continued and even gathered some more strength following the introduction of the euro. The number of institutions has been falling as a result of mergers and wind-ups, while their average size has been growing. According to OECD data, the number of credit institutions fell from 8,320 to 7,867, i.e. by some 5% between December 1998 and January 2000. Four factors are widely cited as the reasons for the consolidation process: technological development, deregulation, liberalisation and globalisation.

Experience shows that the introduction of the euro has amplified the effects of these factors, although the various segments of the banking market have been influenced differently. The changes have affected primarily wholesale banking, with the result that an integrated European interbank market has developed, greatly assisted by the set-up of TARGET.[8] The most spectacular progress was made in the money market in interbank deposits and derivative products. The strong liquidity of the interbank market has facilitated the development of a uniform interest rate level, which is most observable in overnight deposit rates. The markets of repos and short-term securities, such as treasury bills, certificates of deposits etc., in contrast, are less integrated for the time being. Nevertheless, the underlying trend points towards unification. There has been little change in the retail market. It has helped big, universal bank conglomerates to emerge or strengthen even further in some member states.

While integration of the banking market has been a step-by-step process, that of the bond markets has been much faster and spectacular in the euro zone. There has been a particularly sharp increase in issuance of euro-denominated corporate bonds. The restructuring process within the corporate sector, the wave of mergers and acquisitions (M&A) and leveraged buy-outs (LBO), which have been coupled with considerable funding needs, all offer partial explanations.

The development and integration of the EMU member states' equity markets is indicated by the fact that 900 new companies were listed on the European exchanges in 1999, representing a 40% increase in equity issuance relative to 1998. Meanwhile, the number of new equity issues fell in the United States and the United Kingdom. In addition, cooperation projects among exchanges and mergers have started.

M&A activity has affected both the banking and non-banking sectors. There has been an increase not only in the number of mergers and acquisitions, but in the size of average transaction as well. The latter rose by nearly 40% in the banking sector, and amounted to €628 million

[7] Data source: OECD (2000).

[8] Trans-European Automated Real-Time Gross Settlement Express Transfer.

on average in 1999. As a result, the volume of M&A activity increased by 60% in one year. Although there were more M&A deals in Europe in the 90s than at the end of the decade, the volume of deals multiplied. Most of the transactions were mergers within the national borders, but cross-border M&A activity picked up towards the end of the decade. Today, cross-border M&A accounts for some 30% of mergers. Mergers within country borders range over regional levels (the Benelux countries, Scandinavia, the Mediterranean countries), then gradually to pan-European levels. However, the first signs of the latter are just beginning to appear. The dominance of within-country mergers stems in part from the fact that currently banks are facing a wide variety of opportunities to diversify, and they do not have to tackle the various regulatory and cultural problems, which often accompany cross-border fusions (see Table C).

Looking at the portfolio diversification of investors active in the securities market, portfolio investors (fund managers, pension funds, insurers) in small countries reacted much earlier and more robustly to changes in the market environment, diversifying their portfolios by making significant investments across borders, while institutions in large countries confined themselves mainly to a national scope. With the removal of exchange rate risk, liquidity has become one of the major criteria for investment decisions.

The total amount of European bond, equity and bank assets in the 11 member states of the EU is comparable with that in the United States ($21,084 billion and $22,865 billion, respectively). But complementing the data with those for Great Britain and Sweden, two countries likely to join the euro zone, the European financial market outperforms the United States market.[9]

But it is clear that EMU is a necessary but not sufficient condition for creating an integrated European financial market. Nevertheless, the first experiences with the introduction of the euro have shown that integration has already started in a number of segments. The direct and indirect effects on the banking market include the following.

In general, it can be stated that the implementation of the standardisation of prices has reduced transaction costs considerably, as the transparency of markets has improved. However, it is extremely difficult to quantify this effect. Obviously, though, revenues of banks from foreign currency and foreign exchange trading fell, by an estimated 12%–15% on average. This decline affected banks differently. Those entities mainly involved in trade finance were among the losers.

There has also been a decline in fee and commission income, as foreign exchange accounts, denominated in the various European currencies, were terminated, and banks maintain uniform euro accounts instead. Maintenance fees are estimated to have fallen by $25 billion. The winding-up of arbitrage activities can also be counted towards losses.

Table C **Bank mergers**

		Euro zone		USA		Japan	
		Bank	Non-bank	Bank	Non-bank	Bank	Non-bank
Total transaction value (€ billions)	1997	41.1	174.3	86.0	857.9	1.9	15.2
	1998	100.2	335.3	271.7	1,309.5	1.5	17.1
	1999	174.5	1,012.6	91.6	1,813.8	77.1	75.1
Annual change (per cent)	1998	168	92.3	215.9	52.7	–22.0	12.1
	1999	58.4	202.0	–66.3	38.5	5202.7	340.0
		Bank	Non-bank	Bank	Non-bank	Bank	Non-bank
Number of transactions	1997	199	4,323	596	12,325	26	497
	1998	245	5,167	651	13,757	19	564
	1999	278	7,315	535	12,402	82	1,387
Annual change (per cent)	1998	23.1	19.5	9.2	11.6	–26.9	13.5
	1999	13.5	41.6	–17.8	–9.8	331.6	145.9

Source: ECB (1999)

Naturally, a loss for one banks is a gain for other businesses, so we can talk about redistribution in this respect.

The removal of exchange rate risk within the euro market is counted towards businesses' gains. However, the size of this gain is negligible, contrary to popular opinion, as the region was characterised by a high degree of convergence and exchange rate stability before the introduction of the euro - therefore, most of the advantages were realised in the years prior to the introduction of the single currency.

The direct influences include the expansion of monetary policy beyond national borders. This has standardised the sources of refinancing to which banks have access. The establishment of TARGET and the introduction of EURIBOR, the single reference rate, and EONIA (Euro Over-Night Index Average) have also been features of the integrating institutional system. However, there have been a number of obstacles to the integration of the repo markets, including settlement systems and documentation requirements which vary from country to country.

Despite the integration process, the banking markets of countries still continue to be fragmented, with the large part (64%) of interbank assets and bank lending (80%) being confined to national boundaries. The euro zone accounts for 17.6% and 8.7% of total cross-border interbank assets and bank lending, respectively. However, the averages mirror the fact that many entities in the countries' banking markets satisfy exclusively local needs, so the proportions discussed above are much higher in favour of the euro zone in the case of large international banks.

As discussed earlier, it is difficult to separate the effects of the euro from technological development and the continual changes to the regulatory environment. One method of eliminating the effect of the euro would be to compare the development of the European banking market with that of the United States, where there was a similar technological revolution, but the currency remained unchanged.

