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The Hungarian Financial System

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Executive Summary

Hungary's financial system has undergone significant changes since 1987, the year when the foundations of the two-tier banking system were laid. Since the wave of privatization of state-owned banks between 1994 and 1999, large, foreign owned, universal credit institutions have become the backbone of the financial system. Today not only do banks represent two-thirds of all institutional assets in the financial system and have substantial presence in all markets of financial intermediation but they also own major stakes in the capital market, insurance and fund sectors.

Due to the relatively concentrated market structure and the existence of an incumbent market leader the Hungarian banking market is characterized by monopolistic, risk based competition in the retail segment while the corporate segment is more competitive. Banks are, thus, able to offer a combination of relatively low deposit rates and high lending rates to households. The resulting high interest margin has been the main reason behind the outstanding rate of operating profitability of Hungarian banks in the Central and Eastern European region.

In the halcyon years between 2000 and 2008 the banking sector grew impressively, aided by the government's generous housing loan interest rate subsidy scheme and the accommodative stance of regulators towards the dynamic spread of increasingly risky foreign currency based loans. In 2009 the depreciation of the domestic currency caused banks' credit portfolios to deteriorate at an alarming pace, prompting regulators to put an end to foreign currency lending and reverse the trend of dynamic but risky profit growth. Since the crisis, both retail and corporate loan volumes have been on the decline, led by the sharp drop in foreign exchange based financing, while bank profits suffered as a result of several government measures aimed to improve the financial position of household borrowers.

The Distinctive Features of Financialization in Hungary

In the early years of the economic transition, banks in Hungary were mainly involved in lending to the corporate sector. By the end of the 1990s, competition had

strengthened among banks in this segment, aided by strong corporate demand for loans due to the lack of a functioning capital market. The indebtedness of firms, thus, increased rapidly, in line with the convergence of the Hungarian economy. The growing share of foreign currency (FX) loans within the portfolio, however, increased firms' vulnerability to changes in the exchange rate. Exchange rate risk threatens the SME sector in particular as these borrowers lack the sufficient euro revenue that would serve as a natural hedge.

Large scale lending to households only started in the beginning of the 2000s with attractive state-subsidized forint loans leading to a sharp surge in the household loan portfolio in the period 2002-2003. When state subsidy on these forint denominated loans was cut in 2003, banks started to provide customers with low interest, FX based mortgage loans. Households' indebtedness accelerated from 2005 onward, which led to a period of credit boom in 2007-2008.

Despite this gradual accumulation of FX risk, regulators did not take measures to confine the spread of FX based loans until the signs of the global financial crisis showed in Hungary out of concern that such measures might hurt growth. The crisis, however, brought a severe end to lending dynamics and exposed problems inherent both in the household and the corporate segment. In the household sector problems culminated around the issue of lax lending practices of banks and the growing amount and share of non-performing loans. On the other hand, banks appeared unwilling to take on more risks in corporate lending while businesses also refrained themselves from taking on more debt in a period of worsening business outlook.

Regulation of household lending stepped up in 2011 and 2012 to encourage banks' prudent practices and strengthen the transparency of lending and customer protection. The government also made important steps to foster corporate lending by providing state guarantee. Furthermore, the Basel III recommendation package may help handle financing risks more effectively than before.

Competition in the Hungarian Banking Market

Compared to other EU countries and countries in the region, net interest margins, despite a continuing decrease, are still rather high in the Hungarian banking sector. The reason for this phenomenon may be higher inflation, higher credit risk, the larger proportion of customer loans in the asset structure of banks, adding to risks, and the lack of scale efficiency arising from the small size of the market. However, the relatively high profitability of Hungarian banks suggests that banks use their market power and use oligopoly pricing, which is particularly true in the household segment.

Although, owing to the presence of foreign banks and increasing cross-border loans, there has already been fierce competition in the corporate loan market in Hungary from the second half of the 1990s, neither the structural nor the behavioral analysis of competition indicated significant competition in the household banking market. The comparison of the market structure of the household market and that of the corporate market suggests that the concentration of the former segment is much bigger. Moreover, the interest margins between household loan and deposit rates are relatively wide as compared to developed countries, and much wider than margins in the corporate segment.

Research on the pricing behavior of banks indicate that, owing to the low price sensitivity of Hungarian consumers, banks abuse their market power and use oligopoly pricing, especially in the consumer loan and deposit markets. The main causes of the lack of price competition in the retail segment are the information asymmetries, the high switching costs and fees relating to the early repayment of loans, the low level of financial literacy and weak consumer protection. It is important to point out, however, that the lack of price competition does not entail complete lack of competition, because, as it is often emphasized, the main characteristic of competition in the Hungarian banking system is non-price competition.

At the end of the 1990s, the competition in the corporate loan market strengthened, so banks turned to the household loan market which was enhanced by the

government's subsidizing of housing loans, a practice that reached its climax in 2002. In this situation foreign owned banks started a strong cost based competition by opening new offices, installing new ATMs, increasing their employees and expanding the range of banking products and services. The increasingly fierce competition resulted in a moderate decrease in margins but that decline was attributed essentially to disinflation, the fall in the reserve requirement ratio and the decreasing risk premium on Hungarian assets. In this competition local banks preserved their position in the household market by utilizing their acquaintance with local clients.

However, the governmental mortgage loan subsidy system also had an anti-competitive effect. Because the state interest subsidy was linked to the issue of mortgage bonds, the system severely decreased competition as only the three mortgage banks had access to this interest subsidy. This significantly increased the market share of OTP Bank in the mortgage loan market.

In 2003 and later in 2005, however, interest subsidies of forint-based mortgage loans dropped drastically. This led to strong risk based competition, which manifested in the introduction of foreign currency based loans, the increase of loan to value and the recruitment of increasingly riskier clients. This latter development, however, significantly reduced OTP's market leading role and, therefore, enhanced competition. Despite the increasing competition, pricing abuses continued to exist in the household loan market even after the onset of the financial crisis.

Profitability of the Hungarian Banking Sector

Domestic owned banks incurred huge losses in the first few years of the 1990s, owing to the inherited bad credit portfolio. After the bank consolidation of the first half of the 1990s and the subsequent economic recovery fuelled by an influx of foreign investments, the Hungarian banking sector became relatively profitable. Nevertheless, it remained rather segmented with respect to profitability and clientele until the end of the decade. Domestic banks postponed the necessary technological upgrades and other developments during this period because of the

dominance of state ownership while foreign banks, well provided with capital, were active only in the corporate market.

From the beginning of the 2000s, foreign banks turned to the household market and, as a consequence of intensifying competition, the efficiency of the banking sector improved. The profitability of the banking sector became outstanding in the region owing mainly to the surge in households' demand for loans, prompted in part by governmental policy and the low level of competition in the household segment. From the second half of the 2000s, however, the credit portfolio of the banking sector deteriorated because of the economic slowdown and the fierce risk based competition from 2004 that led to the over indebtedness of households. The main consequence of the financial crisis in the Hungarian banking sector was that these accumulated risks manifested themselves in enormous loan losses to banks in 2010 and 2011. For the time being, however, these losses do not jeopardize the stability of the banking system.

Regulation of the Hungarian Financial Sector

The diverse tasks of regulating the Hungarian financial sector are shared by the government, the central bank and the supervisory authority. While in the pre-crisis period the supervisory authority followed a regulation strategy that was conducive to growth, the central bank and the government stepped up their regulatory activities during and after the financial crisis in an attempt to maintain the stability of the financial system. Furthermore, the crisis also strengthened the self-regulation of the banking sector as the association of banks introduced several new recommendations and reviewed its code of ethics.

Most importantly, the central bank responded to the crisis of 2008 by considering financial stability to be its principal task in order to maintain liquidity in the Hungarian interbank market. In an effort to solve the FX liquidity problems of the banking sector it assumed the role of FX lender of last resort. At the same time, the central bank faced mounting difficulties in boosting lending in domestic currency

and in reviving economic growth as the domestic affiliates of foreign mother banks scaled down their activity in the corporate segment.

The Hungarian government took steps to help distressed retail debtors by shifting some of the costs of borrowers emanating from the FX based loan contracts to the banking sector. On the one hand, the government encouraged switching to less risky forint denominated loans and restricted the extension of FX based mortgage loans. The government also introduced other, so called “unorthodox” measures, such as the early repayment scheme and the exchange rate fixing of FX denominated household loans. In the former scheme certain eligible households were allowed to repay their existing FX loans at fixed preferential exchange rates while household debtors entering exchange rate fixing were entitled to pay principal and interest installments at fixed exchange rates until 2017. These measures alleviated the burdens of 40% of all FX borrowers and were financed mostly by the banking system.

The Fund Sector in Hungary

Although Hungarian households are relatively risk averse financial disintermediation of household savings started relatively early after the economic transition with the appearance and growth of insurance funds, mutual funds and, from 1998, the mandatory pension funds. Among these, the biggest and most dynamically growing asset type was that of pension fund assets, which increased to 14% of households’ financial assets by 2010. This trend, however, was reversed after the crisis when the government decided to transfer pension fund assets and redirect employees’ mandatory pension fund contributions to the state social security fund in an attempt to reduce government debt. The transformation of the mandatory pension system was a decisive development in 2011 as it withdrew managed portfolios and their related revenues from the sector. Nevertheless, the dynamics of managed assets reflects a decrease even when netted from the loss of portfolios managed for pension funds. Factors affecting portfolio growth indicate additional negative changes, although returns are expected to rise in the coming period.

As the transformation of mandatory pension funds triggered a decrease in membership and assets, several pension funds went out of business and further mergers are expected. The state-run pension system must face serious demographical challenges in the near future, thus, attempts to promote self-support schemes became increasingly important. So far, they had little results as institutional self-support alternatives such as voluntary pension funds and healthcare funds have not gained any significant popularity: membership meltdown at voluntary pension funds continued, growth at healthcare funds may slow down. Despite lower membership fee contribution from employers, higher member payments generated a growth in membership fee revenues at voluntary pension funds, while supplementary membership fee payments from mandatory pension fund members declined less than expected. Still, the number of members failing to pay membership fee without notice is quite high at all three voluntary pension fund types.

Venture Capital and Private Equity Presence in Hungary

Analysis has shown that an advanced Venture Capital (VC) and Private Equity (PE) industry has developed in Hungary since 1990. By 2000 Hungary had become the main player in the Central and Eastern European VC & PE industry and, although Poland eventually took over this position, the Hungarian market has remained dominant in the region. Moreover, most of the features of the Hungarian VC & PE market (players, operation, function, efficiency, legal and regulatory environment, the availability and experience of the investors, transaction type and structures, etc.) show significant similarity with Western practices. Nevertheless, the VC & PE market in Hungary has also shown strong segmentation. Big corporates with large scale projects have clearly attracted more financiers than smaller and riskier start-up companies, especially those seeking relatively small amounts. The Jeremie funds, which started in 2010, combine EU resources with private funds to improve the availability of funds for these smaller companies.

Changes triggered by the global financial and economic crisis has led to a loss of importance of the Hungarian VC & PE market both in regional and global sense. Since 2008 it has become more difficult for local players to raise new sources and the rate of VC & PE investments in Hungary has declined. Certain macroeconomic factors such as the small size of the economy, the end of privatization, high indebtedness levels, the slow rate of GDP growth, weak consumption and the unpredictability of economic policy have been recently highlighted by potential investors as serious drawbacks hindering further investments.

The Financial Crisis in Hungary

Enhanced by strong global growth and easy liquidity conditions, economies in Central and Eastern Europe (CEE) had experienced an economic boom with rapid GDP and credit growth until 2008, the outbreak of the financial crisis in the region. Their favorable position was further stabilized by the prospects of EU convergence and euro adoption. These factors and the fact that the financial sector of the region had only negligible exposures to subprime or subprime-related assets helped the CEE region withstand the global economic and financial crisis until as long as the final quarter of 2008. In September 2008, however, the crisis deepened and intensified, causing a quick loss of foreign investors' confidence towards emerging markets and dashing hopes that the region might be able to decouple itself from the global turmoil. The country report on Hungary reviews financial and real economic developments in these countries since the crisis started to impact the CEE region. To recapitulate, the consequences of the crisis on the different segments of the Hungarian financial market were a weakening of currency exchange rates, huge losses in the stock markets and soaring and more volatile bond spreads as well as risk premia.

The financial crisis hit Hungary the hardest among the Visegrád countries because the country had been heavily dependent on international funding. The exchange rate of the Hungarian forint nosedived immediately after the collapse of Lehman Brothers and has since remained at a level weaker than in the pre-crisis period. The

markets of government securities, foreign exchange swaps and interbank loans also dried up shortly after October 2008 and their liquidity was only gradually restored in 2009 and 2010. Investors' confidence in the Hungarian economy and financial system has remained relatively low despite a significant improvement in the country's economic and budgetary position since the outbreak of the crisis, indicating that investors continue to consider the Hungarian market a risky one. The structural problems of the Hungarian economy, that started to appear by the end of the 2000s, still exist and manifest themselves in the form of slow growth, low investments and low labor force participation. In the banking market banks' corporate and household loan portfolios have declined massively, reducing the chances of a fast recovery after the crisis. The banking system seems unable to kick-start the ailing economy in itself as its ability to lend has deteriorated sharply since the risks accumulated before the crisis materialized and its profitability was seriously damaged by government measures.

The Hungarian Monetary Policy Context

Following the economic transition Hungary's central bank gradually became independent from the government financially, personally as well as instrumentally. Full formal independence was finally insured by new legislation in 2001 when the decision making structure of the central bank was reformed to adopt the inflation targeting regime, modeled after the practice of the central banks of financially more developed economies. Following an initial period of year-end point targets between 2001 and 2007 the central bank has been following an inflation targeting strategy that aims to keep inflation at $3\% \pm 1\%$ in the medium term. The main monetary policy instrument in meeting the inflation target is the base rate, which is the interest rate paid on the two-week bond issued by the central bank.

The track record of this strategy is controversial at best as the central bank has so far been unable to keep inflation at the target. The principal weakness of the Hungarian inflation targeting strategy lies in the fact that, although the inflation target is jointly set by the central bank and the government, the government has so

far been reluctant to cooperate with the central bank in fulfilling the inflation target. This lack of cooperation most often manifests in unexpected tax changes by the government, causing unforeseen deviations in the path of inflation which the central bank is unable to offset with its monetary policy tools. This, coupled with the recurrent political battles between the prime minister and the governor of the central bank, has contributed to the relatively high risk premium on Hungarian financial assets. Nonetheless, our analysis shows that the central bank has successfully managed and anchored the inflation expectations of financial investors and, netting from the effects of fiscally induced tax rate changes, it maintained price stability.

In parallel with monetary policy reform, Hungary also adapted its currency regime to the changing economic and financial conditions. The fixed exchange rate regime of the first five years of the post-communist era was modified jointly by the central bank and the government in 1995 to a crawling peg system also including a small fluctuation band of $\pm 2.25\%$. The band was widened to $\pm 15\%$ later in 2001 and the crawling peg was abolished in line with the prospects of Hungary's joining the euro zone. The currency regime received the finishing touch in 2008 when the floatation band was abolished and the exchange rate was made freely floating.

The role of the exchange rate in Hungarian economic policy making cannot be emphasized enough. This is because, notwithstanding the important role of monetary policy in fighting inflation, the most important transmission channel of monetary policy making in the small open economy of Hungary is the exchange rate of the domestic currency. Thus, the 'actio radius' of monetary policy is determined by the structure of the currency regime.

Under the crawling peg regime the central bank's main duty was keeping the exchange rate within the relatively narrow band. The widened floatation band between 2001 and 2008, however, allowed the central bank to focus on inflation targeting, let the forint fluctuate in a wider range and only step in when the exchange rate threatened to leave the floatation band. But because the inflation targeting

central bank preferred a strong domestic currency to keep import prices low, it decided to use the key rate to keep the exchange rate within a relatively strong range. One of the distinctive features of central banking in Hungary in the early years of the inflation targeting regime between 2001 and 2005 was that the central bank had both an explicit inflation target range set jointly by the government and the central bank and an implicit exchange rate target range set by the governor of the central bank that was tighter than the explicit floatation band.

However, the fact that the central bank attempted to manage medium term inflation and manipulate the short term exchange rate of the forint simultaneously created uncertainty as to the sustainability of the floatation band and made the domestic money market prone to extreme exchange rate and interest rate volatility. This uncertainty culminated in three consecutive currency crisis in 2003, which also affected the fixed income market. This was the main reason why the implicit exchange rate target range was abandoned in 2005 and the explicit floatation band was abolished in 2008. Although the use of an implicit exchange rate target range has since disappeared from monetary policy making, the exchange rate of the forint has maintained its significance as the most important transmission channel of monetary policy and, owing to the high volume of foreign currency denominated loans in the banking system, as an equally important factor of financial stability.

1. Concise History of Hungary's Financial System (1987-2008)

1.1. The Money Market

1.1.1. The Conditions for Reform in the Banking System

The reform of the centralized, one-tier Hungarian banking system had been on the agenda since the economic reforms of 1968. The slow transition from state-run banking to a market-based one was implicitly supported by a general political attitude of condolence towards all private forms of business, which was a distinctive feature of the Hungarian planned economy vis-à-vis other Central and Eastern European countries.

In the 1970s both internal and external demand for reform were growing. Internally, Hungarian reform economists and policymakers realized relatively soon, compared with their CEE peers, in the 1980s that the competitiveness of the economy may depend on the health of the domestic financial system (Antal, 1985). It is thanks to them and the officials of the central bank who had strong interactions with Western European bankers that the preconditions for the operation of a modern banking system were in place years before the actual transition from a planned to a market economy. The reform of the banking system in Hungary indeed laid the foundations for the transition of the economy and preceded both domestic political reforms and similar reforms in Poland (1989) and Czechoslovakia (1990) (Takata, 2005; Szikszai, 2008).

Externally, Hungary's foreign creditors were especially interested in precipitating financial reforms. Hungary's net external debt-to-GDP ratio rose rapidly from 11.6% to 21.6% between 1970 and 1975. The sharp deterioration of the terms of trade following the two oil price shocks of the 1970s increased Hungary's debt even further as the government refused to increase domestic prices and restructure the corporate sector. By 1981, because of these economic policy mistakes and a lack of sufficient support from the Soviet Union, the country's foreign exchange reserves had fallen to a level that threatened insolvency. For the third time after 1966 and 1973, the government turned to the International Bank for Reconstruction and

Development (World Bank) and the International Monetary Fund (IMF) as lenders of last resort and Hungary was the second Soviet bloc country to join these institutions in 1982. The World Bank and IMF had long encouraged Hungary to introduce market reforms and integrate into the global economy and they made their financial support contingent on further reforms in both the real and the financial sectors (Honvári, 2008).

1.1.2. The Creation of the Two-Tier Banking System

In the one-tier banking system, established in 1948, the National Bank of Hungary (MNB) and the Hungarian Investment Bank had been the lenders for the corporate sector. All corporations as well as MNB's specialized "sub-banks" kept their accounts with MNB. Since 1972 corporate lending has been the responsibility of MNB and the newly established State Development Bank had been financing large public investment projects. Later in 1985 MNB's lending and central banking functions were separated within the organization, which prepared the ground for more profound financial reforms in 1986 when these lending departments were separated from MNB's organization. The subsequent creation of the two-tier banking system in 1987 replicated the structure of Western European financial systems. The "monobank", which had been the National Bank of Hungary (MNB), was separated into two levels: first, the central bank and, second, the new and old commercial banks. The central bank severed all ties with the real sector and was endowed with the task of maintaining financial stability, providing liquidity, supervising banks, managing foreign exchange reserves and making monetary policy while commercial banks were entitled to provide households, corporates and municipalities with financial services (Honvári, 2008; Szikszai, 2008).

Technically, the Hungarian State established three new commercial banks in 1986, the Hungarian Credit Bank (MHB), the National Commercial and Credit Bank (OKHB) and Budapest Bank (BB), and entitled them to extend loans to corporations. The three big banks, staffed from the central bank's credit department, started operation on January 1, 1987. MHB was lending mainly to manufacturers, OKHB to agricultural

producers and BB to the energy, mining and service industries. Another two banks had already had full lending rights since 1972: Hungarian Foreign Trade Bank (MKB), established in 1950, and General Transactions Bank (ÁÉB), founded earlier in 1922. Further banks at the time, mainly involved in transactions denominated in convertible currency (US dollar, Deutsch mark, Japanese yen) included Central European International Bank (CIB), co-founded by 5, Italian and Japanese banks and MNB in 1979; US-owned Citibank, established in 1985 as the first Citi subsidiary in the Central and Eastern European region; and Unicbank co-owned by an Austrian bank and MNB. The emergence of the second tier of the banking system brought with it the appearance of small- and middle-sized banks with specific goals and niche markets – Innofinance (1980), Inter-Európa Bank (1981), Iparbankház, Agrobank, Corvinbank (1984), Általános Vállalkozási Bank (1985), Mezőbank, Ybl Bank and Konzumbank (1986) –, established by the state, the corporate sector and/or cooperatives, none of which exist today (Szikszai, 2008).

Servicing the retail segment was initially the exclusive responsibility of National Savings Bank (OTP), which was established in 1949 as MNB's retail sub-bank. Postbank, OTP's potential competitor in the retail segment, was set up in 1988 by the state-owned Hungarian Post. Further retail banks included Dunabank, launched in 1987 by MHB, Merkantil Bank, registered in 1988 by OKHB and Takarékbank, established by savings cooperatives in 1989. However, none of these posed any real threat to OTP's dominant position in the retail market. In 1989, OTP was authorized to provide services for the corporate sector while the retail banking market was also liberalized, enabling all commercial banks to carry out retail and foreign exchange operations. In 1991, further liberalization abolished OTP's monopoly as the exclusive account keeping bank of municipalities (Várhegyi, 1998).

1.1.3. Transformational Crisis

The new banking system set out to operate with great momentum in 1987. By 1990, the loans-to-GDP ratio was 47%, and it included almost entirely corporate loans, while there was virtually no lending to households or the government. Despite this

conspicuous buildup of new exposure to loan default risk, policymakers turned a blind eye to this development. The Ministry of Finance even scolded banks for their allegedly excessive reserve provisioning, while the MNB's Governor underlined that banks' cautious lending policy would help prevent a bank crisis. In the early 1990s, banks showed little interest for the retail banking market, which was stricken by high forint interest rates, lack of professional experience and underdeveloped financial culture of the household segment (Várhegyi, 1998).

The economy fell into a transitional recession in 1991-1993. By 1993 industrial production had fallen by 40% compared to 1989 and 60% of the companies had gone bankrupt and ceased to pay their installments. The consequently diminishing demand for loans had a negative impact on banks' lending activity. Banks' initially robust corporate lending fell from 31% of GDP in 1991 to 18% by 1995. Problems piled up in the banking sector because flawed banking strategies and the banks' unhealthy clientele increased the stock of non-performing loans. The flaws in the strategies can be traced back to the above mentioned sectoral specialization of the three large banks and the fact that these banks were partly owned by the biggest corporations, that is, their own clientele (Kovács, 1997; Várhegyi, 1998).

In the early 1990s banks were making financing decisions that reflected the particular interests of their shareholder companies and this led to the deterioration of the quality of their loan portfolio. Liquidity problems were prevalent in all sectors of the economy and corporate bankruptcies sped up with the passing of the very strict Act XLIX of 1991 on Bankruptcy and Liquidation Procedures. Banks, however, decided to finance their troubled corporate clientele, which was made possible by an undeveloped culture of risk management and credit analysis. This, coupled with the state's urgent need for bank dividend payment to finance the budget deficit, created a constant lack of capital in the banking system. Owing to the lack of developed financial markets, inexperienced domestic bank executives alleviated their banks' capital shortage by refinancing via MNB (Várhegyi, 2008).

By 1992 corporate debtors' insolvency had approached a level that threatened to bring down the entire financial system. The debt of loss making companies was 13% of GDP and 60% of total loans by 1992. The ratio of bad loans within the portfolio of banks climbed to 17% in 1992 and further to 25% in 1993. Unsurprisingly, most of the bad debt accumulated within the group of large banks. The government faced the dilemma of either lowering banks' capital and letting household savings evaporate or reestablishing confidence in the banking system using taxpayers' money and getting banks ready for privatization. The government also had a binding agreement with the World Bank that it would strive to increase banks' capital adequacy ratios gradually to above 8% in line with Basle I requirements. Additionally, it had the problem of the inefficiency of the corporate sector to solve. Finally, the government chose to bail out both banks and the strategically important companies in three rounds of consolidation (see below), hoping that some of the costs can be recovered in the subsequent privatization process and the utter collapse of the economy can be avoided (Kovács, 1997; Várhegyi, 1998).

1.1.4. Consolidation

In the so called *credit consolidation* the government purchased bad loans from banks whose capital adequacy ratio was below 7.25%, which effectively included all important credit institutions. In 1992 and 1993, 14 banks and 69 cooperatives were eligible to sell a part of their bad debt to the state at 50, 80 or 100% of the face value, depending on the date of extension of the loans. In exchange, banks received floating rate government bonds with maturities of 20 years in the value of 104 billion forints (3% of 1993 GDP). The state sold the bulk of its newly acquired bad loan stock to its bank, MFB, whose task was to work out or write off these assets. Although credit consolidation alleviated banks' bad debt burden it did not provide a lasting solution as banking practices were left unchanged. Thus, in what was later called *bank consolidation*, the government decided to recapitalize banks in three steps between 1993 and 1995 to increase their capital adequacy ratio and to gain management control. In the first step it increased the capital of 8 banks to reach a capital adequacy ratio of 0%. Then it increased the capital of those under a capital adequacy

ratio of 4%. Finally, the state provided those under 8% with subordinated loan. These funds, which amounted to 176 billion forints (4% of 1994 GDP), came with the condition of adopting international accounting standards, streamlining the organizational structure and modifying credit policies. Performance requirements, however, were not attached (Kovács, 1997).

Simultaneously with the consolidation of banks, the recapitalization of the corporate sector was also inevitable. Since most of the sectors were still state-owned at that time, companies relied on capital from the state to ease their liquidity and solvency problems. In the first stage of the so called *debtor consolidation* the state decided to recapitalize 15 companies (BHG, Borsodchem, Dunafer, Ganz Machinery Holding, Ikarus, MGM, Nitrogénművek, Nitrokémia, Rába, Taurus, Videoton, Vilati Automatics, or, the “dirty dozen”, expanded later with Salgótarjáni Steel Manufacturing, TVK and the Hungarian Railways) that it deemed strategically important. These companies were responsible for one-quarter of Hungarian export revenues and employed 10% of the total workforce at that time. In 1994 and 1995 the state purchased their liabilities towards banks for 57 billion forints (2% of 1993 GDP) worth of consolidation government bonds. In the second stage of the debtor consolidation banks relieved the debt of 354 Hungarian companies in the value of 45 billion forints (1.3% of 1995 GDP) by write-off, rescheduling or debt-share swap (Kovács, 1997).

The main beneficiaries of the above mentioned consolidation rounds were the big three (MHB, OKHB, BB), which received two-thirds of the total amount. Other beneficiaries included OTP, MKB, Postabank (5% each) and Takarékbank (4%). These banks got rid of one-third of their bad loans and turned profitable while the stability of the banking sector was restored for the short term. Nevertheless, the preparation of banks for privatization required additional window-dressing. In 1995, BB was granted further 12 billion forints and Agrobank merged into Mezőbank to receive further 9 billion forints and state guarantee to secure the combined loan portfolio of the new Mezőbank. MHB's books were cleaned with a state guarantee of 11 billion forints and the exposure of K&H Bank (earlier OKHB) was swapped to shares in electricity companies and cash in order to make them more attractive to foreign

investors. This post-consolidation window-dressing was controversial to some economists who said that these costs should have been born by the foreign investors (Kovács, 1997; Várhegyi, 1998).

Between March 20, 1993 and December 31, 1995 the Hungarian State provided banks with a total of 358 billion forints (6% of 1995 GDP) in the form of debt purchase, capital increase and subordinated loan. The burden of the state was further augmented by a total of 143 billion forints (3% of 1994 GDP) worth of interest payments in 1993 and 1994 due on the consolidation government bonds (337 billion forints). Although economists later criticized the government for the hastiness and the related deficiencies of the consolidation programs, they agree that these programs improved the transparency of banking practices and prepared these institutions for privatization (Kovács, 1997; Várhegyi, 1998).

1.1.5. Privatization of the Banking Sector

While Hungary was a forerunner in the transformation of the financial system, it lagged behind other CEE countries in the speed of bank privatization. The sell-off of large banks already began in 1992 and 1993 in the Czech Republic and in Poland, respectively, whereas in Hungary the process only started in 1994. Before 1995, efforts to privatize financial institutions were sporadic and included only two small banks (IEB by San Paolo di Torino in 1989 and ÁVB by Westdeutsche Landesbank in 1992) and a portion of Postabank's shares. Having said that, foreign investors were already present in half of the 44 banks at that time, most of them having become owners via greenfield investments. Creditanstalt, BNP, Dresdner Bank and Kulturbank (later Bank Indosuez) were launched in 1990, Daewoo, Nomura and Volksbank were established in 1991, Credit Lyonnais and ING were set up in 1992, ABN Amro, Commerzbank, HypoVereinsbank (HVB) and IC started up in 1993, Porsche Bank was set up in 1994, Deutsche Bank in 1995 and Cetelem Bank in 1996. These institutions still operate today – albeit some under different names: e.g. Daewoo/KDB, Bank Indosuez/Hanwha, WestLB/Gránit, HVB/UniCredit, IC/Banco

Popolare) – either as banks, branch offices, financial or investment enterprises (Szikszai, 2008).

In line with Hungary's goal to join the European Union, it signed in 1991 and ratified in 1994 together with other CEE countries the so called Europe Agreement, in which it obliged itself to open its domestic banking market to foreign competition (Agreement of 1993, §68, §83 and §98-103). The opening of the EU for aspirant CEE economies was announced in 1993 in Copenhagen, where the so called "Copenhagen criteria" including the economic standards of EU accession were published. These economic standards called for a restructuring of the banking sector to increase its competitiveness and enable it to operate in a highly competitive business environment. These documents provided incentive for CEE governments both to recapitalize domestic banks to prepare them for foreign competition from EU-based banks (see 1.1.4.) and to totally restructure the domestic business environment through privatization (Takata, 2005).

Indeed, Act LXIX of 1991 on Financial Institutions and Financial Activities included a passage that called for the decrease of the Hungarian State's share in the banking system to 25% by 1997. This passage and the early experiences gained from the inefficient operation of domestic banks led policymakers to believe that the privatization process should be accelerated. This task was, however, a difficult one. While state ownership in the banking sector was 39% in 1991, it increased back to 66% after the consolidation and even after the bulk of privatization had happened by 1997 it was still 37% (Várhegyi, 1998).

Since Act LXIX of 1991 excluded the opportunity of other types of investors gaining more than 15% in one financial institution, only two types of bank privatization were feasible: sale to either financial or strategic investors. But these two ways required different techniques. Financial investors typically gained ownership through public offerings (IPO) while strategic investors were usually offered ownership stakes via tenders. Given the underdevelopment of the capital market at that time it was a widely held belief that a higher sales price could be attained by inviting strategic

investors, thus, this had come to be viewed as the main form of bank privatization. (Várhegyi, 1998).

The commitment to the specific form of bank privatization to strategic investors in the 1990s was a Hungarian specialty in the Central and Eastern European region. In Poland the number of initial public offerings through the stock exchange roughly equaled the number of sales to foreign strategic investors while the Czech Republic widely applied the alternative technique of voucher privatization in which previously distributed certificates could be exchanged for bank shares. The technique of employee buyout (EBO), in which the bank was sold to domestic owners, was used as an auxiliary method in only a few cases (Takata, 2005).

The only exception when this commitment to strategic investors was relaxed was the multi-stage public offering of OTP Bank shares to institutional investors in 1995. The main reason behind OTP's exceptional treatment was the fear that if one investor gets dominant position in OTP¹, it will have control over two-thirds of Hungarian household savings. Government Resolution of February 1995 stipulated that domestic and foreign investors may acquire a maximum of 10% and 5% each, respectively, while the state would keep 25% + 1 share in OTP (and Postabank). Another reason for this specific type of privatization technique was the decision to develop the stock market by introducing the shares of the biggest Hungarian bank. As a result of these considerations, the state sold 23% in a closed tender to foreign institutional investors, 5% in a public offering to domestic investors and 5% to the management at a discount (EBO). This first transaction was followed by two more stages in 1997 and in 1999. By 1999 OTP's majority stake (72%) had been privatized for a total of 89 billion forints (0.8% of 1999 GDP), making it a highly successful series of transactions. Earlier in 1992 and 1994, respectively 5% and 20% of OTP shares were traded in for compensation coupons, local governments received 2% in 1994 and the pension and healthcare funds received 10% each in 1995. Thereby, OTP's ownership structure became highly fragmented, which ensured the lack of strategic ownership control over the management. The management was so

¹ George Soros made a bid to buy 25% of OTP in 1994 but was refused.

powerful that the shareholders' assembly even voted the 75% + 1 share majority rule to remove the President-CEO. It is the legacy of this special multi-stage privatization process that OTP's management have so far enjoyed a great deal of independence in both operative and strategic decisions (Szikszai, 2008).

Between 1994 and 1999 the Hungarian State sold the biggest domestic banks and cashed in 160 billion forints (1.4% of 1999 GDP). The first transaction was the sale of MKB's minority stake to the consortium of Germany's Bayerische Landesbank (25%) and the European Bank for Reconstruction and Development (EBRD, 16.7%) in 1994. After Deutsche Investitions- und Entwicklungsgesellschaft bought 8.3% in 1995, Bayerische Landesbank became MKB's majority owner in 1996 by purchasing the remaining portion (25.8%) owned by the state. The sales revenue from MKB's privatization totaled 6 billion forints. The sale of 60% of BB to US-based General Electric Capital and EBRD in 1995, however, did not generate net revenue. The government had provided BB with 12 billion forints of subordinated loan to prepare the bank for privatization and the sales price was just equal to this amount. In 1996, the state-owned half of undercapitalized ÁÉB was sold to Russian Gazprombank for 600 million forints and Dutch ABN Amro purchased 90% of MHB for 14.5 billion forints following its thorough portfolio cleaning. In 1997 the German Deutsche Genossenschaftsbank (DG) and Allianz-owned Hungária Insurance bought 56% and 5%, respectively, of Takarékbank for 4.4 billion forints and the last big state-owned bank, K&H Bank, was privatized to the Belgian-Irish consortium of Kredietbank-Irish Life in a transaction that involved the purchase of 10% for 30 million dollars and a capital increase. In the same year 84% of Mezőbank was sold to Austria's Erste Bank for 4.8 billion forints and the state-owned 34% of CIB Bank went to Italian minority stakeholder Banca Commerciale Italiana (BCI) for 30 billion forints. Typically, these privatizations deals included subsequent capital increases by the new owner, alleviating the acute capital shortage of the Hungarian banking system and laying the foundations for future growth (Ábel and Siklos, 2001; Szikszai, 2008).