[9] The calculations are based on the study by Danthine et al. (2000).

Table D **Net interest income-to-balance sheet total ratio in international comparison**

Per cent

	1990	1991	1992	1993	1994	1995
Euro zone	2.97	3.04	2.91	3.02	2.73	2.71
EU	3.23	3.35	3.18	3.34	2.99	2.99
UK	4.83	5.00	4.55	4.41	4.12	4.07
USA	5.16	5.53	5.97	6.16	5.77	5.76

Source: De Bandt et al. (1999).

Table E ROE in international comparison

Per cent

	1990	1991	1992	1993	1994	1995
Euro zone	12	12	9	9	6	8
EU	12	13	8	10	9	11
UK	14	9	7	19	27	29
USA	11	11	17	21	22	22

Source: De Bandt et al. (1999).

Table F **Bank and branch density in international comparison**

Per cent

	Number of banks		Percentage change	Number of branches (thousands)		Percentage change
	1990	1995		1990	1995	
Euro zone	8,377	705	–16	143	145	2
EU	9,540	7,728	–19	165	165	0
UK	665	560	–16	19	17	–13
USA	27,864	23,854	–14	68	70	3

Source: De Bandt et al. (1999).

However, such a comparison should be treated with caution, as the structure of the financial sectors in the USA and the euro zone is very different.

The rapid development and transformation of the securities markets obviously reduces banks' room for manoeuvre as regards the traditional channels of financing, but at the same time it opens new routes for banks in portfolio management and investment banking. The European market has been gradually converging with the American structure, in that the importance of bank loans is progressively smaller within finance for large companies. At the same time, however, European banks will continue to play an important role in ensuring liquidity, primarily by granting credit lines, as securities markets do not have the necessary qualifications to service this function.

Banks' comparative advantages in collecting and processing information and monitoring borrowers has been eroding in the past decade. Another key role of banks, namely ensuring liquidity in the market, has been losing its importance, as repo markets and short-term commercial paper provide institutional investors with adequate liquidity, while households have access to investment opportunities with similar liquidity characteristics as those of bank deposits via various money market funds. All this has led to the shrinking of traditional banking activities. EMU, in turn, has strengthened this disintermediation process.

A comparison of the United States banking system with that of the European countries reveals much keener competition between banks in the US, although competition in the US is still far from being perfect. There is monopolistic competition among large banks in many European countries, with small banks rather operating as local monopolies. All this shows that there are plenty of opportunities for competition to intensify in the European banking market. Growing competition brings to the surface and makes capacity surpluses evident, which the European banking market is struggling with.

Capacity surpluses may appear in many forms, depending on the structure of the given banking system. If banks are free to enter the market, then capacity surpluses become manifest in the decline in profitability. If, however, markets are closed or strictly regulated, then capacity surpluses do not necessarily become manifest in the decline in income, but rather in high relative operating costs. In such cases, X-inefficiency may be sizeable, and economies of scale may remain below the required level. Furthermore, competition will be fought not in prices but rather in the form and accessibility of services and the dimensions of the branch network. The above problems come to surface even in liberalised and integrating markets, but in most cases adjustment requires enormous costs and time inputs, and so inefficiency may easily be cemented for long. The emergence of problems, discussed above, is often also reflected in profitability, which may prompt banks to undertake unreasonably high risks in order to offset the loss of income.

The comparative data show that the European banking system lags well behind the US in terms of efficiency and that the lion's share of the transformation is still waiting to be accomplished. All this causes difficulties in making a projection for the Hungarian banking sector, as a rearrangement on such a scale and scope may take place in the European market on the 3 to 5-year horizon, the adjustment to which may be a larger exercise than that the current situation would induce (see Table D and E and F).

4 Characteristics of banking sectors in Central and Eastern Europe and in Hungary

As the banking sectors in the accession countries have common features and are facing the same challenges, it is worthwhile to look at those common features collectively.

Analysing the link between the economic strength of Central and Eastern European countries and the development of their respective banking sectors, a number of studies have found that banks in Poland, the Czech Republic and Hungary still have considerable growth potential.[10] This is underlined by the low balance sheet total-to-GDP ratio, so often cited, which is at least two or three times higher in European states than it is in Hungary. There is a clear relationship in developed countries between per capita GDP and the balance sheet total-to-GDP ratio, i.e. the development of the banking sector not only keeps pace with economic growth, but even exceeds it as a tendency. According to a study by PriceWaterhouseCoopers, a 1 per cent increase in per capita GDP causes a nearly 1 per cent increase in the balance sheet total-to-GDP ratio. Chart 1 illustrates this relationship, presenting the link between real growth and the change in balance sheet total-to-GDP ratio in various countries. All this would imply an increase around of 5 per cent in the balance sheet total-to-GDP ratio annually, given the current 5% real GDP growth. This growth forecast is significantly higher than the current rather stagnant ratio, indicating that the factors hindering the development of the banking sector, other than GDP, have a much greater role in Hungary than in the Western European countries (see Chart 1).

Western European data for the 90s also show that the size of the banking sector grew even along with static GDP growth, particularly as regards countries with high GDP. One explanation for this may be the sector's continual liberalisation and the change in the operating environment in the 90s. However, growth does not equally affect the various client segments. It can be seen that the higher a country's GDP, the higher the proportion of the retail segment within banks' assets. All this implies that in the emerging Central and Eastern European countries, including Hungary, the statistical relationships project a robust expansion of the retail sector.

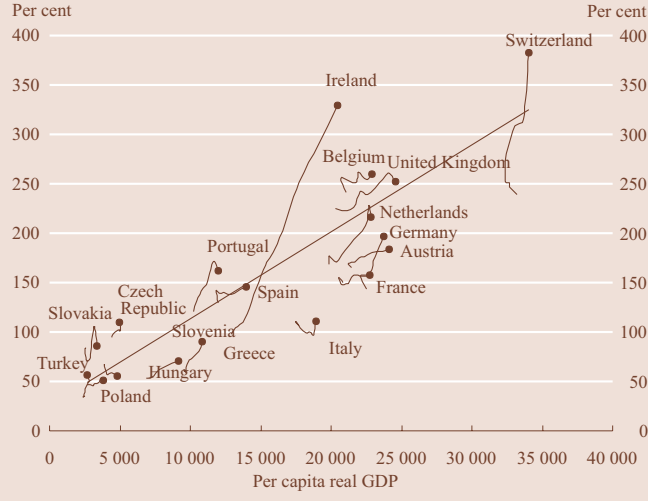
Looking at average interest rates and the role banks play in the economy, the data show that the lower interest rates were in a country in the past decades, the higher the size of the banking sector was relative to GDP. Consequently, a low inflation environment is believed to be achieved with the accession to the EU and, later, EMU is expected to influence positively the development of the Hungarian banking sector.