The history of privatization is complete with the account of the sale of Postabank, OTP's long-time competitor in the retail market. Postabank came close to

bankruptcy in 1997 due to the bad decisions of the management, which prompted the government to bail out Postabank with 152 billion forints (1.7% of 1997 GDP) of taxpayers' money in order to avoid a bank run. This added to the costs of consolidation and was only partially recovered from the 101 billion forints (0.5% of 2003 GDP) that came from Postabank's highly successful privatization to Erste Bank in 2003 (see Table 1.1). While further smaller privatizations came afterwards – Citibank and Raiffeisen becoming 100%-owners in their Hungarian subsidiaries and MKB acquiring Konzumbank – the Postabank deal marked the end of the era of privatizations in the Hungarian banking sector (Király, 2004).

Table 1.1. Two-round privatization of Postabank (2003)

First round		Second round	
Bidders	Bid (billion forints)	Bidders	Bid (billion forints)
Bank Austria Creditanstalt (HVB)	66.5	Budapest Bank	69.2
Bartha and Co. consortium	50	Bank Austria Creditanstalt (HVB)	85.1
Budapest Bank	54.3	Erste Bank	101.3
Citibank	52		
Erste Bank	61		
OTP Bank	45		

Source: Mihályi (2010).

In total, privatization revenues were dwarfed by the consolidation costs of the banking sector. Total consolidation costs of circa 650 billion forints, borne fully by the government, stood against total privatization revenues of circa 300 billion forints, which makes the phrase of “successful bank privatization” sound like an exaggeration. Having said that, it is clear that bank consolidation would have been necessary even without privatization and by privatizing the banking sector the state got rid of the burden of recapitalizing banks once again. Furthermore, the profitability of the banking sector improved after consolidation and privatization, which suggests that the appearance of foreign-owned, well-capitalized institutions in the domestic financial system was beneficial (Ábel and Siklos, 2001; Szikszai, 2008).

The overwhelming presence of foreign investors in the banking sector is, thus, the result of this wave of bank privatization. As the state stuck to its ownership in Hungarian Development Bank, Eximbank and MEHIB (see later in Chapter 3), newcomers could choose between two ways of entering the market after privatization: either by purchasing operating banks or by setting up new franchises. The first is obviously the easier one. OTP has become majority owned by foreign institutional investors, which have made OTP the most actively traded share in the Budapest Stock Exchange. The Belgian owner of K&H Bank forced out the Irish owner, merged with ailing ABN Amro Hungary in 2001 before buying out the Dutch owner's share in 2005, becoming the second biggest domestic bank after OTP at that time. ING Bank first acquired the retail client base of Dunabank and sold it to Citibank in order to focus on its investment business. German DZ Bank (former DG) sold part of its stake to savings cooperatives in 2005 and is now selling the remaining portion to the Hungarian State. Gazprombank sold its clientele to Austrian Volksbank International (VBI), which was sold to Russian Sberbank in 2012. However, new franchises have also been registered. For example, state-owned banks established FHB Land Credit and Mortgage Bank in 1997, Credigen Bank was set up in 1998, Bank of China Hungary and Sopron Bank opened in 2003, Allianz Hungária insurance company established Allianz Bank in 2006 and Széchenyi Bank started up in 2010. There have also been examples of financial enterprises (Banif Plus) and savings (Kinizsi, Mohácsi and DRB) or credit cooperatives (Magnet) turning into banks, while other specialized credit institutions such as home savings banks (OTP, Fundamenta, Erste) and mortgage banks (OTP, Unicredit) have increased the range of available services (Szikszai, 2008).

Given the embeddedness of the Hungarian banking system into the global community it is no surprise that ownership restructurings on the mother banks' level have strong repercussions on the domestic front. For example, when German HVB purchased Bank Austria-Creditanstalt Hungarian affiliates merged under the name HVB Bank Hungary. Italian Unicredit later acquired HVB, which is why the bank was renamed Unicredit Bank in 2007. The merger of CIB and IEB in 2008 was

also the consequence of Italian events, namely, the merger of BCI and SanPaolo IMI. The Budapest branch office of Dresdner Bank merged into Commerzbank Hungary because German Commerzbank took over Dresdner Bank. This influence of European events on the operation of domestic banks is likely to grow in the future as all key regional players (Erste, Raiffeisen, KBC, Unicredit, Intesa Sanpaolo and Société Generale) are present in Hungary (Szikszai, 2008).

1.1.6. The Era of Dynamic Growth of the Banking Sector

1.1.6.1. The Housing Loan Interest Subsidy Scheme

After the wave of privatization had passed the main trend in the banking sector was determined by the dynamics of the retail segment. Restructured domestic banks set out to compete with OTP for the retail segment. This new form of competition caused the rate of expansion of the credit stock to double from an average 10% in the second half of the 1990s to 20% by the mid-2000s. The engine of growth was the growth of housing and consumer loans, growing by 46% and 37% on average, respectively, from 2001 to 2006. The ratio of household loans to GDP quadrupled from 8% to 33% between 2000 and 2008 (see Chapter 2). Albeit this dynamics was unseen, it can also be interpreted as convergence to West European levels (Banai et al., 2009; Szikszai, 2008).

A decisive factor driving growth in the retail segment and increasing the profitability of banks in this period was the appearance of interest-subsidized forint housing loans denominated in Hungarian forint. The state created legislation in 1997 that allowed its newly-established mortgage bank (FHB) to issue mortgage bonds in order to finance long maturity mortgage loans with preferential interest rates using the intermediation of domestic banks. FHB's monopoly to issue mortgage bonds was broken in 2001 on pressure from OTP, which led to the establishment of further two mortgage banks in 2002 (OTP and HVB). Government Decree of 12/2001 (I.31.) specified that the state would subsidize the interest rate paid by banks on their issued mortgage bonds if the proceeds are used to extend long-maturity housing loans. Mortgage banks issued the bonds and the proceeds were transferred to the

commercial bank where clients applied for the subsidized loan. The commercial bank was paid commission fee and made the loan contract with the client with a maturity of at least 5 years. The client was paying the commercial bank subsidized interest, which was then transferred to the mortgage bank². Finally, the mortgage bank received the state subsidy after the client's interest payment and paid subsidized interest on the issued mortgage bonds (Szikszai, 2008).

While all banks profited from the surge of housing loans, the biggest beneficiary of this subsidy scheme was OTP group, which extended two-thirds of interest-subsidized housing loans. The group not only benefitted from the spread between its total interest revenue including subsidies and the interest paid on the mortgage bond but also from the spread between the latter and the interest paid on household deposits. This is because OTP Bank subscribed the mortgage bonds issued by OTP Mortgage Bank using deposits placed by its clients. (Szikszai, 2008).

After 2004, the dynamics of the retail segment slowed temporarily for three reasons. First, the government had gradually phased out its housing loan interest subsidy scheme by 2004 in an attempt to cut budget expenditures. Second, risk analysis became a more influential department within bank organizations after Basel II was published in that year. The surge of the retail segment brought with it the proliferation of the so called "credit cheaters". They were individuals who borrowed from a number of banks, accumulating huge debts that they were both unwilling and unable to repay. This prompted banks to implement more sophisticated risk assessment techniques including analytic scorecards that helped them to price retail loans more precisely based on the probability of default. On the other hand, better risk assessment also led to higher risk provisioning which decreased banks' capital, increased risk-based interest rates and decreased households' demand for loans. Third, by 2004 the interest rate on forint denominated loans had climbed to levels unseen since the end of the 1990s. This was due to an unfortunate

² On top of the general interest subsidy certain groups (e.g. young couples buying their first home) received further support on social grounds, which decreased the burden on households even more.

development in the macroeconomic policy context (see Chapter 12) , which increased the risk premium required on forint assets (Szikszai, 2008).

1.1.6.2. Foreign Currency Borrowing

In an effort to revive the dynamics of the retail segment, banks turned to loans denominated in foreign currency. These were mainly Swiss franc denominated mortgage-backed housing or free-purpose loans. Although borrowing in foreign currency had already been very popular in the corporate sector, the spread of household foreign exchange loans were a new development. Pellényi et al. (2009) explain the general attractiveness of foreign exchange denominated loans among the Hungarian households with the large interest rate spread and the relative stability of the exchange rate of forint. As another analysis in Rosenberg et al. (2008) suggests, “financial dollarization” in Hungary was further facilitated by the overwhelming presence of well-funded, foreign-owned credit institutions, loose fiscal policy and the expected adoption of the euro. Thanks to these factors, banks’ lending dynamics received new momentum from the household segment. In 2000 foreign currency loans only represented 4% in the total retail loan portfolio. By 2007 the shares of outstanding foreign currency loans had surpassed that of forint denominated ones (Szikszai, 2008).

1.2. The Capital Market

1.2.1. *The Stock Market*

As an important element of financial reforms in 1987, Hungarian firms were given the right to establish joint stock companies and issue shares. In 1989, individuals were allowed to buy these shares and trade them, which later created the need for institutions that would facilitate the trading of shares (Honvári, 2008). Legislation prepared the legal background in 1989 and Act VI of 1990 on the Initial Public Offering and Trade of Securities and the Securities Exchange was passed. The Budapest Stock and Mercantile Exchange, which was nationalized in 1948, resumed operation as the Budapest Stock Exchange (BÉT) in June 1990, one month after the inauguration of the first freely elected government. In the beginning BÉT was a separate legal person and had 42 banks and brokerages and MNB as founding members and a capital of 211 million forints (circa 730,000 euros). The stock exchange became an incorporated company in 2002.

BÉT's trading infrastructure and, thus, its ability to facilitate trading, developed relatively fast after its inception. Until 1998, BÉT used the open cry trading technique on the trading floor. This was gradually replaced by an electronic trading platform, the Multi Market Trading System I (MMTS), developed by an Australian-Swedish-Hungarian consortium. Its new version, MMTS II, was later implemented in the derivative section in 2000 and in the mercantile section after the merger of BÉT and Budapest Mercantile Exchange (BÁT) in 2005. Trading in BUX index derivatives (futures and options) started earlier in 1995, while individual equity derivatives were added to the range of products in 1998. In 2004, BÉT introduced its index of small- and middle-sized listed companies, called BUMIX. CETOP20 index, reflecting the value of Central and Eastern European listed companies was introduced on the stock markets owned by BÉT's mother company in 2004. Today, BUX, BUMIX and CETOP20 indices consist of 11, 13 and 20 shares, respectively.

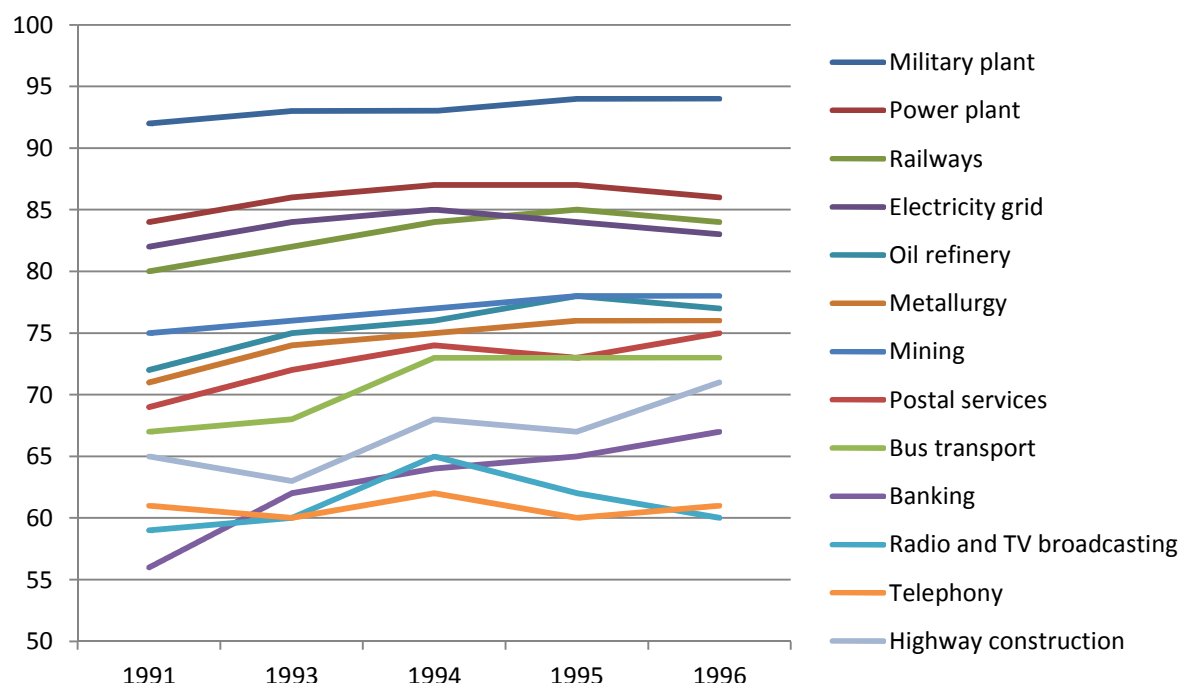
1.2.1.1. Privatization Through the Stock Exchange

Equity and corporate bond financing through the exchange have always played a less important role in Hungary than credit financing via the banking sector. In fact, the Hungarian stock exchange was revived with the main purpose of facilitating the privatization of state-owned companies and, vice versa, the privatization deals were supposed to give an impetus to the development of the stock exchange (Korányi, 1999), besides generating considerable budget revenue. As Mihályi (2010) makes it plain and clear, “there would not have been a stock exchange had there not been privatization” (Mihályi, 2010: 357). Its close dependence on the privatization program partly explains why the Hungarian equity market has also grown to be relatively smaller than other markets in the CEE region.

The privatization process in Hungary was successful in regional comparison as Hungary cashed in 31% of its GDP in the period between 1989 and 2003 from the sale of state-owned corporations and financial institutions, second only to Slovakia (Mihályi, 2010). This success owes great deal to the success of the privatization of state-owned companies through the stock exchange. Mihályi (2010) discusses the arguments of the time for and against establishing the stock exchange and using Initial Public Offering (IPO) as a privatization technique. Policymakers opined that the sales price in an IPO of strategic state-owned companies would be at least 30-50% lower than the price paid by a strategic investor. Furthermore, IPOs seemed more complicated and time consuming as well as politically less desirable as workers can easily be laid off after an IPO, whereas employment and investment clauses can easily be agreed on as part of a sale to a strategic investor. The general public also realized that privatizing state-owned utility companies means a subsequent reduction of the government’s price subsidies on these utility services. Figure 1.1 shows the results of a survey in 1996 displaying the adverse changes in the public sentiment towards the desirability of privatization in the core sectors of the economy. On the other hand, IPOs were thought to include domestic private investors and, thus, bring transparency into the privatization processes otherwise often hidden from the eyes of the general public. Public offers also provided small private investors with good investment opportunities, as evidenced by the immediate

share price appreciation of privatized, listed blue-chip companies following their IPOs.

Figure 1.1. Share of people desiring state ownership (%)



Source: Mihályi (2010).

Up to 1994, privatization deals involving the stock exchange were scarce. The first listed share was that of IBUSz, a travel agency, in 1990, followed later by Danubius, the national hotel chain in 1992-94. These deals, as Mihályi (2010) points out, generated little revenue: 2.4 billion and 3 billion forints (0.1-0.1% of GDP), respectively. They also contributed little to involving small private investors. Mihályi (2010) notes that one reason for the lack of success in this first stage of privatization through BÉT was the fact that foreign mutual and pension funds stayed away from the Hungarian stock market until 1995 because of Hungary's weak credit rating. It was also only in 1995 that the Security Exchange Commission (SEC) acknowledged BÉT as a stock exchange under US law. A further reason was the late launch of the domestic central clearing house (KELER) in 1992, which was also acknowledged by SEC only in 1995. The advantages of listing shares in BÉT for foreigners, however, included the possibility of trading through American and global depository receipts

(ADR and GDR) issued by large New York- and London-based investment banks (Mihályi, 2010).

The privatization process accelerated in 1994 due to two main factors. One was a shift in policymakers' attitude towards privatization after the parliamentary elections and the inauguration of a new socialist-liberal government. The new administration adopted a new strategy that called for the sale of large state-owned companies, the so called "hard core"³ and set an extremely ambitious deadline for selling the entire electricity industry, the five gas distributors, the national oil company Mol, the national broadcaster Antenna Hungária, the incumbent telecommunications company Matáv and the leading commercial banks OTP, Budapest Bank, MHB and K&H Bank all in 1995 and 1996. The other factor is a more profound one. At the end of 1994, both the Hungarian government and the economy were on the brink of collapse: the budget and the current account deficit amounted to 8.4% and 9.5% of GDP, respectively, while GDP growth was slowing down. At the same time, global investors were still recuperating from the Mexican peso crisis and became more risk-averse. In an effort to raise money for the central budget, the state holding company borrowed 150 million dollars from CIB and Austrian Creditanstalt just before the Christmas of 1994. The loan contract had a maturity of one year and included 16 billion forints (0.4% of 1994 GDP) worth of Matáv and Mol shares as collateral. It was then obvious that privatization had to be accelerated to generate the necessary amount of cash to repay this loan along with the rest of the government debt (Mihályi, 2010). Table 1.2 suggests, indeed, that listings of the shares of large state-controlled companies accelerated in 1994 as a part of their privatization process.

³ Mihályi (2010) clarifies that the hard core included 30-40 companies in energy production, telecommunications, petrochemicals, aluminum industry, banking and insurance, transportation and water management.

Table 1.2. Companies listed by state holding companies

Year	Number of companies	Name of company (Year of delisting)
1990	1	Ibusz (2002)
1991	4	Bonbon Hemingway (1999), Styil (2005), Zalakerámia (2005)
1992	2	Pick Szeged (2002), Danubius
1993	4	Csemege-Julius Meinel (1997), Prímagáz (2003), Globus (2006), Domus (2006)
1994	9	Balaton Fűszért (1998), Aranypók (2001), Egis, Soproni Sörgyár (2005), Global T. H. (1997), Graboplast (2001), Pannonplast, Richter Gedeon, Inter-Európa Bank (2007)
1995	5	Mol, OTP, Humán, Hajdútej (1997), Pannon-Váltó
1996	3	TVK, Borsodchem (2007), Eravis (2002)
1997	3	Matáv, Rába, BAV (2000)
1998	1	BIF
1999	2	Konzumbank (2000), Antenna Hungária (2006)
2000		
2001		
2002		
2003	1	Forrás
2004		
2005	1	Állami Nyomda
2006		
2007		
2008		
2009		
Total	36	

Source: Mihályi (2010).

Between 1995 and 1997, the state cashed in approximately one-half (1007 billion forints, or 12% of 1997 GDP) of its total privatization revenue since 1990. Most of this revenue was realized in public share transactions including large state-owned companies of strategic importance and was in foreign currency. The bulk of these proceeds was generated by the public sale of the shares of Matáv⁴, Mol⁵, OTP, petrochemicals TVK and Borsodchem and pharmaceuticals Richter Gedeon and

⁴ Although two-thirds of Matáv shares had already been sold earlier to strategic investors Deutsche Telekom and Ameritech International, the company's privatization process included the IPO in 1997, in which 26.3% of the shares were sold for more than 1 billion dollars (Mihályi, 2010).

⁵ Most of Mol's shares were privatized in an IPO and four more public sales transactions on BÉT: in 1995 (29.6%), 1997 (22.4%), 1998 (11.2%) and later in 2004 (10.9%) and 2006 (1.74%). These transactions resulted in a total revenue of 1.5 billion dollars, out of which, 830 million dollars were made in the first three transactions (Mihályi, 2010).

Egis⁶. 58% of the 1007 billion forints was paid into the central budget and 90% of this income (518 billion forints, or 6% of 1997 GDP) was used to repay outstanding liabilities and pay interest on outstanding bonds (see Table), as part of the government's budget consolidation program (Mihályi, 2010).

Table 1.3. Debt and interest payment from privatization revenues (billion forints)

	1995	1996	1997
Privatization revenue	150	206.9	160.9
-brought forward from last year		87.2	
MNB forint bond repayment	15	101	59.6
MNB foreign currency bond repayment	42.4		85.6
Government bond repayment	5.4	188.8	15.7
Interest payment		4.1	
Remaining revenue	87.2	0.2	0

Source: Mihályi (2010).

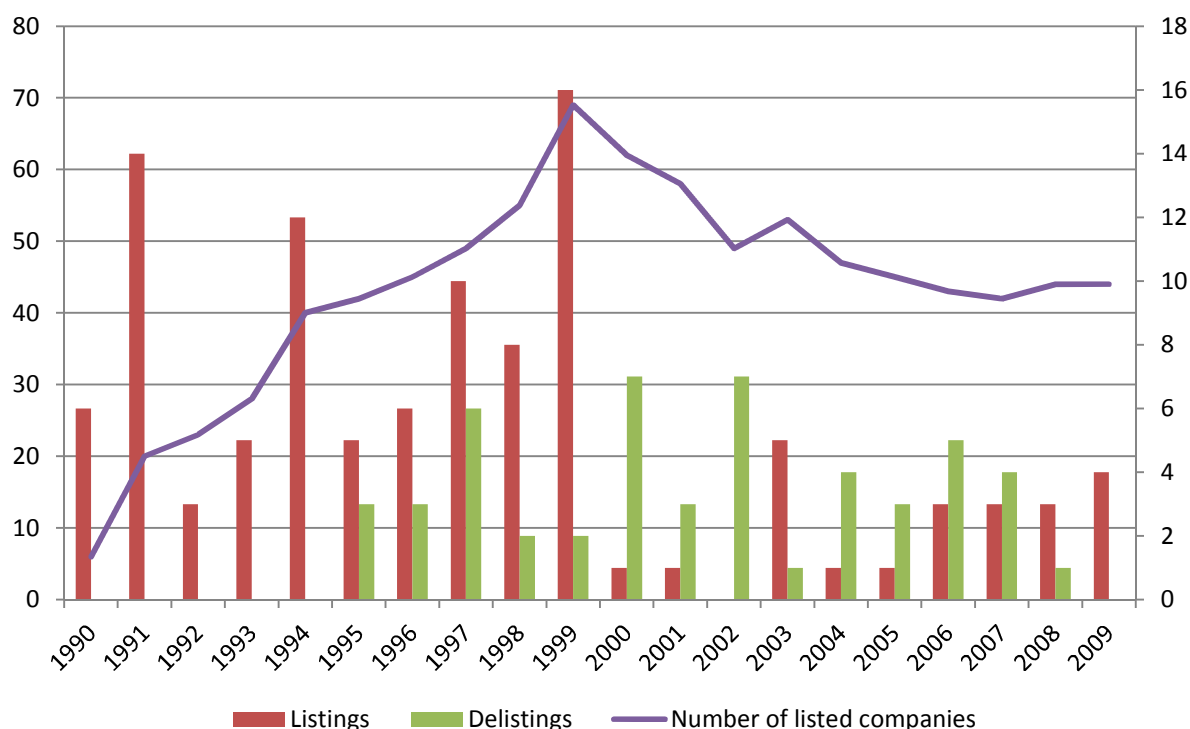
Although privatization continued after 1997, sales transactions including IPOs and public offers became less frequent. To offset the negative impact of the lack of IPOs, the Parliament even created new legislation in order to increase the number of shares on BÉT but, ultimately, failed in its attempt⁷. The growth of the stock market continued to slow as the beneficial effect of the privatization transactions phased out. Another factor why investors' interest decreased in BÉT was that the first real crisis hit the domestic stock market in 2000, when the share price of leading blue-chip company Matáv more than halved. Investors' enthusiasm fell to such an extent that the public offer of Antenna Hungária in 2000 had to be called off. Figure 1.2 shows that from 2000 BÉT saw more delistings than listings (except for 2003). By 2004, the capitalization of listed companies as a share of GDP (22%) was already

⁶ The state introduced the shares of Richter Gedeon and Egis on BÉT in 1994. Richter's IPO was followed by another 3 public offers in 1995 (19.5%), 1996 and 1997. Egis' IPO in 1994 (8.2%) included a share swap for compensation coupons and was followed by 2 more public offers in the same year (22.4%) and in 1995 (28%). The combined revenue from these transactions was circa 460 million dollars (Mihályi, 2010).

⁷ In 1995, 46.15%-49.23% of the six regional electricity companies (ELMŰ, DÉDÁSZ, DÉMÁSZ, ÉDÁSZ, ÉMÁSZ, TITÁSZ) were privatized to strategic investors for a total of 1.1 billion dollars. New owners were given the option to purchase majority shares but only after a moratorium of 2 years. In the meantime, Act CXI of 1996 forced the listing of the shares of companies with a market value of above 200 million forints, including electricity companies, before the end of 1998. Eventually, however, most of these shares were delisted by the new owners by 2007 (Mihályi, 2010).

outpaced by regional peers including the Estonian (46%), the Russian (43%), the Slovenian (26%) and even the Croatian (25%) exchange (Mihályi, 2010). It has remained low since, reaching 31% of GDP in 2009, as compared to 75% in Germany, 61% in Poland, 53% in the Czech Republic and 7% in Slovakia. The number of listed companies is also low in regional comparison (see Figures 1.5-1.8).

Figure 1.2. Listings and delistings in BÉT



Source: Mihályi (2010).

Privatization through the stock exchange, however, proved to be a useful means for raising budget revenue. The Hungarian State cashed in a total of 953 billion forints (circa 3.3 billion euros) from 110 transactions on the stock exchange between 1990 and 2007. As Table 1.4 shows, this was 44% of the value of all privatization transactions but involved only 4% of the total number of companies. The average value of these transactions was 8.7 billion forints (circa 30 million euros), the highest among all types of transactions.

Table 1.4. Shares sales conducted by state holding companies (1990-2007)

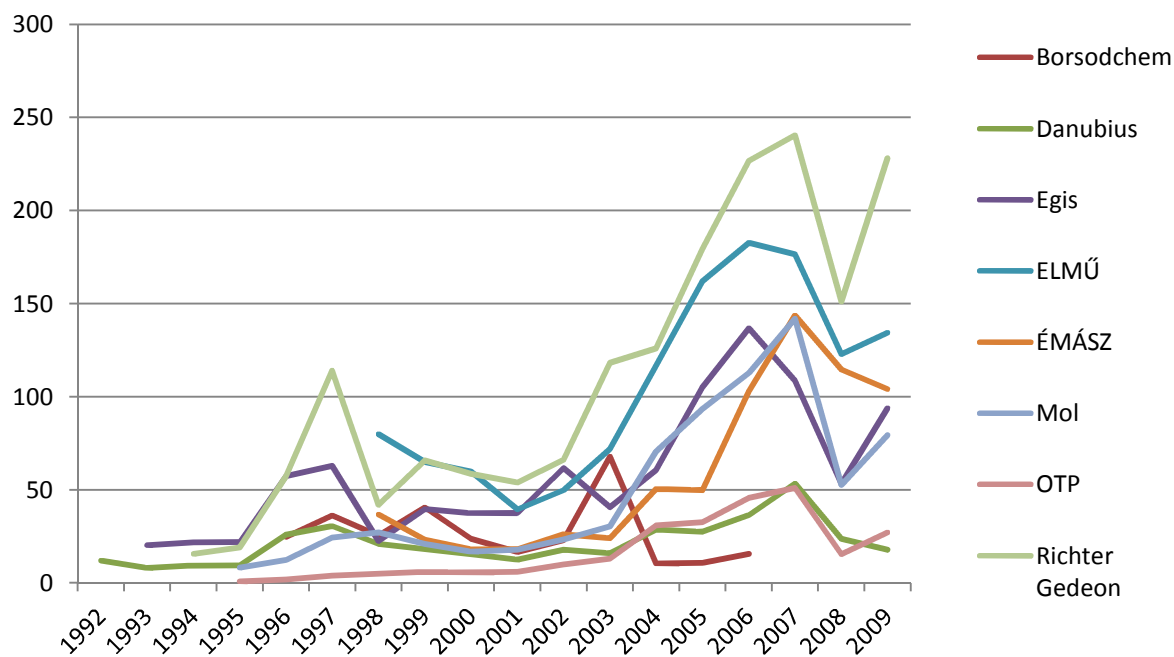
Privatization technique	Transactions				Average size
	Number	%	Billion forints	%	Million forints
Stock exchange	110	4.2%	953	43.9%	8 664
Tender	1042	39.4%	721	33.2%	692
Other (leasing, swap. etc.)	332	12.5%	292.8	13.5%	882
Employees	964	36.4%	114.7	5.3%	119
Compensation coupons	82	3.1%	76.6	3.5%	934
Simplified	88	3.3%	6.1	0.3%	69
MBO	28	1.1%	5.1	0.2%	182
Total	2646	100%	2169.3	100%	

Source: Mihályi (2010).

1.2.1.1.1. Lessons from privatization through the stock exchange

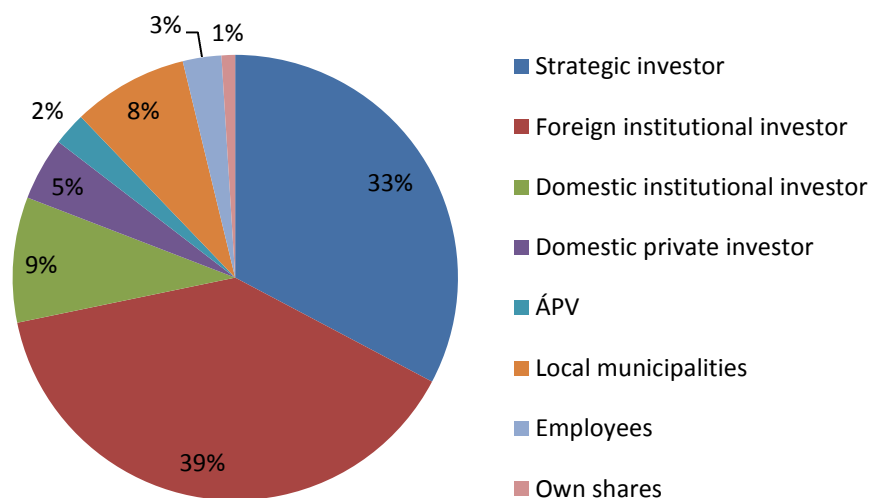
BÉT was positioned at its inception to be the leading stock exchange in the region and it largely benefited from the privatization of the core companies of the Hungarian economy between 1994 and 1997. Although only a fraction of the privatization deals have been carried out in the stock exchange, BÉT's role in restructuring the real sector via privatization is historical as it contributed to the long-term development of the backbone of the economy, the so called "blue-chip" companies. The development of these companies was reflected in the increase of their market value following privatization (see Figure 1.3). By attracting foreign institutional and domestic private investors, BÉT also contributed to the development of the domestic equity market. Finally, by virtually eliminating state ownership in large listed companies (see Figure 1.4) and by increasing the share of the private sector in GDP from 50% in 1993 to 80% in 1998, BÉT also greatly advanced the long process of structural transformation of the Hungarian economy from one based on state ownership to one based on private ownership. This structural change is reflected in the increasing share of employees in the private sector, from 31% in 1992 to 65% in 2005.

Figure 1.3. Share price of certain privatized, listed blue-chip companies (USD, year-end)



Source: Mihályi (2010).

Figure 1.4. Ownership structure of listed A category shares (1998)



Source: Mihályi (2010).