Analysing the OECD countries, Jaffee-Levonian (2000) have statistically demonstrated that the size of banking sector assets is closely correlated with foreign liabilities (within banks' balance sheets) and the saving rate, in addition to GDP. By contrast, the size is not affected by the population and the country's territory. Population affects primarily the number of branches and staff; however, the countries' geographical size does not have an influence on the banking sector's size and structure.

The study by Jaffee-Levonian (2000) makes calculations for Hungary, finding that, based on 1995 data, the 'OECD-compatible' level of the balance sheet of the Hungarian banking sector would be $69 billion, against the actual $26 billion, which means that, considering the development of the Hungarian economy, the size of the banking sector should be nearly two-and-a-half times bigger. The higher aggregate balance sheet total would be shared by 62 banks, in contrast with 43 at that time, so the 150% increase in size would imply a nearly 50% increase in the number of banks. All this indicates that, with the current level of balance sheet total, there are too many banks, and so the average size of bank is below the optimum level. In other words, the Hungarian market is overbanked. As regards the number of branches, the equilibrium level would be 1,789, while as regards the number of staff, there should be 83,000 people working in the banking sector, in comparison with the figure of 36,000 at that time. For the purposes of comparison, Table G presents the values for other countries in the region.

As regards balance sheet totals, every country seems to be lagging behind, but the extent of this lag is greatest in Hungary. The number of banks is closer to the equilibrium in every country, which, however, implies growth in the size of banks. The values for the OECD countries are much higher than those above. Moreover, the average size of banks is a least ten times greater in the OECD countries than in the Central and Eastern European countries.

Chart 1 **Size of the banking sector as a percentage of GDP; 1992–1999**



Source: PWC

Table G **Major indicators of banking sectors in the Central and Eastern European countries**

	Balance sheet total (USD millions)		Number of banks		Number of branches		Staff (thousands)	
	Actual	Equilibrium	Actual	Equilibrium	Actual	Equilibrium	Actual	Equilibrium
Czech Republic	55,171	62,454	51	55	1,518	1,595	60	77
Poland	50,537	83,897	81	82	4,512	4,245	136	186
Slovenia	10,786	16,624	29	22	550	581	10	20
Hungary	25,792	68,912	43	62		1,798	36	83

Source: Jaffee-Levonian, 2000.

[10] See, for example, PWC (2000) and Jaffe-Levonian (2000).

5 Expected effects of accession on the Hungarian banking sector

The previous chapters have presented the major changes that took place in the European banking market in the past two decades. However, in Europe there was a change in the economic regime with the introduction of the euro in 1999, the early results of which are just beginning to appear. Nevertheless, the effects of this step will likely outweigh all the changes that occurred in earlier decades. Hungary will have to adjust to this changed environment. The adjustment process will likely be continuous, and as a result of a permanent transformation, the Hungarian market probably will not be shocked by accession. However, it would be useful to enumerate some of the changes that can be forecast based on our current knowledge for the future of the Hungarian banking sector.

Legal and regulatory changes

Liberalisation in opening branches

Even now, Hungarian legal regulations are compatible with the legislation of European countries in many respects. The latest amendment to the Banking Act incorporates all the acquis in force, with the exception of provisions which apply to the single market. Of these, the implementation of the 'Single European Passport' may cause significant changes, which will allow European banks to provide services in every member state, either directly or via branches, without the need to apply for an additional licence. In Hungary, regulations on branch opening continue to include a lot of restraints, the most important of which is the endowment capital requirement, which is likely to be terminated upon accession. The countries that joined in 1995 also incorporated the provisions of the relevant Directive into their own legal structures.

It is fairly difficult to forecast the consequences of the liberalisation of branch opening, as there are no available international examples in this field. The importance of foreign banks in European states is less than 10%, in contrast with Hungary, where more than two-thirds of the banking sector is owned by foreign investors. A part of these banks already are operating like branches, which is perceptible in many areas from decision-making mechanism to risk management activities. Therefore, the strategic decisions to be taken by the parent banks will be crucial for the fortunes of Hungarian banks. The development of the European banking market has shown that banks provide services only on a limited scale via their branches in other member countries.

The transformation into branches of subsidiaries currently operating in Hungary is not expected to have a significant influence on the banking market, as the transformation will likely affect banks operating as quasi-branches, and the operations of these will have a limited impact on the retail market. Servicing personal clients and creating the required infrastructure is a very costly process, therefore, the foreign banks that want to break into this segment will likely want to make their own way by exploiting the new technological innovations (Internet, mobile and telephone banking). This will likely spur Hungarian banks to implement further technological development, which, however, is a two-way process, as it largely depends on customers' approval (safety problems) and how they are supplied with PCs, mobile phones and Internet access.

In addition to the transformation of subsidiaries into branches, a proliferation of cross-border services is also expected, which, however, belongs to the liberalisation of capital flows.

Liberalisation in capital flows

Liberalisation also affects capital movements, as currently there are a number of restrictions in force in Hungary which hinder mostly short-term speculative capital movements, although these are being gradually lifted. Arising partly from its OECD membership and partly from its accession to the EU, Hungary will have to remove the existing barriers. As we have seen, according to international experience, creating a sound macroeconomic environment and modernising the financial sector are necessary conditions for successful liberalisation, as the increase in the frequency of systemic banking crises goes hand in hand with liberalisation. The risk of banking crises can be reduced by creating a smoothly functioning, up-to-date legal environment and an efficient banking supervision. As regards the effects of foreign exchange liberalisation on Europe, the more developed a country's financial sector, the less the changes will affect the performance of the banking sector.

In terms of the legal and regulatory environment as well as the health of the banking sector, Hungary is currently well ahead of those countries which implemented a full liberalisation of capital movements in the 80s and 90s, therefore, their experiences are irrelevant. Taking into account all these, it is expected that further liberalisation will not pose a serious risk factor for the Hungarian banking sector, so the scheduling of steps is rather the competence of monetary policy.

Transformation of market structures

Size and growth of the market

Analysing the growth potentials of Hungarian banks, a number of pros and cons can be brought forward. European experience shows that the growth potentials car-

ried by traditional banking activities (deposit collection, lending, payment transactions) have become very low by now. The Hungarian banking market is much more bank oriented than the European average, with banks playing the dominant role in corporate finance. The bond and equity markets as well as the stock exchange are underdeveloped compared with those in the European states. Moreover, Hungarian banks' lending activities are not so much concentrated on the entire corporate sector, but primarily on large companies, which will have much easier access to sources of finance in the capital market following accession. The shift in large companies' focus towards the capital market will very likely impede the development of domestic banks.