Privatization of state-owned companies on the stock exchange had its side effects, however. Mihályi (2010) points out two of these. One is that as Russia gained back most of the economic might of the earlier Soviet Union in the 21st century Russian investors looked for investments opportunities in the CEE region. In doing so, they used BÉT to expand their economic influence in Hungary and the European Union by attempting to take over large listed Hungarian companies such as Mol, OTP, Borsodchem and TVK, sometimes using foreign-based companies as their investment arms. Although in most cases these attempts were fended off⁸,

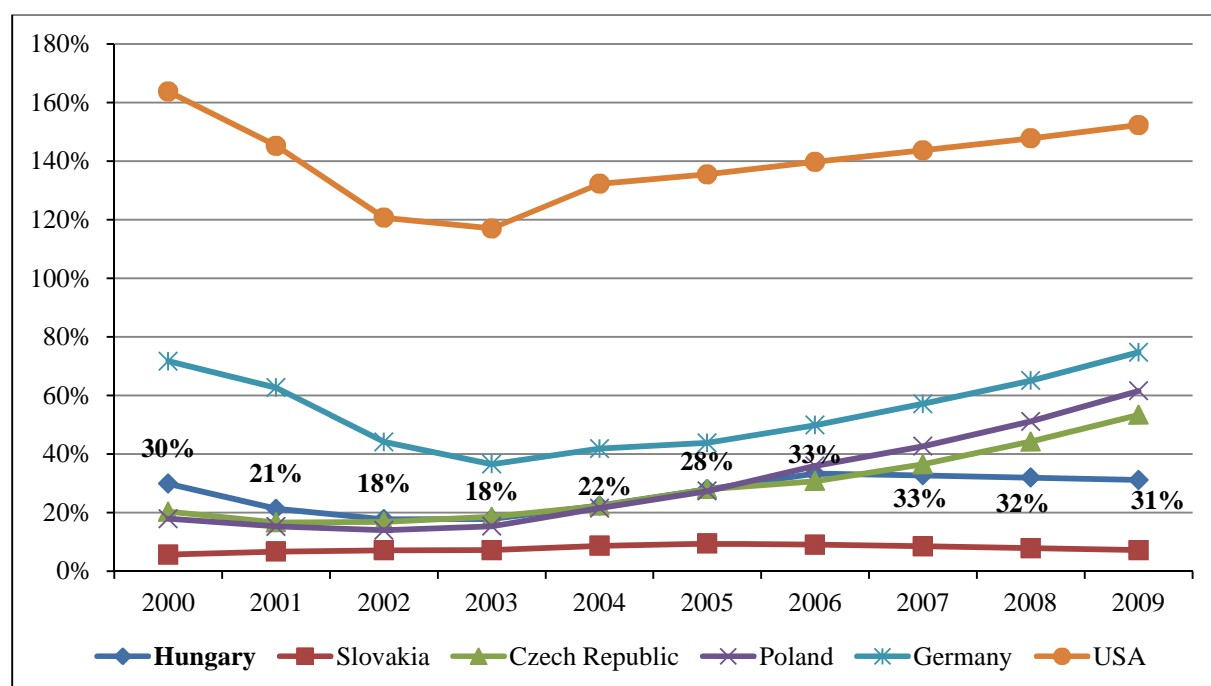
⁸ Between 2000 and 2007 Austrian rival OMV purchased more than one-fifth of Mol shares and in 2007 it made a public offer to buy all Mol shares. Under political pressure by the public and Mol's management, the Hungarian parliament passed "lex Mol", which made it extremely difficult for foreign investors to buy majority shares in strategically important Hungarian companies. In 2009 OMV sold its 21.4%-stake on to Russia's Surgutneftegaz. The Russian company, whose participation in MOL's General Assemblies was successfully vetoed by Mol's management, finally sold its Mol package to the Hungarian government in 2011. In 2007, Megdet Rahimkulov, a Russian private individual very actively trading in the Hungarian equity market announced that he and his family members control more than 10% of OTP shares. The Hungarian Financial Supervisory Authority (PSzÁF) soon called on him to decrease his stake below the 10%-threshold. In 2000, Rahimkulov was also the representative of Irish incorporated Milford Holdings, which purchased 24.7% of Borsodchem and 13% of TVK, both large wholesale purchasers of Mol's refined products. The stakes were passed on to Austrian Vienna Capital Partners (VCP) whose daughter company made a bid for Borsodchem shares in 2001 and advanced its stake to 59%. VCP's effort to buy out TVK was countered successfully by Mol, which became majority owner in the company. In 2007, Mol also purchased VCP's 32%-stake and now owns 95%. Borsodchem, however, was eventually taken over by VCP, whose direct and indirect shares in the company totaled 92% by 2004. In 2006, London-based private equity firm Permira Advisers and VCP arranged a public bid for all Borsodchem shares to squeeze out minority shareholders and acquired 93%.

authorities had to deal with the issue of increasing Russian influence and had to change regulation accordingly. Most of these changes had to do with finding a way to easily identify investors that are planning to take over a listed company with the purpose of taking over full control, delisting and potentially reselling the company with profit.

Another is that IPOs gave the managements of privatized companies the opportunity to gain almost unlimited control in the operation of their companies as financial investors mainly focused on increasing shareholder value. This also coincided with the increase of executives' compensation through preferential stock purchase programs in the early phase (e.g. plastic manufacturers Pannonplast and Graboplast and food manufacturer Globus) and American-style stock option programs from 1995 (e.g. Mol and OTP).

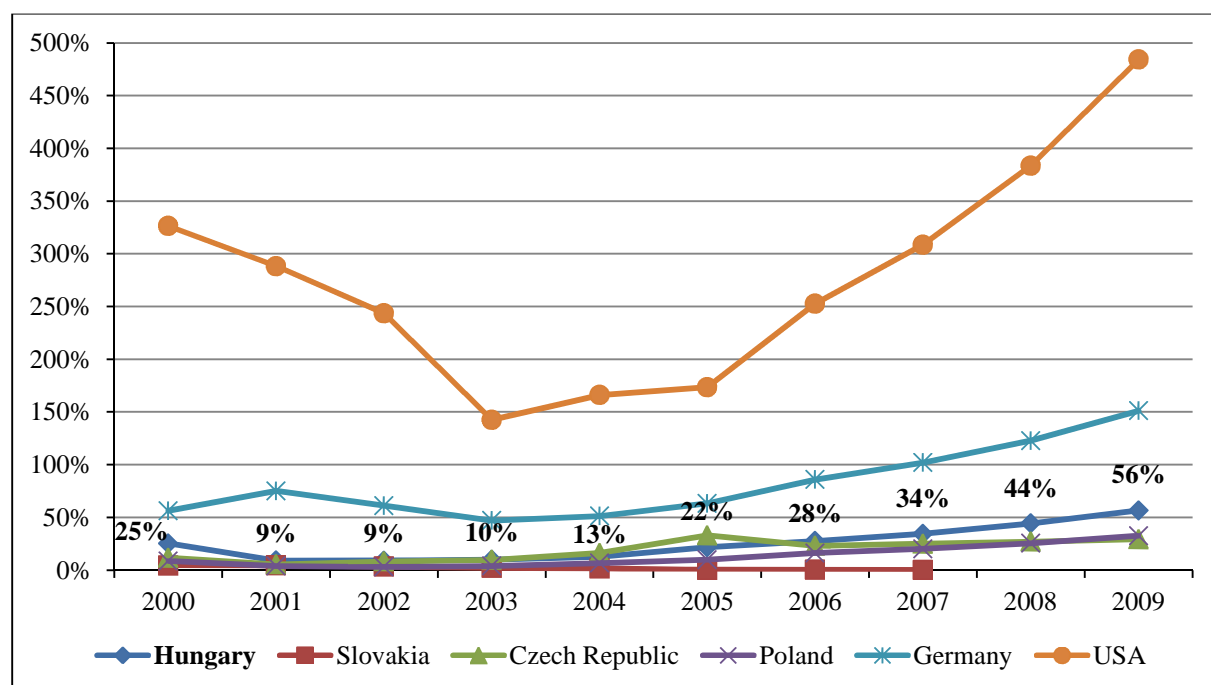
Borsodchem shares were delisted in 2007 and sold to Chinese strategic investor Yantai Wanhua in 2010 as a part of the deeply indebted company's restructuring.

Figure 1.5. Stock market capitalization as a percentage of GDP (2000-2009)



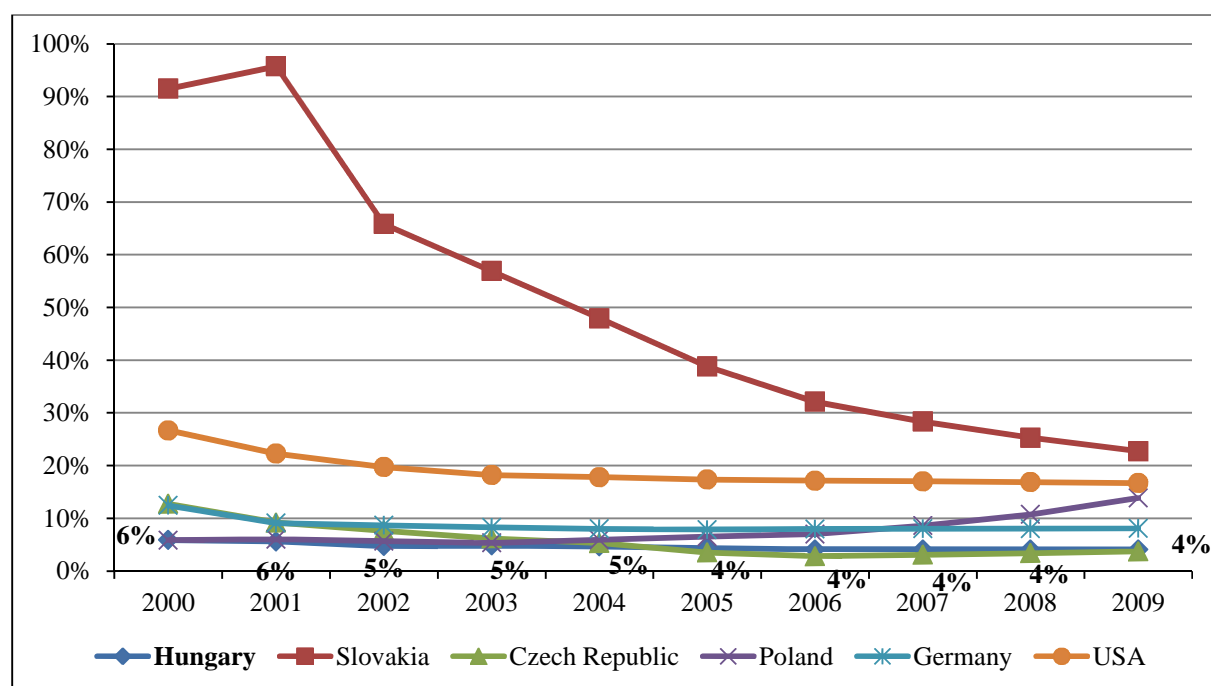
Source: World Bank.

Figure 1.6. Stock market total value traded as a percentage of GDP (2000-2009)



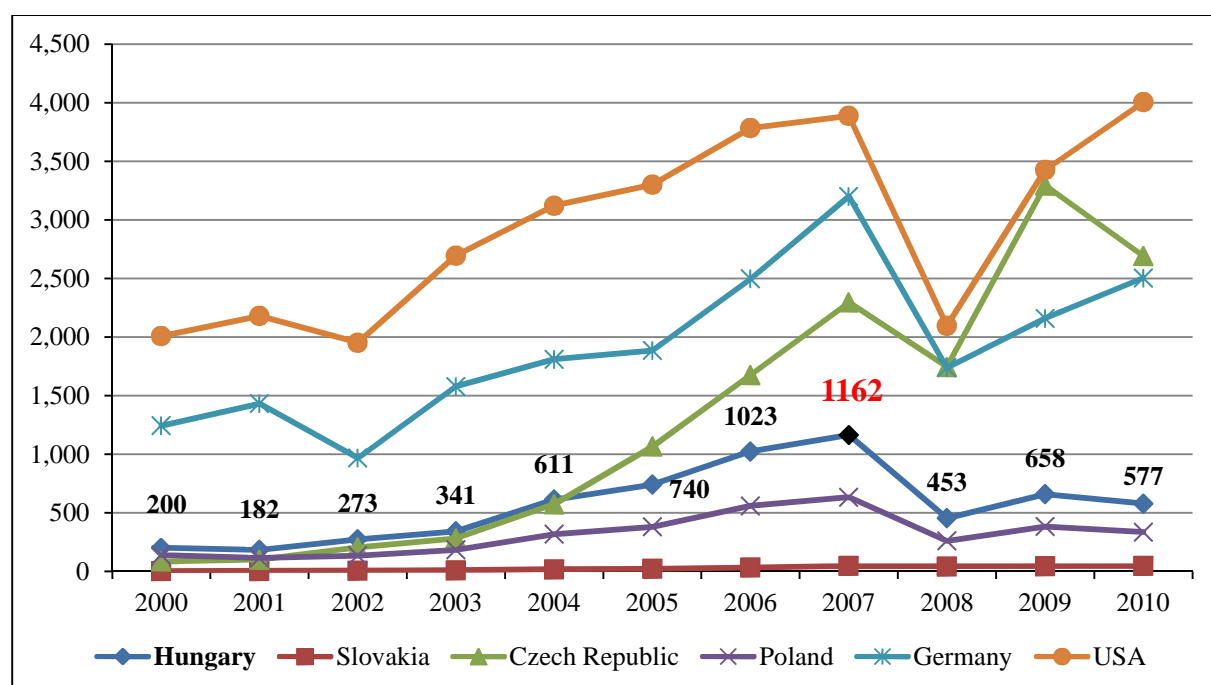
Source: World Bank.

Figure 1.7. Number of listed companies per 10 000 people (2000–2009)



Source: World Bank.

Figure 1.8. Average capitalization of listed companies in current million USD (2000–2010)



Source: own calculations from World Bank data.

1.2.2. The Bond Market

The early development of the Hungarian government bond market resembles that of the Slovak market while it is in contrast with developments in the Czech and Polish markets. The government started issuing bonds to finance its budget deficit and subsidize state-owned companies such as OKGT (the predecessor of MOL) and OTP in 1982, the year of Hungary's joining the World Bank and IMF. Initially, these bonds could only be purchased by the corporate sector, their retail trading only started in 1984. Public trading in treasury bills started in 1988 as a result of the growing need for state financing in the transformational period. Treasury bill auctions began in 1989, longer maturity notes, however were not yet on sale because of the inflationary environment and the increasing risk of default. This crowding out effect of short-maturity, mostly floating rate government papers prevented the emergence of a corporate bond market similar to that of Poland or the Czech Republic. Banks showed a decreasing willingness to lend and investors stayed away from the equity market up to 1995 as government bond yields were highly attractive compared to the yields of alternative assets (Barisch et al., 1997).

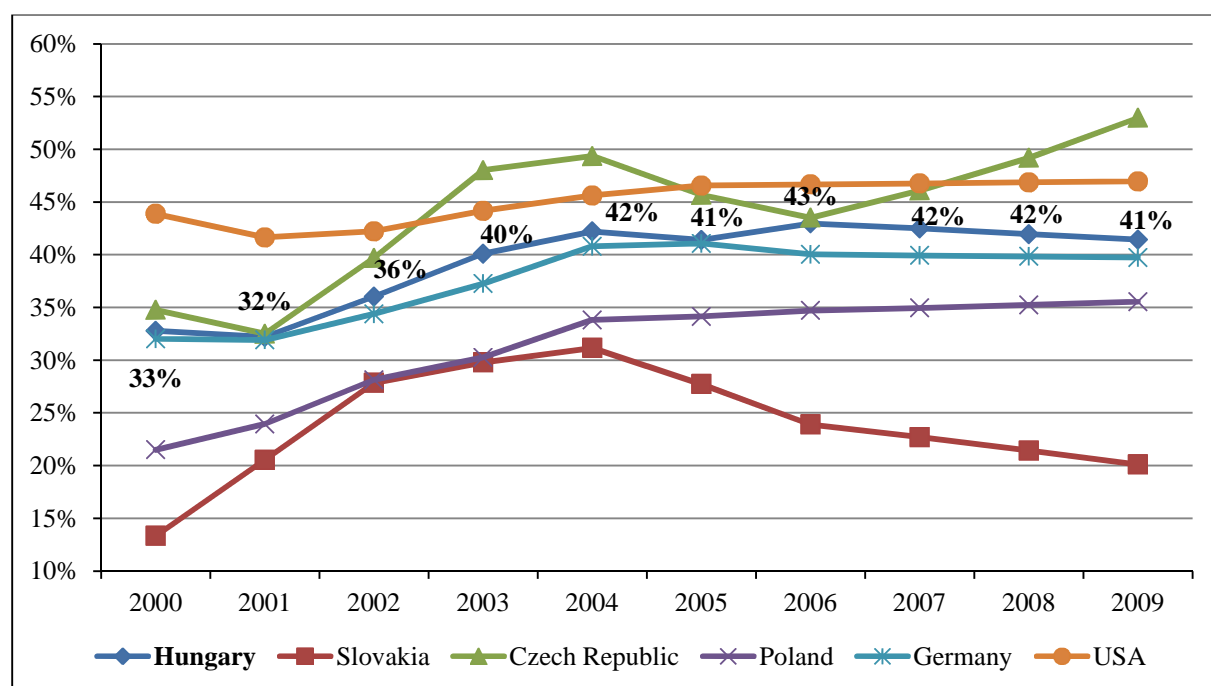
The National Bank of Hungary (MNB) played a special role in the government bond market in the early 1990s as it was legally bound to purchase newly issued government papers to finance the budget deficit. MNB's above obligation impeded the early development of the secondary market for government bonds and distorted the pricing mechanism of these bonds. At the end of 1994, MNB held 33% of all budget deficit financing instruments, mostly treasury bills with maturities of less than one year. New legislation in 1994 restricted MNB's role in financing the deficit and, as a result, MNB's share in government securities fell to 8%.

The fiscal consolidation (Bokros) package in 1995 gave further impetus to the development of the secondary market for government bonds and the move towards fixed rates and longer maturities (Barisch et al, 1997). Although the stock of government bonds outstanding was drastically decreased from privatization revenues (see later) and stayed low until 2001, the constant postponement of

structural reforms of public finances and continued deficit spending by the state after 2002 brought new momentum to the government bond market. At the same time, as the central government reduced its grants towards local governments, the need arose for the external financing of municipalities, as well. Nevertheless, the market for municipal bonds started relatively late compared to regional peers and, following its upswing between 2006 and 2010, was brought to a sudden stop by new legislation restricting municipalities rights' to issue debt securities (see Chapter 3). Figure 1.9 shows that by the mid-2000s the capitalization of the public bond market incorporating government and municipal bonds reached a level comparable to that witnessed in developed countries, above 40% of GDP.