However, large-scale restructuring is expected in the corporate sector as a result of accession. The related waves of acquisitions and mergers may facilitate the expansion of bank lending. Generally, it can be expected that the Hungarian economy, becoming increasingly stable as a result of the convergence criteria, lower inflation and falling interest rates will all contribute to the expansion of bank lending.

Lending will likely be shifted towards small and medium-sized enterprises as well as households in Hungary. The borrowing capacity of these market segments will improve due to robust economic growth and the increase in real incomes, which will reduce banks' risks. Moreover, experience has shown that the pick-up in lending not only accompanies economic growth, but even outperforms it. However, the continuation of the property market boom, induced by rapid growth, may be a source of risk, which may lead to the evolution of a price bubble. Price bubble bursts have led to serious bank failures in many countries. Hungary, therefore, must closely monitor this process, although the increase in Hungarian property prices can be seen as a natural process of catching up. But if the dynamic growth continues, it may cause systemic risks in the future. Currently, Hungarian banks' risk exposures are not significant in this area.

The underdevelopment of the Hungarian non-bank intermediary system is even more striking relative to the EU member states, which makes it likely that growth will concentrate on this sector. This process will be further reinforced by the ageing of the population, causing the importance of long-term forms of saving to increase. These factors, in turn, will impede banks' growth, and so the expansion of market activities will affect mostly the non-bank member of a banking group.

Looking at the size of the banking sector, even the largest entities are not large enough to become influential factors in the single European market. Consequently, the only significant Hungarian bank may become a takeover target of foreign banks.

In sum, a number of arguments can be adduced to estimate future growth, which partly strengthen and partly offset each other. Growth in the banking sector will likely reach or slightly exceed GDP growth. But this process probably will not be spectacular. Rather, it may be realised gradually, over several years (or decades).

Market concentration

Following the reduction in market concentration in past years, the first signs of further concentration have begun to appear in the Hungarian market, although decisions on mergers and acquisitions are mostly taken by foreign parent banks, which causes difficulties for the forecast. Right now, however, it is difficult to see which of the parent banks active in the Hungarian market plan to merge or to form strategic alliances, as these will obviously affect their Hungarian subsidiaries (or branches) as well.

In countries the size of Hungary, for example, in Belgium, the Netherlands or Finland, there is a much higher degree of market concentration, and where the situation is different, for example, in Austria, there the reason should be found in the strong cooperative banking sector and the massive regional segmentation of the financial sector. None of these factors plays an important role in Hungary, so market forces will likely enforce a higher degree of concentration, or they will drive smaller banks either towards closing-down or more marked specialisation.

Profitability

Joining the single European market will likely further strengthen competition in Hungary. As a consequence of intense market competition, interest margins, fee incomes are expected to fall, in line with the general trend, although the latter could easily increase due to the expansion of universal banking. The deterioration in profitability will likely force banks to pursue more stringent cost saving policies, which will imply cutting operating costs, rationalising branch networks and improving the efficiency of human resources management. It is also expected that non-bank entities will take an increasingly higher share of profit-making within banking groups.

European experience shows that banks are more or less able to offset the decline in interest margin by taking the measures mentioned above, and that the real sources of fluctuations in profits are the variations in lending losses and provisioning. In Hungary, there has been an opposite development recently. On the one hand, the thriving economy tends to improve clients' quality and their borrowing capacity as well as banks' profitability. On the other hand, conquering new customer segments is associated with additional risk-taking, which, in turn, affects profitability negatively. It is difficult to forecast the future balance of the two effects; however, dramatic outcomes which could destroy banks' portfolios are highly unlikely. An economic downturn is primarily the function of external factors, due to the openness of the economy. To forecast such factors cannot be the purpose of this study.

Distribution channels

The number of ATMs boomed almost in every EU member state in the 90s, although a few of them experienced a drop. By contrast, the number of branches clearly fell, replaced by European banks providing an increasingly wider range of electronic services. The introduction of services via the Internet and other media has not yet materially influenced banks' positions in Western Europe, although the first Internet based banks have appeared already.

Looking at the density of branches, Hungary's is not overbanked, although technological development will certainly make a few branches redundant. Nevertheless, no significant drop is expected over the short to medium term, especially if we take into account that several banks are working on the enlargement of their branch networks. The number of ATMs is expected to grow, until Hungary has reached the European average.

Relations with the central bank

The required reserve ratio, one of the instruments of monetary policy, was lowered from 11% to 7% in early 2001 in Hungary. At the moment, however, this reduction is far from the 2% level specified by the ECB. The reduction in the required reserve ratio may cause problems via the abundance of liquidity, which can be sterilised only by incurring substantial losses of income. In order to avoid the shock, it will be necessary to lower further the required reserve ratio in several steps until Hungary's accession.

Joining EMU will certainly confront Hungarian banks with new challenges. The quantitative tenders of the ECB have led to credit rationing due to the strong excess demand. Those institutions which do not have the quantity and quality of collateral which is a precondition for acquiring access to central bank funding are struggling with this problem. However, obtaining foreign interbank finance will probably not cause problems for the majority of Hungarian banks, but for banks that do not have background provided by a foreign parent bank, the same could well be a source of risk.

Generally, it can be expected that the parents of Hungarian banks will concentrate banks' treasury operations in their own headquarters, which will narrow the room of Hungarian branches and subsidiaries for manoeuvre.

More likely than Hungary's accession to the EU, joining EMU will induce perceptible changes in the Hungarian banking sector. Accession to the EU is expected to be smooth. However, until that moment we will continue to witness the continual adjustment of Hungarian banks and the gradual transformation of the domestic marketplace.

References

DANTHINE, JEAN-PIERRE – GIAVAZZI, FRANCESCO – VON THADDEN, ERNST-LUDWIG (2000): *European Financial Markets After EMU: A First Assessment,* NBER, Working Paper 8044

DE BANDT, OLIVIER – DAVIS, E. PHILIP (1999): *A Cross-Country Comparison of Market Structures in European Banking,* European Central Bank, Working Paper No 7.

DEMIRGÜC, ASLI – DETRAGIACHE, KUNT – DETRAGIACHE ENRICA (1998): *Financial Liberalization and Financial Fragility,* IMF Working Paper, WP/98/83

ECB (1999): *Possible Effects of EMU on the EU Banking Systems in the Medium to Long Term*

EDEY, MALCOLM – HVIDING KETIL (1995): *An Assessment of Financial Reform in OECD Countries,* OECD Economics Department, Working Papers No. 154

HOELLER, PETER – LOUPPE MARIA-ODILE (1994): *The EC's Internal Market: Implementation, Economic Consequences, Unfinished Business,* OECD, Economics Department Working Papers, 147

JAFFEE, DWIGHT – LEVONIAN, MARK (2000): The Structure of Banking Systems in Developed and Transition Economies, FED

NOYER, CHRISTIAN (2000a): *The Development of Financial Markets in the Euro Area,* BIS Review 54

NOYER, CHRISTIAN (2000b): *The Euro and the Banking Sector,* BIS Review 83

OECD (2000): *The Financial Structure of the Euro Area: One Year After the Introduction of the Euro,* DAFFE/CMF(2000)13

PriceWaterhouseCoopers (2000): Research Note from the Financial Services Value Advisory Team: *The Potential for the Banking Sector in the Developing Economies of Europe*

TURNER, PHILIP – JOZEF VAN 'T DACK (1996): *Changing Financial Systems in Open Economies: An Overview, in: Changing Financial Systems in Small Open Economies,* BIS Policy Paper No.1

PRICING BY HUNGARIAN BANKS

by Áron Tóth

Yields on financial assets tend to move towards equilibrium in a competitive market over the longer term. But the adjustment process is lengthy and equilibrium yields take time to develop. From this perspective, identifying the developments that determine short-term variations in interest rates, including banks' interest rates, on various financial instruments is a key question. The transmission of central bank reference rates and the adjustment of banks' interest rates, in turn, are largely determined by the considerations and mechanisms on which banks base their interest rate decisions. Therefore, in the following we will analyse the pricing behaviour of Hungarian banks. First, we will attempt to take an overview of international literature on the subject, and then analyse the practical experiences and empirical evidence gained in dealing with the Hungarian banking sector.

In the conventional approach to banking operations, banks set their interest rates on the assets and liabilities sides so that interest margin provide cover for the costs of operation and lending risks as well as for the required return. From the textbook perspective, the problem of pricing virtually ends at this point – the interest rate on an asset-side transaction, therefore, is the sum of the cost of funds (per transaction) plus the risk premium of the transaction plus the expected profit calculated by the bank. A change in one of the components will cause a change in the interest rate. Consequently, variations in the three components must explain short and long-term interest rate movements.

However, this causal relationship has been questioned for a long time. This is partly because in the case of loss-making banks, for example, operating costs or the costs of risk exposures for several years in the future are not priced in, and partly because the 'costs + profits = price' type of pricing has increasingly been replaced by a 'price – costs = profit' type of pricing, due to intense competition. In other words, banks' interest rates are fundamentally determined by market developments, and currently banks can only use their costs to influence their profits.

The problem cannot be regarded as the main direction of research into the financial sector in the literature. Most textbooks on banking operations address the issue of banks' pricing practice in a schematic and abstract way. Few studies have been written with the requirement of theoretical discussion.

One of the first of such papers was by Ho and Saunders (1981). This analysed, within the framework of a theoretical model and its (indirect) empirical test, the process fundamentally determining the pure margin, i.e. the interest margin above operating costs and lending risks. The heart of the model is that the demand for loans and supply of deposits follows a stochastic process – the demand for loans and supply of deposits do not necessarily coincide, i.e. net surplus funds are a random variable. The dilemma for a bank is to decide whether or not to hedge against the resulting uncertainty in the money market – a risk-averse bank attempts to set deposit and lending rates in a way to minimise the risk arising from the mismatch between deposits and loans. In the approach, the bank practically acts as a simple trader or broker (dealership model). The results have proven that the optimum spread is determined by (1) the measure of management's aversion to risk, (2) the structure of the market, i.e. the intensity of competition, (3) banks' average transaction size and (4) the variance of market interest rates. In the study, the authors do not directly estimate the equation which can be regarded as the final conclusion of the model, but they indirectly test the relationships explicated by the model. The empirical tests of the 100 largest US banks confirmed that the size of spread was influenced by interest rate volatility. The authors went further and found that the large banks were operating with an around 30-basis-point narrower interest margin than smaller banks. Paradoxically, this can be explained by the fact that smaller banks have more market power – large banks are exposed to sharp international competition, while smaller banks can operate as monopolies locally or regionally.

Angbazo (1997) develops this model further. The author presents a similar 'dealership' model, with the difference that the solutions include lending risk or the interaction of lending and interest rate risks. Angbazo comes to the rather unsurprising conclusion that lending risk positively affects the size of the optimum interest margin. The empirical evidence presented in the study cannot, as in the case of the earlier study, be regarded as a direct test of the theoretical relationships – the author simply regresses the risk factors examined and a number of complementary (bank-specific and other risk) variables against the interest margin. He measures lending risk with net loans written off-to-total lending and interest rate risk with net position in short-term assets-to-equity ratios. Both variables were significant in the model. However, the parameter measuring the interaction of lending and interest rate risk (the result of multiplying the two ratios) did not prove to be significant.

Wong (1997) builds his model on a fundamentally different logic – he starts from the traditional corporate theory and uses the classic comparative statics. His results partly coincide with the findings of Ho and Saunders and partly complement them. Some of the conclusions drawn from the model are obvious and correspond to pragmatic thinking:

1 The optimum interest margin is higher if the bank is risk-averse than if it is risk-neutral.

2 If:

a) the market power of a bank;

b) the marginal cost of transactions;

c) lending risk; or

d) interest rate risk

increases, then the optimum interest margin also increases. Integrating the problem of moral hazard and selection bias into the model, this reduces the optimum interest margin – banks try to avoid high interest rates in order to reduce those risks.

Other observations do not appear as obvious: (3) if interbank rates rise, then the bank's optimum interest margin increases, provided that the bank is in a net debtor position. This is because the bank will raise lending rates, because a) it can lend relatively more favourably in the interbank market, so it rearranges its portfolio, by increasing lending rates (*substitution effect*), or b) resulting from the net debtor position, its profit will fall, which, in turn, triggers an increase in lending rates (*income effect*). If the bank is in a net lending position in the market, then the effect of the rise in interbank rates is less obvious – the income effect is negative, i.e. it prompts a reduction in interest rates, which will be opposite to the substitution effect, so the direction of the result of the two interactive factors will be uncertain.