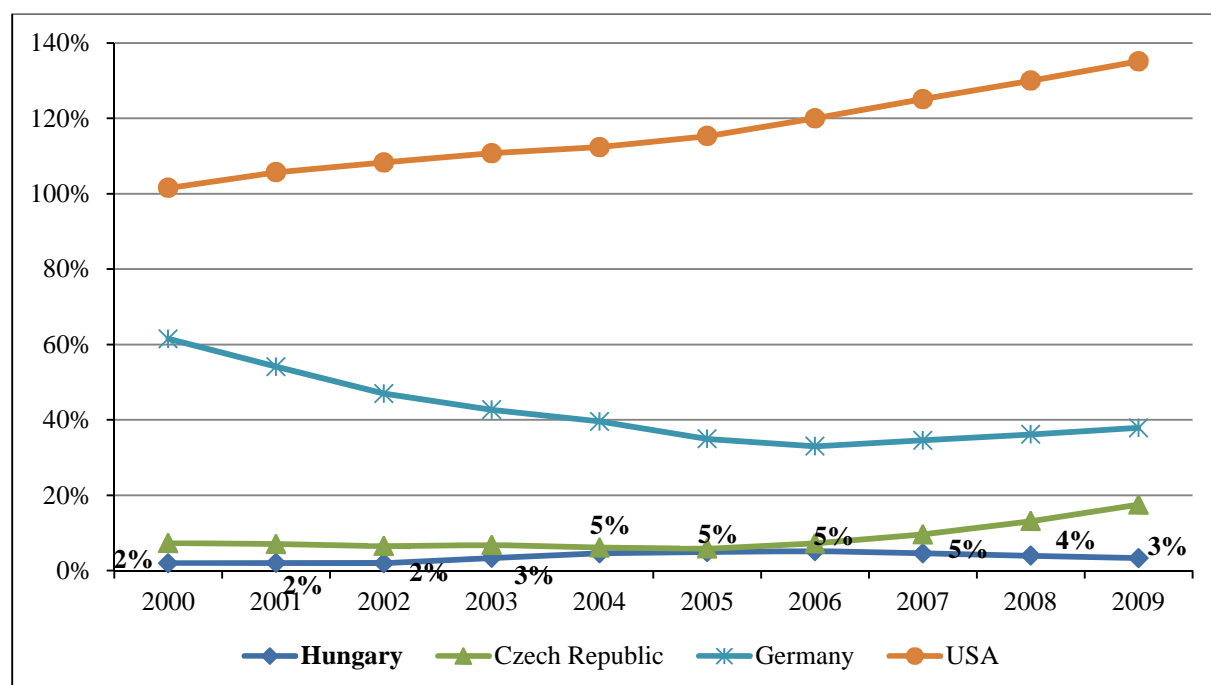
Because of the need for budget deficit financing and, thus, the crowding out effect of government papers in the capital market, the stock of private bonds have stayed low in Hungary(see Figure 1.10). Although it started out relatively early with commercial papers and promissory notes, the corporate bond market has become restricted to a small circle of leading ("blue-chip") financial and non-financial corporations and is small in size compared to the public bond market. Mortgage bonds have become the most significant portion among private bonds thanks to their dramatic rise in 2001, the year mortgage banks started issuing them. Their value, however, has been dwindling since 2008 along with the contraction of the housing loan market (see more in Chapter 3).

Figure 1.9. Public bond market capitalization as a percentage of GDP (2000–2009)



Source: World Bank.

Figure 1.10. Private bond market capitalization as a percentage of GDP (2000–2009)



Source: World Bank.

2. The Decade of Financialization: 2000 to Date

2.1. Introduction⁹

A possible description for financialization comes from Epstein (2001):

“Financialization refers to the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international level.”

Although there is no consensus on the definition of financialization there are certain characteristics that are universally accepted as important measures of its expansion. This chapter is intended to give a panoramic view on many of these elements, detailed presentations will be available in the subsequent chapters.

Comprehensive and current literary sources are few and far between on this topic, as a result, this chapter is built around time series data from World Bank, OECD and the National Bank of Hungary (MNB). Comparisons are also made between relevant countries: The Visegrád Group (Hungary, Slovakia, Czech Republic and Poland), Germany and the United States. The analysis relies greatly on the Quarterly Report on Inflation and on the Semi-annual Report on Financial Stability published by MNB. They are available from the onset of the new millennium, but as the process of financialization in Hungary really took up in this period, we think that it is sufficient to examine only the last decade.

2.2. Financial Sector

2.2.1. Output and Employment¹⁰

Value added in the financial sector almost doubled in Hungary and Poland relative to GDP after the fall of communism, much smaller increases were registered in Slovakia and the Czech Republic. The statistic as a proportion of GDP stands at 23 percent in Hungary, about 3–4 percent higher than in the other 3 countries;

⁹ Sources: Havrylchuk (2012), Gardó & Martin (2010), older: Rácz (2006), ECB (2002), Bonin & Wachtel (2003), Schardax et al. (2001).

¹⁰ Sources: Glassner (2009), Escudero (2009), Eurofound (2011a, 2011b).

employment in finance, real estate, renting and business as the percentage of total employment expanded gradually in every Visegrád Group country from below 5 percent to over 10 percent in the last 2 decades, the Czech increase was the most dynamic (see Figures 2.1 and 2.2).

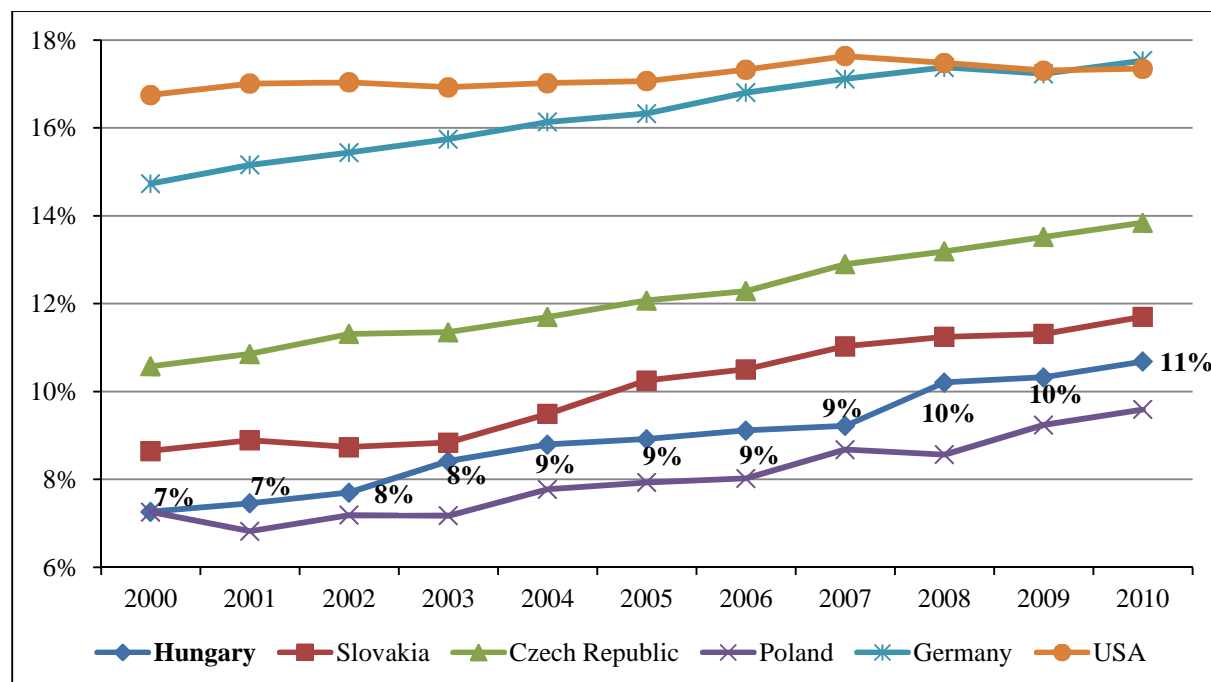
According to Eurostat data, around 6.5 million persons were employed in the European financial sector (banking and insurance services, financial intermediation) in 2007, representing almost 3 per cent of employment in the EU. However, differences between countries with regard to the importance of the sector are considerable. For instance, in Luxembourg, employment in the sector accounted for 10.5 per cent of total employment, compared to 4.4 per cent (that is, 1.2 million employees) in the United Kingdom, and 3.5 per cent (1.3 million employees) and 3.1 per cent (0.8 million employees) in Germany and France, respectively. Furthermore, there seems to be a clear divide between ‘old’ and ‘new’ member states as the share of banking sector employment in total employment is lower in the Central and Eastern European countries.

Employment in the European banking sector is characterized by two main trends. First, a divide with regard to the dynamics of employment can be observed between western and eastern Europe. Second, in the ‘new’ member states – and France – the overall employment trend was positive between 2002 and 2007. For instance, between 2004 and 2007, employment in the Polish banking sector grew by 9 per cent, while in government and trade union responses to the economic crisis in the financial sector Lithuania, the number of banking employees rose by one-third. In Romania, employment increased by around 14 per cent between 2004 and 2006, while Bulgaria showed employment growth of 17 per cent from 2002 to 2005.

The economic crisis is already causing massive job losses. In developed countries, this means higher unemployment – so far mitigated somewhat by recourse to shorter hours and labor hoarding. In developing countries, the crisis is leading to losses of formal jobs, affecting women disproportionately. Workers go back to rural areas or take informal jobs, entailing lower pay and worse working conditions.

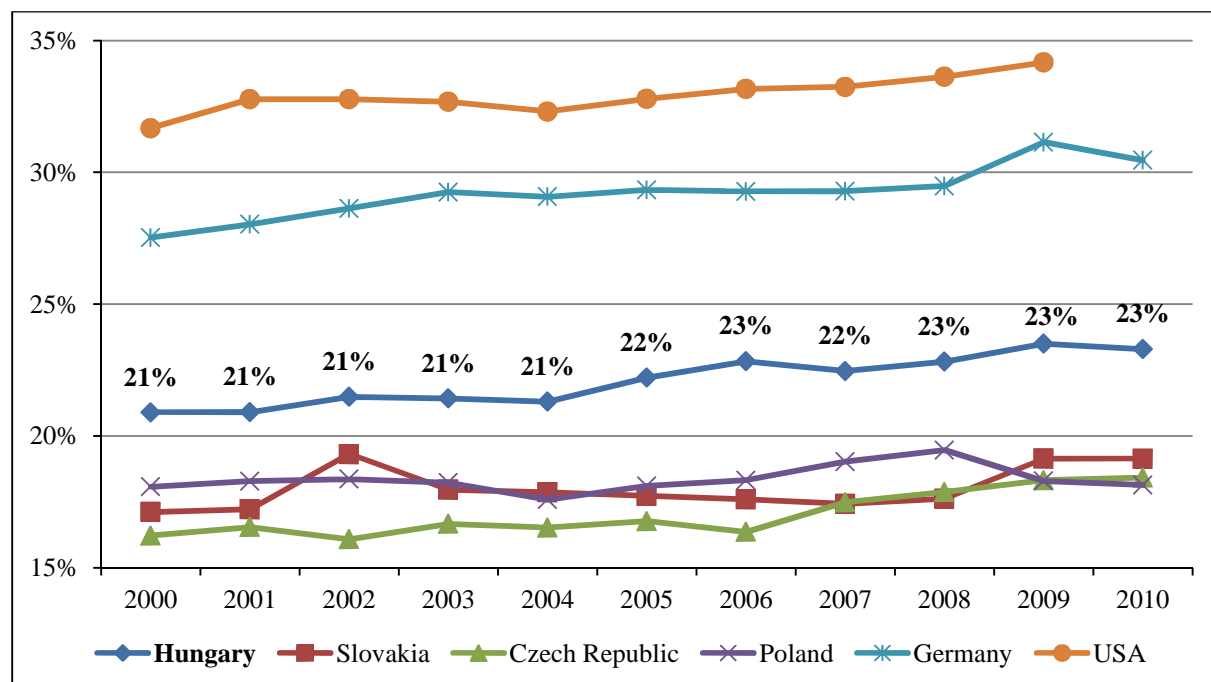
Everywhere, youth leaving school face significant difficulties entering the labor market. A jobs crisis of colossal proportions is in the making.

Figure 2.1. Employment in financial intermediaries, real estate, renting and business activities as a percentage of total employment



Source: OECD.

Figure 2.2. Value added in financial intermediation, real estate, renting and business activities as a percentage of GDP



Source: OECD.

2.2.2. Banking Sector

2.2.2.1. Activity¹¹

In early 2003 the loan-to-deposit ratio was 100 percent. By the end of the year, however, the ratio rose to 110 percent, as the phase out of subsidized forint loans generated a sharp rise in net flow. Against the backdrop of the lending surge, the ratio rose nearly continuously and reached 160 percent by 2009. The dynamics of the loan-to-deposit ratio is in correlation with the share of foreign liabilities in the balance sheet. When the loan-to-deposit ratio rises above 100 percent, external funds are needed to replenish deposit funds. Developments in foreign liabilities confirm our previous statements. While their share was around 17 percent in proportion to the balance sheet total at the beginning of 2003, this value exceeded 30 percent by the onset of the crisis.

Besides the increasing weight of foreign liabilities after 2003, risks were exacerbated by a growing reliance on the foreign exchange (FX) swap market. On the deposit side, Hungarian banks obtained liquidity predominantly in forint, which was conveniently used to close their open FX positions in the swap market. This allowed banks to obtain cheaper foreign currency liquidity. However, this meant higher funding liquidity risks. On the one hand, their excessive reliance on the swap market posed serious problems during times of market disturbances. On the other hand, foreign currency liquidity obtained in the swap market was generally of much shorter maturity than the on-balance sheet foreign currency funds, which increased renewal risks. It also led to a drastic contraction in the liquid assets portfolio of the banking system that serves to ensure that institutions are capable of meeting their obligations even in times of crisis. Despite all this, Hungary did not adopt any liquidity regulations aimed at mitigating these risks.

Before the global crisis, banks in Hungary relied on high loan-to-deposit ratios and cross-border financing from parent banks. However, this model has become less attractive as illustrated by the announcement of the Austrian Financial Market

¹¹ Sources: PSZÁF (2011), ECB (2010), Kovács (2011), Banai et al. (2010), older: Várhegyi (2002), ECB (2005).

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

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

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

The bank credit/bank deposits ratio more than doubled in Hungary to 1.61, in the other countries of the Visegrád Group it is between 0.9 and 1.3; *the ratio of offshore bank deposits* to domestic bank deposits remained steady around 4–5 percent in the 1995–2009 period, while in other Visegrád Group countries it decreased from around the same levels after a brief surge before 2006 (see Figures 2.5 and 2.6).

Lending to the domestic private sector continued to decline in 2011–2012. Strong supply constraints remain in domestic corporate lending, while demand constraints are also becoming increasingly effective due to the weaker economic outlook. Of the Visegrád Group, Hungary is the only one where there has been no turnaround in corporate lending. The creditless recovery is mainly attributable to the supply side, i.e. a low willingness to lend coupled with an increasingly weak ability to lend. An additional risk is that local subsidiaries might be compelled by their foreign parent groups to further restrain drastically their lending due to the euro area debt crisis and the early repayment scheme at a preferential exchange rate. The most efficient instrument to reduce the credit supply constraints in corporate lending could be government guarantee schemes; developing the corporate bond market and creating the legal background of securitization also arises as a possibility. Besides credit supply constraints, potential instruments to ease demand constraints are also coming to the forefront as a result of the considerable economic slowdown.

The decline in lending to households is characterized by a decrease in foreign currency denominated loans and weak forint lending. Balance sheet adjustment by indebted households continues to be dominant in this segment. Since the majority of mortgage loans is still denominated in Swiss franc, the persistently strong Swiss franc reduces disposable income and significantly decelerates the contraction in outstanding debt. In addition to the strong constraints in loan demand, loan supply constraints are also appearing, primarily in relation to price-related conditions. Supply constraints could be eased by increasing price competition among banks. An upturn in bank-switching may play an important role in this regard. However, an important precondition for price competition is the introduction of transparent loan products with an interest rate pegged to a reference interest rate and fixed premium.

Banks' low willingness and ability to lend as well as the deteriorating economic and risk environment hinder corporate lending. In a forecast published in an earlier Report on Financial Stability a turning point in corporate lending for end-2010 was expected. However, economic outlook in the period that elapsed since then has changed considerably: the outlook of the export sector worsened coupled with the subdued domestic demand, thus reducing demand for loans. On the other hand, further tightening of credit conditions is also expected on the supply side, which is explained by the market conditions related to the euro area sovereign debt crisis and by the potential losses related to the mortgage loan repayment scheme. Within supply constraints, the deterioration in the ability to lend may play an increasing role, which is primarily attributable to the weakening capital position. The above factors lead to a further delay in a turning point of corporate lending; an increase in corporate loans outstanding is expected only from 2013 Q1.

Balance sheet adjustment is expected to continue in the household sector. In parallel with the worsening ability and willingness to lend of the financial intermediary sector, considerable credit demand constraints affect lending to households. The persistently strong Swiss franc continues to significantly impair the income position of households, while slack labor market conditions may remain for a

longer period of time. Precautionary motives also play a material role in the subdued household consumption, mainly due to the uncertain economic outlook and the concerns related to the strengthening of the Swiss franc. Taking into account of the constraints prevailing in household credit demand and the significantly worsening risk environment of domestic financial intermediaries, no material increase in lending is expected in this segment over the forecast horizon. In parallel with this, in 2011 Q4 and 2012 Q1, total loans outstanding may shrink substantially as a result of the repayments of foreign currency mortgage loans from savings.