Saunders and Schumacher (2000) bring few new ideas as regards the model relative to the study by Ho and Saunders (1981). They retest the model set up 19 years ago in the international environment – the two-step methodology used is the same. They run a cross-sectional regression for each of the 7 major OECD economies, for each year of the period 1988–1995. Here they regress various bank and country-specific variables. The constant of these regressions will be the true 'pure margin'. In the second step, the theoretical relationship is tested for these clean margins, i.e. the authors regress the constants of the previous regression in one panel against interest rate volatility. The constant(s) of the second regression indicate(s) the degree of competition in the 7 countries analysed. The authors have found that the banking sectors of the countries analysed generally operate efficiently – on average, 0.20% of the pure margin can be explained by the structure of markets, the French and British markets proving to be the most competitive. Consistently with theory, the model has shown that the higher the volatility of interest rates, the higher banks' margin – a 1% increase in interest rate volatility results in a 0.2% rise in bank interest rates.

Santomero (1985) considers the pricing of loans to the corporate sector from a practical, operative perspective. In order to maintain the optimum scale of operations, banks have to finance high-risk loans as well, which has monitoring costs – theoretically, a financial institution funds high-risk transactions as long as the marginal costs of monitoring are equal to the marginal revenue of the transaction. In practice, it is basically management's 'nose' that determines the size of risk a bank actually undertakes. Although pricing high-risk products is theoretically a very complex task, in practice it is much simpler. An important issue to address when pricing banking products is essentially what banks charge in the risk premium, i.e. whether it risk capital only, or opportunity cost must also be recovered above the risk capital.

The variable-rate facility is increasingly often used when pricing loans, despite the fact that the optimum proportion of variable or fixed-rate loans depends on a number of factors. As banks' fund collection strategy fundamentally determines the way in which loans are priced, the primary issue is whether the bank basically collects fixed or variable-rate liabilities. The second issue to be addressed is what maturity matching is required by management's willingness to undertake risks. It is unsuitable for a bank to completely eliminate interest rate risk with the help of perfect maturity matching. In the case of variable interest rates, the bank passes its interest rate risk over to the client, i.e. it translates interest rate risk into lending risk. However, there are limits to this policy. In many cases, banks are much more prepared to manage interest rate risk than their clients, so the fixed interest rate may be useful. As a rule of thumb, managing interest rate risk does not cause particular problems for firms whose profits clearly move in tandem with variations in the market rate (or rather inflation), therefore, facilities with variable interest rates are recommended. But where this is not demonstrably so, presumably the bank can manage uncertainties arising from market rates with more expertise, so facilities with fixed interest rates are appropriate.

Based on their own analyses and also surveying the Anglo-Saxon literature, Booth and Chua (1995) looked at the various types of loans to US large companies at the end of the 90s. They confirmed that the vast bulk of loans are variable-rate facilities – a fixed spread is added to a base rate which, in turn, is determined on the basis of an index basket (prime, LIBOR). In addition, commissions complemented the interest rate in a variety of forms – in most cases banks charge an up-front fee, although in many other cases various forms of commitment fees, charges on unused loans, various other commissions, linked to the size of loan, complement the former charge. Often early repayment is 'penalised' by some sort of charge.

Covitz and Heitfield (2000) draw very interesting conclusions in their article. They analysed what loan assessment practice and pricing behaviour are most likely followed by banks operating in different market (competitive or monopolistic) environment. The problem was raised by banks' lending portfolios having deteriorated significantly in the USA in the 80s with the intensification of competition. This was presumably due to the fact that, faced by growing competition, banks were forced to finance more and more risky clients and investment programmes. Accordingly, the model states that, optimally, competing banks should charge higher lending rates in accordance with higher risks. This may lead to the very peculiar situation in which a monopoly, exploiting its comfortable position, pursues a more conservative lending policy, as a result of which it may charge lower rates on loans than a participant in a competitive market. The problem is raised particularly sharply in an unfavourable economic environment – here the difference between secure and risky investment is much bigger, which prompts firms to undertake risky investment programmes. As banks operate in a

competitive market (i.e. they are price takers), they cannot but choose to accept the high interest rate coupled with high risk, offered by firms.

Strahan (1999) places special emphasis on the fact that banks not only embody their risks in interest rate but in the nature of loan as well, which, as the article points out, is largely linked with the interest rate itself. He categorises as non-price risk components, for example, credit ceilings, shorter maturities and mortgages as well as the various restrictive covenants of a loan contract. Theoretically, banks attempt to hedge against a part of their risks using the above non-price components, then they price the remaining risk into the interest rate. So, in this case, for example, the interest rate on a loan secured by mortgage should be lower, as the mortgage provides cover for a part of the lending risk. Using a simple regression, the author demonstrates the effects of the various price and non-price components of risk. He finds that the non-price components do not substitute but rather complement the price components risk – those loans which are extended under stricter conditions tend to have higher interest rates. The phenomena observed by Strahan (1999) can be traced to two causes. (1) In fact, price and non-price components may well substitute each other, although non-price components can cover a relatively small portion of risks. So the remaining risk, which is a part of the price component, is still typically higher than the risk premium built in the interest rate – this may explain the statistical relationship discovered by Strahan (1999). (2) Banks price their loans wrongly, i.e. they expect high-risk lending transactions to have disproportionately high returns. Unfortunately, the article does not go as far as to raise the issue.

In their studies, Lown and Peristiani (1996) assert that there is a clear link between interest rates (on consumer credit) and banks' capital strength – banks with more capital strength lend at lower interest rates. One reason for this is that the costs of funds for more risky (undercapitalised) banks are higher, the other reason being that, according to their risk, they tend to cut back their lending activities via higher lending rates. The authors explained the large lending squeeze in Western Europe in 1990–91 –large banks were typically grappling with capital shortages in the period, which significantly affected their lending activities.

Experiences of a survey

In the second half of 2000, a few questions were asked about the issue of pricing from Hungarian medium-sized and large banks in the framework of a detailed questionnaire dealing with the broad issue of lending risks. Most of the questions tried to survey the definition of interest rate from operative and business perspectives and to discover the background of interest rate decisions.

Unfortunately, some of the banks did not return the questionnaire (7 out of 29),[1] or they did not give meaningful answers. Independently of this, the results of the questionnaire are presumed to reliably represent large and medium-sized banks, i.e. the majority of the banking sector. The results of the survey can be summarised as follows.

Generally, banks try to react to market developments rapidly, or, at least they attempt to create the institutional conditions for a quick response. The forum authorised to change interest rates convenes fortnightly in most banks, but all of them certainly revise their conditions on a monthly basis. Nevertheless, all respondents stressed that these forums may convene on an ad-hoc basis as well, if market developments warrant it. Almost all banks maintain that a 25 basis point change in market yields should be built in interest rates. Based on the survey, banks do not have a uniform approach in respect of the adequate market reference rate – in practice, they monitor the whole range of reference market rates.

Most banks did not give a sufficient answer to the question dealing with the calculation of the costs of funding. Those banks that gave unambiguous answers, calculated on the basis of marginal cost were in the majority (mostly large banks); but there were banks that used the average cost based calculation method as well.