The decline in lending is attributable to the shrinking in foreign currency denominated loans outstanding. The balance sheet adjustment of households accelerated in 2011. The contraction in outstanding loans reached 240 billion forints in H1, which is nearly twice as much as the decline in the same period last year. Although balance sheet adjustment is becoming stronger, the outstanding amount of household loans is increasing due to the appreciation of the Swiss franc. In 2011 Q2, the nominal level of household loans outstanding exceeded the end- 2008 level by 5 per cent, whereas excluding the exchange rate effect it was 10 per cent lower. In 2011, foreign currency loans played a decisive role in the decline in both housing and consumer loans, as low amount of newly extended loans denominated in forint does not offset the repayment of foreign currency denominated loans. There is no material difference among types of institutions either. In 2011, a decline in loans outstanding was typical both in the case of banks and financial enterprises, while in the co-operative credit institutions sector only a marginal increase was seen.

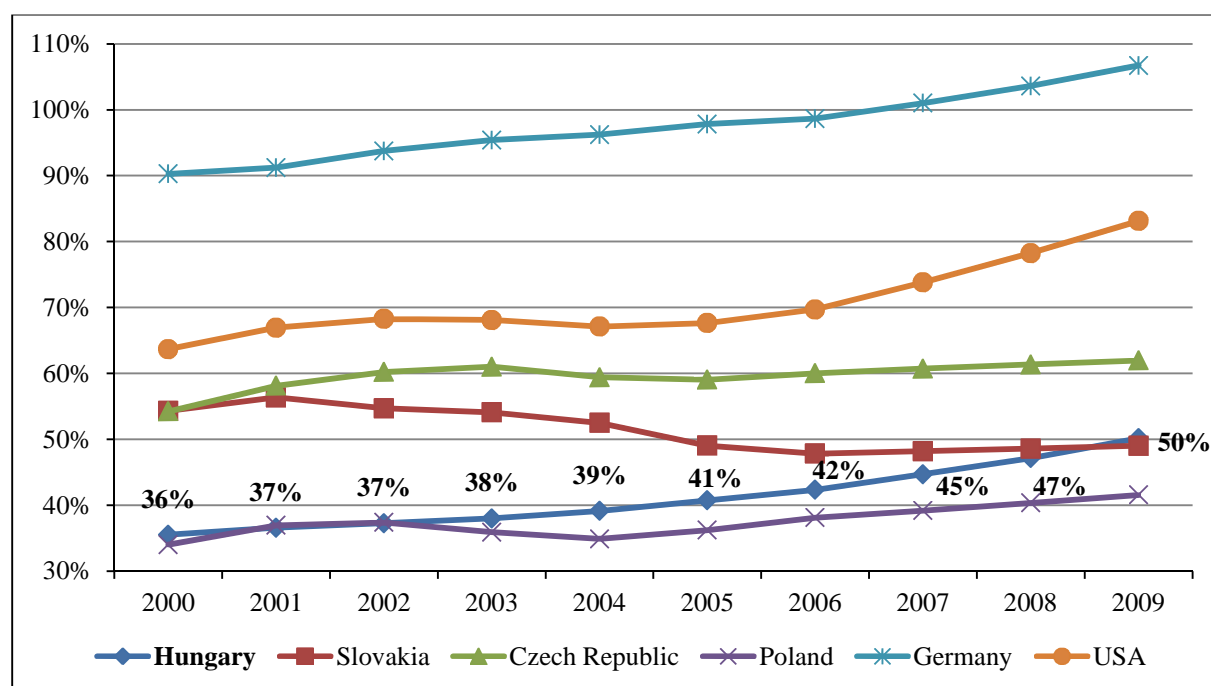
Domestic lending is weak in regional comparison, which is partly attributable to the lack of price competition. The international comparison of household lending shows a similar picture to that of corporate lending. Of the Visegrád Group, Hungary is the only country where there has not been a turning point in household lending. However, this is attributable not only to credit demand constraints. The regulatory tightening practically meant a quasi-prohibition on foreign currency mortgage loans, which, at the same time, is perceived as an interest rate shock for clients, as it is not possible any more to borrow in foreign currencies with lower nominal interest rates.

Consequently, the volume of new forint loans is considerably lower. At the same time, examining the Visegrád Group, there is a material interest rate spread on outstanding loans in Hungary. In addition to the strengthening of the Swiss franc, debt service burden of households is also significantly influenced by the fact that the interest rate spreads applied by the Hungarian banking sector are high in international comparison.

Balance sheet adjustment led to a lower loan-to-deposit ratio in Hungary. Although the balance sheet total of the domestic banking sector has shrunk materially over the past period, its loan-to-deposit ratio of approximately 130 percent in 2012 still exceeds the regional average. The average ratio for major banks in foreign ownership stands at around 150 percent; on a stand-alone basis, this ratio is over 200 percent for certain banks. This poses significant risks, especially in light of the fact that, increasingly strict regulatory and investor expectations for capitalization may trigger further forced balance sheet adjustments at parent banks and, hence, their subsidiaries. At the same time, the ratio was notably influenced by exchange rate movements, as the majority of loans (contrary to deposits) are denominated in foreign currencies. Furthermore, lower balance sheet totals due to final repayments contributed to the indicator only to a lesser extent, because a significant portion of loans was financed from deposits.

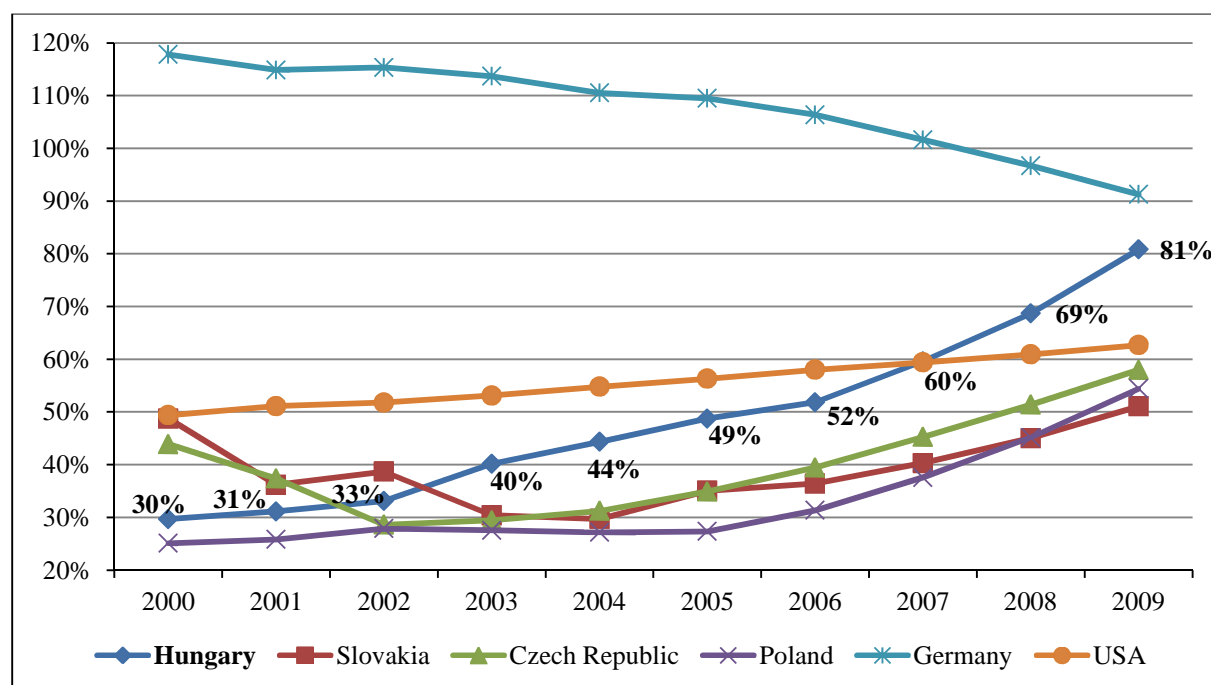
Increasing funding risks are clearly indicated by the fact that, while the bank loan portfolio of households nearly tripled between 2004 and 2008, their bank deposits increased by only slightly over 40% during the same period. The loan portfolio of the private sector doubled in the same period, while deposits lagged far behind (see Figures 2.3 and 2.4). Consequently, the loan-to-deposit ratio of foreign banks within the banking system already exceeded 100% in 2000 and continued to rise sharply with the escalation of lending, peaking at 180% at the end of 2008. A total of 60–70% of the funds involved came from parent banks, while 30–40% was raised on the capital markets.

Figure 2.3. Bank deposits as the percentage of GDP (2000–2009)



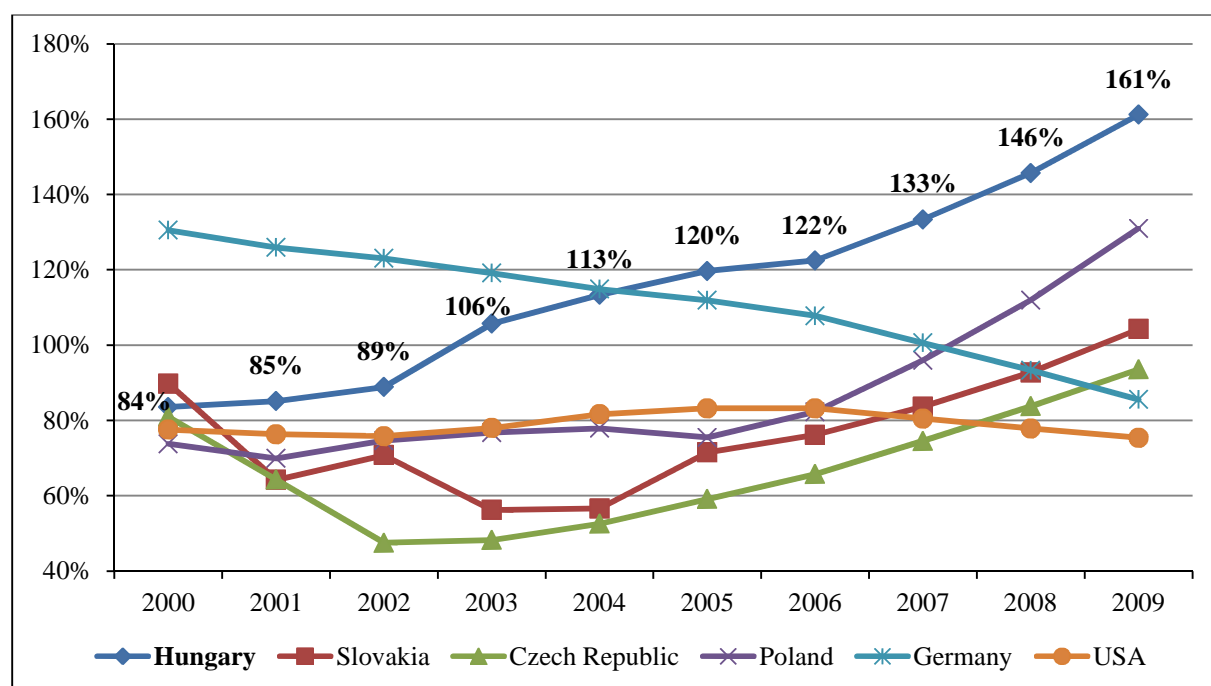
Source: World Bank.

Figure 2.4. Bank credit as a percentage of GDP (2000–2009)



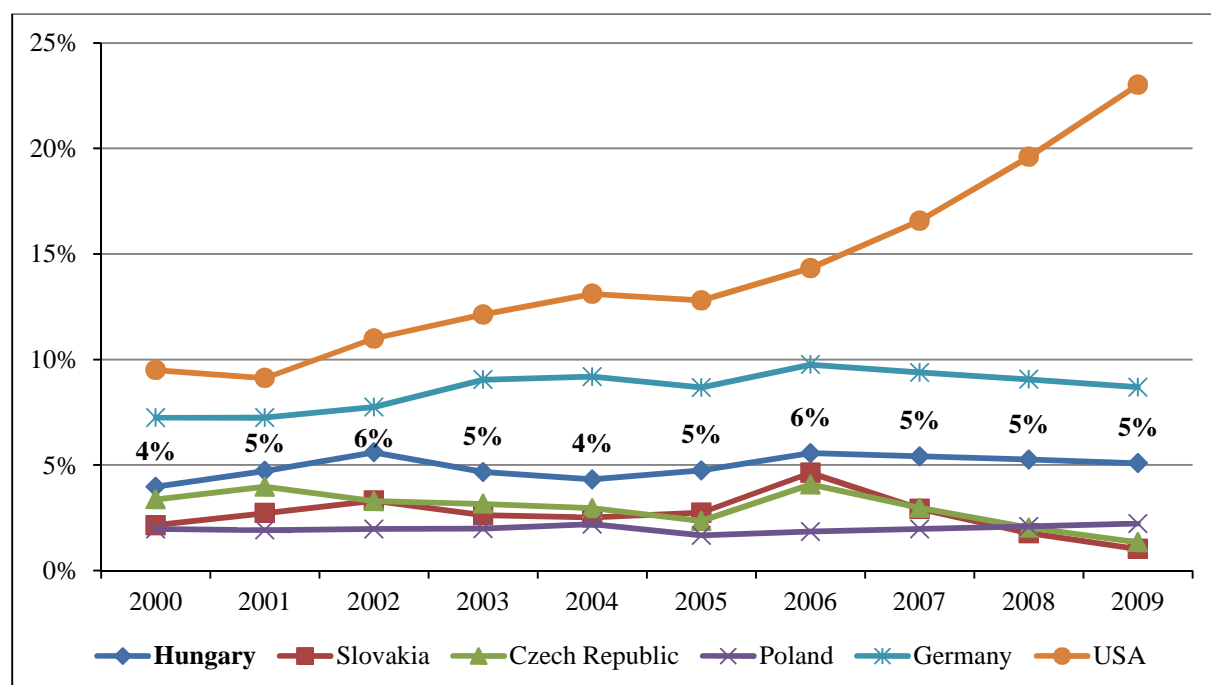
Source: own calculations from World Bank data.

Figure 2.5. Bank credit to bank deposits ratio (2000–2009)



Source: World Bank.

Figure 2.6. Offshore bank deposits to domestic bank deposits ratio (2000–2009)



Source: World Bank.

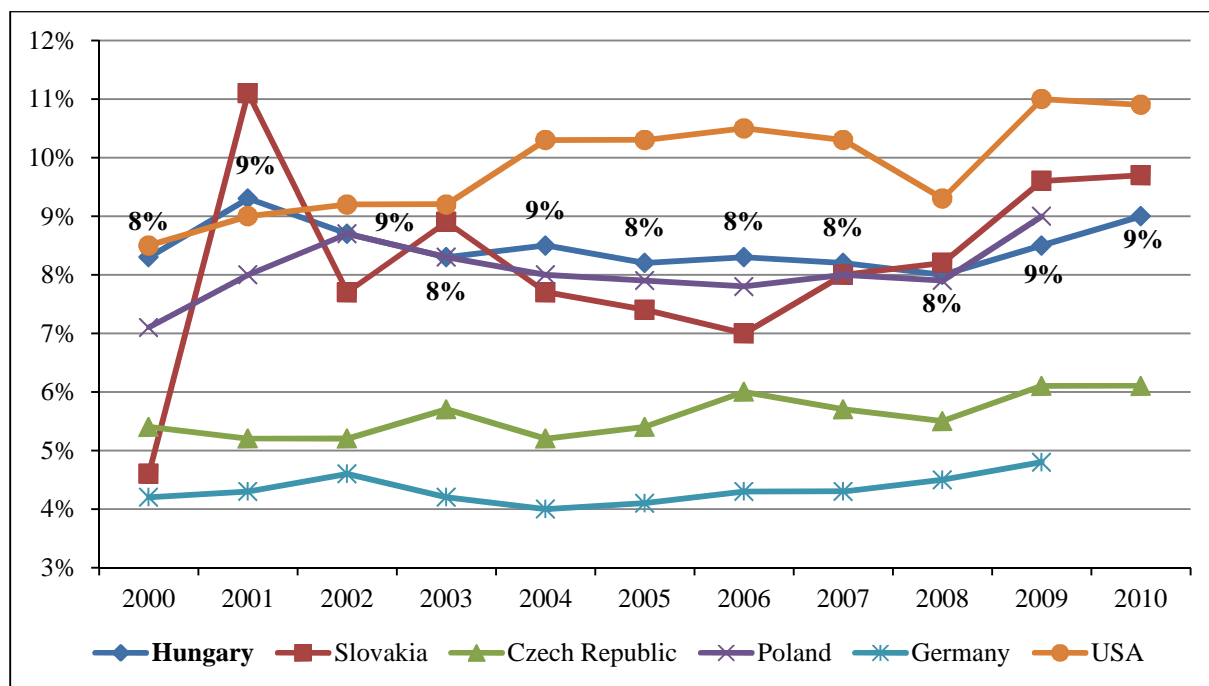
2.2.2.2. Leverage¹²

The banking sector has been deleveraging since 2008. Based on prudential ratios, Hungarian banks appear to have sufficient buffers to absorb unexpected losses in the short run and are not overleveraged by international comparison. Their *capital to asset ratio* increased to 9% in 2010 from 8% before the crisis (Figure 2.7) and their capital adequacy ratio rose from 10.3% in the first quarter of 2008 to 13.8% in the second quarter of 2011, with their leverage ratio having fallen from 12.8 to 11.7. These two trends are partly connected, as deleveraging has contributed to a one percentage point increase of the solvency ratio. In the medium run, the financial situation of banks can be more fragile, because there is a large heterogeneity in capital adequacy between banks and credit quality is deteriorating.