Banks are fairly flexible in deciding whether they build the profit content of transactions into the interest rate or fees – in most cases it is the client's requirements which determine where the expected profit component should be computed.

In the following, we attempted to establish the influences that fundamentally determine developments in bank interest rates.

Very interesting results were produced in the case of the two cost factors – it appears as if costs were asymmetrically affected by developments in banks' interest rates. Almost one-half of all the banks responded that, even if costs are falling or are expected to fall, they would not reduce interest rates. Those banks that build changes in costs into interest rates, generally reduce rates only after costs actually have fallen. Therefore, there is no 'forward looking' price setting in this case. If, however, the change in cost factors produces an upside push on interest rates, only one-fourth of respondents replied that costs do not have an effect on services prices. It appears that in this case banks build increased costs into prices gradually. On any account, this phenomenon appears to signal that banks are operating in an imperfect market. If costs fall, then they try to realise excess profits until the market forces them to reduce interest rates. This is a perfectly rational behaviour. The only problem is that, according to all signs, the market is far from being so strong as to exercise its compelling power without delay.

[1] The most important weakness of the questionnaire was that the largest Hungarian bank, OTP, did not fill it in.

As regards demand, banks' behaviour is completely symmetrical – demand influences the price of services at two-thirds of banks.

Most bank revise risk premium regularly – if the client's rating in terms of risk changes, then there is the possibility for interest rates to change accordingly.

Taken together, having processed the questionnaires, it appears that the way banks set interest rates is largely different from the "textbook banking approach" – lending rates naturally include the risk premium component, but, when actually pricing a transaction, costs and required returns are not automatically built into the margin, under a pre-determined procedure. Normally, banks' businesses are required to return profits – however, the calculations are rather produced for long-term plans or the examination of profitability, and not for banks to use them as an operative rule of thumb. When pricing products, banks generally take into account the judgements formulated about their competitors and the given market product.

Banks' pricing practice based on personal interviews

Because the questionnaire raises a number of new issues, it has served as a good starting point – we have therefore considered it important to obtain a more detailed picture based on personal interviews.

We selected participants from the largest and medium-sized entities, in order to cover the banking sector as thoroughly as possible, ensuring at the same time that market leaders and followers were included in the sample. So we conducted interviews with managements of 10 banks[2] that account for 68% of the sector's balance sheet total, 80% of household funds, 69% of corporate deposits, 75% of household lending and 68.3% of loans to the corporate sector. We have attempted to hold interviews with persons who are involved in actual interest rate decisions and have a more or less detailed overview of the operative process of pricing. Although banks in most cases were helpful, it happened that we were not able to obtain the necessary information despite our best efforts.

Overall, our experience shows that banks have realised in full the importance of pricing in the past one year – most institutions started or finished their investments in information technology in the second half of last year which will enable them to price transactions accurately, according to the risks and costs they carry. In fact, we differentiate among the pricing practices followed by banks taking into account the stage of investment projects. There are minor differences, but the overall objective is the same – to earn a profit on each client.

In most banks, the ALCO convenes relatively frequently (fortnightly). Generally, case-by-case interest rate decisions are made, and rules of thumb or automatic mechanisms are seldom used. At the meetings, banks' interest rates are collectively determined by developments in the various money market returns, the pricing behaviour of competitors and the bank's strategy. In sum, the most important parameter of those noted above is competitors' interest rates for almost all banks.[3] Generally, they consider 4–6 banks as their rivals, although it happens that they monitor a much wider range of entities or just one bank. In most cases, developments in money market returns are only indicative - what matters is the behaviour of competitors.

Banks' organisations are split into profit centres throughout the sector. Profit centres are organised on a regional, divisional or (in a few instances) product basis, but there are combinations of the two in many instances. Month by month, they have to perform against detailed plans, the hardest requirement being the profit plan (or the loss plan, as the case may be) and the measure of risks to be undertaken, which most banks also stipulate as an important limit. In most cases, gaining market share is only of secondary importance, even if the bank is attempting to expand in a given segment. The independence of profit centres varies by bank – most banks measure performance on a monthly basis, others make a requirement to fulfil the plan on quarterly or annual averages.

Net collectors of funds offer surplus funds to net lenders via a transfer price. There is one transfer price used in the majority of cases, but it happens as well that separate settlement prices are set for both the assets and liabilities sides. However, this is irrelevant from the perspective of pricing. The overwhelming majority of banks adjust this transfer prices very flexibly to money market developments (generally to BUBOR), but there are systems in which the price is revised only monthly. In this latter case, a bank presumably alters its market rates much more slowly.

The structure of interest rates is fairly roughly outlined in most banks, and almost never follows the traditional banking approach. In most cases, costs of funds are calculated at marginal cost – generally this is BUBOR. Risk premium, operating costs and required rate of return are very vaguely separated in the margin which is built on this. Therefore, in most cases it is very difficult to recognise the traditional textbook logic.

Banks meticulously produce their plans for the following year (or perhaps for a longer period). In the detailed profit and loss statement, revenue must provide a cover for the costs of operation and provisioning, or operations must return some profit on the average of the year. However, these costs and the profit are not allocated to the individual transactions and customers, so these very indirectly

[2] OTP, Hungarian Foreign Trade Bank, CIB, Commercial and Credit Bank, Raiffeisen Bank, Budapest Bank, Bank Austria-Creditanstalt, Citibank, Erste Bank, Inter-Európa Bank.

[3] Interestingly, banks were reluctant to follow the NBH's official interest rate increase in October 2000 – they were mostly waiting for each other's reactions. Those banks that were quick to respond, did so because they considered the raising rates due for long, independently of the central bank's rate increase.

affect the prices of transactions. Many banks add a margin on the costs of funds which, based on past years' experiences and the future trends, is expected to cover the costs of operations and profit, but various elements are inseparable within the margin, so variations in the individual components seldom induce an interest rate change within the year.

Banks set risk premia (or, where it cannot be separated within the margin, the entire margin) mostly empirically. Particularly sophisticated solutions have seldom been met – in most cases the basis for risk premia is the relative frequency of the various risk categories, but there was one case of a bank setting risk premia on an absolutely ad-hoc basis. A factor making risk premia more difficult to estimate is that there are no adequately large data bases available. Banks tend to revise the calculated values mostly semi-annually or annually, but it is suspected that they actually alter these values much more rarely (some banks have never changed those values). In any case, this is a factor acting against a decline in interest rates.

Although in the majority of cases the risk premium basically should cover the costs of provisioning, there is no direct link between the risk premium and provisioning. In theory, a bank is able to price its asset-side services adequately, if it correctly judges the risks of a transaction, i.e. the size of expected provisions.[4]

The practice of postponing the building of provisions year by year is also interesting – risk provisions tend to increase more strongly in the second half of the year, without developments in outstanding lending providing a reason for this. The two possible explanations are that, (1) presumably, banks are more inclined to qualify assets more accurately towards year-end; and (2) their risk provisions also serve as a buffer, which helps banks smooth out financial results between years. In the latter case, no clear conclusions about banks' risk management systems can be drawn from movements in provisions.

Generally, banks emphasise that an increasing role is given in Hungary to the non-price components of transactions. We have been told that management believe the prices of services have only a passive role in market competition,[5] and that quality and non-price components of services are given a more important role. With their IT developments, banks are trying to calculate increasingly more accurate earnings per customer. They are making attempts to find out to what costs certain customers are sensitive to, and, for example, they realise the required returns not on the interest rate but rather on fees, or, for example, they cover a part of risks by collaterals. This usually depends on the customer, so the majority of banks have not been able to give a clear answer to the question regarding the importance and frequency of the use of this practice currently.

The role of collaterals is very interesting. The overwhelming majority of loans are more or less backed by collateral. Consequently, only a part of lending risks has to be built into the risk premium. Given that the risk premium is a price component, unlike the collateral, the trade-off between the two is far from clear – it is difficult to say how large a risk premium could substitute a collateral backing a lending risk and vice versa. Accordingly, banks treat this issue in very different ways. Most of them have claimed that there exists such a trade-off, but the policy is a matter of bargaining in most cases. Other banks have said that the risk is fully covered the risk premium, that is, loans are admittedly over-secured. In these cases, a part of the risk premium should be realised as a profit year after year.

In most cases, there is an opportunity to modify the conditions of the transaction whenever the risk of the client changes during the life of the lending transaction. However, there are major differences in when a bank is ready to recognise this change mostly in the collaterals of the transaction or rather in the premium.

In cases when there is a lag behind the plans, banks very seldom try to make up the delay via their pricing policy. In most cases, they find some way to fulfil the requirements in terms of profits – speeding up debt collection, changing the marketing strategy, improving the quality of services, etc.

Most loans are variable-rate facilities. There is virtually no experience of banks trying to alter the conditions of the facility taking into account customer properties, i.e. to take over interest rate risks from clients that supposedly are less prepared to manage this situation. Few banks take advantage of having a competitive edge over certain client groups, for example, that they could realise excess profits on fixed-rate facilities. Banks' views differ in respect of the fact whether or not the market requires fixed-interest facilities.

Variable-rate lending products for the important customers are fixed to BUBOR. According to the consensus view, the role of the prime rate is extremely slim. It is used mostly with clients that are less sensitive to interest rates. Accordingly, changes to the interest rate are less frequent and are based mostly on business policy considerations.

[4] Especially for this reason a bank could establish provisions right at the time the deal is transacted. In this case, there would be no lag between the excess income realised on the higher risk premium and the increase in provisions in case of a lending expansion or a turn towards more risky debtors. Nevertheless, neither domestic nor international experience has shown a trend supporting this idea.

[5] 'Low' interest rates are therefore a sort of minimum requirement, but it is not the factor which differentiates.

Conclusions

On the whole, the traditional costs of banking tend to determine the level of banks' interest rates only indirectly and over a period of one year or more. In the short run, it is the scale of competition which is relevant for the efficiency of the transmission mechanism. Most banks believe that further competition can hardly be expected in interest rates in the future. However, the race is going on in increasingly larger areas, so a more and more important role is being accorded to non-price factors. It is difficult to compare these components, due to their nature, which implies strong rigidity by itself. All these factors suggest that banks' market rates will adjust more rapidly in the future.

It should be stressed that currently there are important changes going on – banks are installing state-of-the-art IT systems, which are more or less capable of developing a more sophisticated pricing practice.

This is based on banks trying to calculate per client profitability as precisely as they can. As a result, the question of pricing may be simplified or fine-tuned. At first glance it may appear that the IT developments, observed as a general tendency, constitute an important step towards traditional textbook pricing. But the picture is deceptive for a number of reasons:

1 Traditional interest rate setting has been built on the concept of pricing the transaction. Apparently, though, domestic banks do not consider individual product pricing as the strategy of the future. From this it follows that traditional components will not be caught in interest rates, as the bank will not necessarily earn required profits and even its costs and the risk premium from the given transaction and the interest rates charged on it..

2 In keen competition, the traditional logic will presumably reverse itself – if the interest margin (or, more generally, the revenue realised on the customer) does not provide cover for the (risk induced and operating) costs incurred and/or required profits, then interest rates will not increase, but rather banks will try to 'economise' on the margin (for example, they will reduce operating costs, or increase the efficiency of debt collection).[6]

There may be other differences in respect of how profitability calculations are detailed, for example, costs will continue to be roughly allocated; or probably calculation of risk premia will be less well-grounded at some banks than at others, etc. In addition, in certain business segments[7] banks plan to introduce profitability calculations only over the longer term.

References

ANGBAZO, L. (1997): *CommercIal bank net interest margins, default risk, interest-rate risk, and off-balance sheet banking,* Journal of Banking & Finance 21, 55–87

BOOTH, J., R.; CHUA, L. (1995): *Structure and pricing of large bank loans,* FBRSF Economic Review No. 3.

COVITZ, D., M.; HEITFIELD, E., A. (2000): *Monitoring, moral hazard, and market power: a model of bank lending,* Center for Financial Studies: *Competition among banks: good or bad?,* Conference Papers

HO, T., S., Y.; SAUNDERS, A. (1981): *The determinants of bank interest margins: theory and empirical evidence,* Journal of Financial and Quantitative Analysis, Vol. XVI, No. 4, November

LOWN, C.; PERISTIANI, S. (1996): *The behavior of consumer loan rates during the 1990 credit slowdown,* Journal of Banking & Finance 20, 1673–1694

SAUNDERS, A.; SCHUMACHER (2000): *The determinants of bank interest rate margins: an international study,* Journal of International Money and Finance 19, 813–832

SANTOMERO, A., M. (1985): *Pricing business credit, Handbook for Banking Strategy,* A Wiley-Interscience Publication

STRAHAN, P., E. (1999): *Borrower risk and the price and nonprice terms of bank loans,* Banking Studies Function, October

WONG, K., P. (1997): *On the determinants of bank interest margins under credit and interest rate risks,* Journal of Banking & Finance 21, 251–2713

[6] Unless, for example, the increase in costs can be passed over to the market via improvements in the quality of services.

[7] Mostly in the household segment.