As a result of the recent financial and economic crisis, banks started rapidly to reduce the leverage they have been accumulating during the past decade. To avoid a further economic downturn, some governments and central banks took part of bank debt onto their balance sheets. Such a process may often lead to unsustainable imbalances in public finances, sometimes followed by sovereign debt crisis, depressing the real economy.

Figure 2.7. Bank capital to asset ratio (2000–2010)

¹² Sources: European Banking Federation (2010), older: Csermely & Vincze (1999).



Source: World Bank.

2.3. Debt

2.3.1. *Private Debt*¹³

With a few exceptions, nonfinancial corporations in Europe and Central Asia (ECA) are only moderately indebted. Indirect evidence comes from these facts:

- Financial development (private credit to GDP) was still lagging economic development (GDP per capita)—but the gap has closed only recently relative to 1995.
- Small and medium-size enterprises in ECA's transition countries (excluding Turkey) relied more on retained earnings and informal finance than external finance to fund fixed investment, than did developing market economies, a gap that closed for the richer transition economies only in 2008, on the eve of the crisis.
- The growth of credit to nonfinancial corporates was considerably lower than that to households in many ECA countries.

Direct evidence comes from the evolution of corporate leverage—the ratio of total debt to total assets—for large nonfinancial corporates. Although leverage increased sharply in Hungary and, to less extent, in Turkey in 2008, it was still about half the elevated levels in East Asia during its crisis in 1997–98 and was also generally lower than in Argentina (2001), Brazil (1998), Mexico (1995), and Turkey (2001) in the years of their crisis. Corporate leverage is notably higher in Greece, Ireland, Portugal, and Spain (the EU cohesion countries), reflecting their deeper and more liquid financial markets.

Data for other countries in the region (taken from the Bloomberg database, which has a wider country coverage) confirm this view. Corporate leverage in 2008 was among the lowest in Bulgaria, the Czech Republic, Poland, and the Slovak Republic; intermediate in Romania, Turkey, and Ukraine; and among the highest in Croatia, Estonia, Latvia, Lithuania, and Slovenia. But even the countries with the highest leverage have a total debt to total assets ratio broadly similar to those in East Asia and somewhat less than in the cohesion countries in 2008. In particular, corporate

¹³ Sources: Eller et al. (2010), Molnar (2010), MNB (2012b), Banai et al. (2011).

leverage in the ECA countries is much lower than that in East Asia during its crisis in 1997–98. The comparison, which focuses on the largest firms, is meant to be suggestive, and the small sample size in ECA's smaller countries in particular should be recognized. But it should be placed alongside the indirect evidence cited earlier about ECA's financial shallowness, the importance of households rather than nonfinancial corporates in rapid credit growth in many ECA countries, and the dominance of retained earnings as a source of financing for fixed investment giving way only recently to bank financing in a large sample of small and medium enterprises from across the region.

The sustainability of corporate financial structures during the years of crisis is of somewhat more concern in some countries. Some indication of the extent to which nonfinancial corporates have a sustainable financing structure is the interest coverage ratio—the ratio of EBIT (earnings before interest and tax) to total interest expense. It fell sharply in Hungary between 2007 and 2008 to reach a low of 1.3 in 2008, comparable to the lows in East Asia during its crisis and in Turkey in 2001. For a wider set of countries, it is the lowest in Croatia, followed by Slovenia, Turkey, Latvia, and Hungary. The highest interest coverage ratios are for the Czech Republic, the Russian Federation, Estonia, Poland, Romania, and the Slovak Republic.

Hungary experienced a relatively rapid credit growth between the 2003 and 2008 Q3. During this period, loans outstanding to non-financial enterprises grew at an annualized rate of 12.5 per cent on average; the stock of loans has doubled by the end of the period. The recent financial crisis has made an end of this credit expansion, since the last quarter of 2008 loans outstanding keeps on declining. In nominal terms, the most severe drop was in 2008 Q4 and in 2009 Q1, in these quarters loans outstanding contracted by 200 billion forints. The annual growth rate bottomed out in the third quarter of 2009, since then the dynamics of the decline has been moderated somewhat. The seriousness of this contraction can be illustrated by the fact that the loans outstanding at the end of 2010 corresponds to the level of the first quarter of 2007. This downturn is very severe and long drawn-out in a regional

comparison; in magnitude it is similar to the slump experienced by the Baltic countries.

In 2011 and 2012, lending activity continued to decline in both the corporate and household segments in Hungary. On the supply side, the weakening of the banking sector's lending capacity became more pronounced. The outflow of external liabilities from the banking sector may become the reason for – rather than the consequence of – a contraction in lending. Due to a lower willingness to take risks and the substantial outflows of external liabilities, companies are facing tighter credit conditions. Although demand for credit is also decreasing as a result of deteriorating economic prospects and the subsequent downturn in investment, investments are being postponed or cancelled owing to credit supply constraints. Therefore, a turnaround in corporate lending cannot be expected, due to tight credit conditions, until after 2013.

Corporate loans outstanding of the domestic financial intermediaries continued to contract in 2011 and 2012. In net terms adjusted by exchange rate, domestic corporate loans outstanding shrank by a total of 570 billion forints, representing an annual decline of 6.6 percent. Since 2011, the decline in long-term loans has dominated on the whole, while short-term loans decreased only to a lesser extent, mainly as a result of some increase offsets in the third quarter of 2011. In a breakdown by currencies, the outstanding amount of both forint and foreign exchange denominated loans shrank, the latter to a greater extent. The decline in long-term (foreign currency) loans is not surprising: with the worsening global and domestic economic outlook, corporate investment activity remained modest, and thus long-term borrowing is still not essential.

The decline in lending by banks to corporations is stronger in Hungary than in the region. In the corporate segment, developments in lending in Hungary continue to diverge from the region: with the exception of Hungary, corporate lending expanded in all countries in the CEE region after 2010, whereas a substantial decline was recorded in Hungary. However, at the end of 2011 the growth of corporate loans

came to a sudden stop or the decline accelerated in almost all countries of the region. Except for in the Czech Republic and Poland, corporate lending in all regional countries remained steady or continued to decline in the first months of 2012, a potential sign of worsening economic outlook in the region and the euro area, as well.

In the retail segment, one of the most important factors determining the dynamics of lending to households was the early repayment scheme for foreign currency denominated loans at a preferential exchange rate at end-2011, which resulted in a nearly one-quarter decline in foreign currency mortgage loans outstanding. Both price and non-price conditions of banks became stricter in the household segment during 2011 and 2012. However, this was mostly a consequence of the effect of the early repayments. Following this scheme of the exchange rate cap and the handling of non-performing household loans (i.e. the solving of problems related to loans outstanding), banks may focus on increasing forint-denominated mortgage lending within new lending. However, new lending will fall below the level of principal repayments of households over the forecast horizon, and thus an increase in loans outstanding to households should be expected only after 2013.

The current lending forecasts in Hungary are accompanied by significant risks, both in the positive and negative directions. The intensified interventions of the ECB and the MNB represent an upside. These steps may have positive pass-through effects, which may materialize in a permanent easing of European funding difficulties and a turnaround in business activity. However, a permanent deterioration in the external environment, excessive deleveraging of the euro area banking sector and a disadvantageous regional allocation of funds may result in a tighter credit supply of domestic financial intermediaries, pointing to a credit crunch. In this case, in parallel with the withdrawal of external funds, a faster contraction in corporate lending may take place.

2.3.1.1. Total Private and Corporate Debt¹⁴

Figure 2.8 depicts, for selected countries, domestic private sector credit stocks and cross-border credit stocks as a percentage of GDP. After some disruptions due to country-specific crises in the 1990s, most CESEE-11 countries experienced a strong and smooth expansion of private sector loans until late 2007/early 2008. Nevertheless, as a result of the global economic crisis, credit growth rates decelerated sharply; in the Baltic countries, the year-on-year change of domestic private credit turned even negative in real terms in the first quarter of 2009.

In terms of the evolution of domestic private sector credit over time, we can distinguish three groups of countries. First, the Czech Republic and Slovakia already disposed of considerably high credit stocks in the mid-1990s (around 60% of GDP). However, credit stocks shrank remarkably as a consequence of bank restructuring in the late 1990s and early 2000s. As a case in point, Slovakia recorded real average change of -20% in 2001 and the Czech Republic -28% in 2002. Credit stocks have still not reached the degree of financial intermediation observed earlier (the high values registered in the Czech Republic and Slovakia in the mid- and late 1990s have to be interpreted with caution as they were “inflated” by a comparatively high share of nonperforming loans).

Second, Poland and Hungary were characterized by real credit growth rates of more than 20% already in the late 1990s but have experienced a comparatively moderate and steady expansion of credit since then. Third, Slovenia, Bulgaria, Romania, and especially the Baltic countries went through a brisk increase of credit stocks as a percentage of GDP starting with 2000–2003. From January 2003 until December 2007, the average (year-on-year) real credit growth rate was 19% in Slovenia, 28% in Estonia, 35% in Bulgaria, 38% in Romania, 40% in Latvia, and 44% in Lithuania.

In the initial period of the crisis, Hungarian banks responded to mounting liquidity problems primarily by cutting back corporate lending (see Figure 2.9). This was justified by several factors. As the average residual maturity of the corporate loan

¹⁴ Sources: Fábián et al. (2010), Bodnár (2009), Sóvágó (2011).

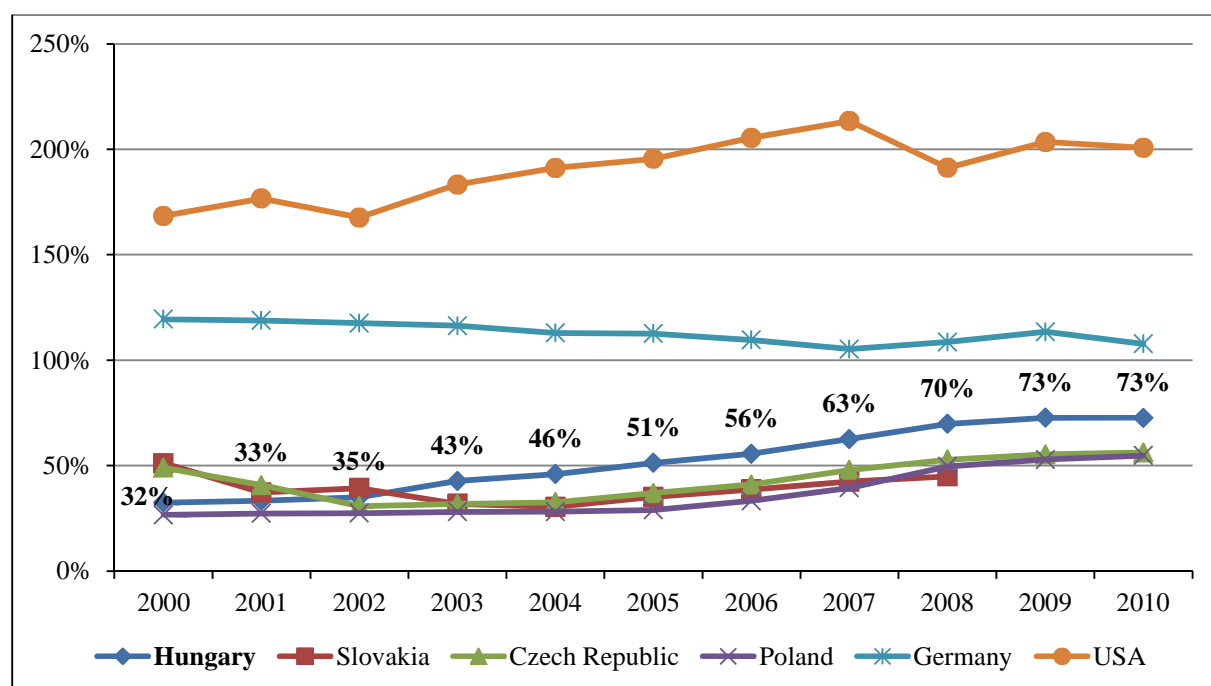
portfolio is significantly shorter than that of loans to households, in the short run it allows more robust adjustments on the part of banks. Since competition is much stronger in the corporate segment in the Hungarian banking system, margins are tighter and banks' profits are smaller on these loans. Finally, corporate loans usually have higher capital requirements than the mortgage loans constituting the bulk of the household portfolio.

From the last quarter of 2008, the corporate segment recorded a negative credit flow in each subsequent quarter. Although the economy started to recover as early as end-2009, this trend of negative credit flows continued throughout 2010. Contrary to developments observed in the region, economic growth has so far not been followed by a recovery in lending. Banks' loan supplies remain restrained for two reasons. On the one hand, banks' risk appetite remains low; on the other hand, reflecting the deterioration in the portfolio and the very high bank levy, capital buffers decreased, curbing lending ability. According to the forecast of the MNB, corporate lending is not expected to pick up soon. Without a pickup in lending, the recovery of the economy may remain weak and fragile.

As seen above, we cannot say that credit expansion in the Hungarian corporate sector was excessive. Although risks were exacerbated by the currency structure of the loan portfolio, we have not found evidence of a problem similar in magnitude to that encountered in the household segment. Nonetheless, against the backdrop of the drastic downturn in the economy, the quality of the corporate loan portfolio deteriorated substantially. This, in turn, was reflected in the mounting losses on the portfolio, which impairs the lending ability of the banking system even further. Thus, the greatest challenge lies neither in changing the structure of the portfolio nor in controlling credit expansion; first and foremost, efforts must be made to revive lending, and the government should be involved in this process (e.g. interest rate subsidies, guarantee etc.). The difficulty is that the room for fiscal maneuver is fairly limited due to Hungary's high public debt and former high budget deficit levels. Since it is mainly a supply problem, the goal is to reduce the risks assumed by banks. A possible way to achieve this goal is the provision of state guarantees. Such

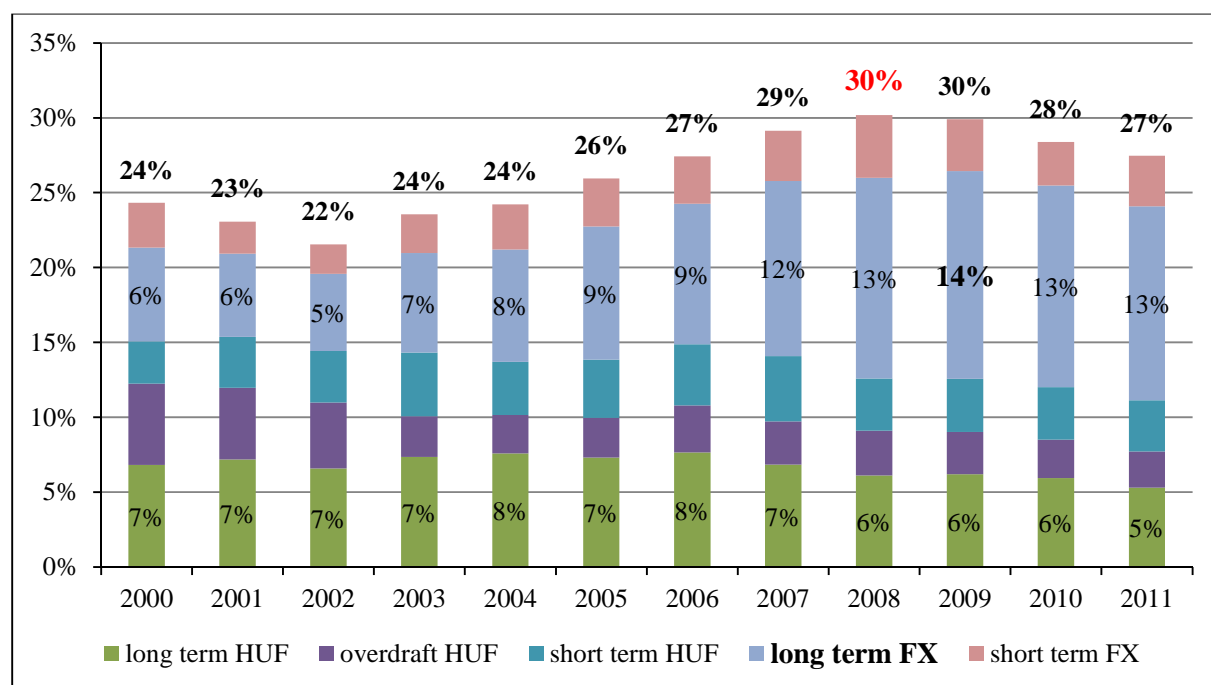
programs already exist in Hungary; moreover, more than 20 percent of the loans extended to the SME sector are backed by state guarantee through Garantiqa (see Chapter 3). In view of the success of this program, similar options should be explored and aimed at supporting the revival of lending.

Figure 2.8. Domestic credit to private sector as a percentage of GDP (2000–2010)



Source: World Bank.

Figure 2.9. Loans to non-financial corporations in Hungary as a percentage of GDP



Source: own calculations from MNB and OECD data.

2.3.1.2 Household Debt¹⁵

Much of the rapid expansion of credit in CESEE countries in the years preceding the crisis was driven by the household sector (see Figure 2.14). Besides the overall expansion of domestic private sector credit, the share of household credit increased considerably in all the CESEE-11 countries, especially in the Baltic countries and Croatia. The ratio of household lending to corporations doubled in most countries between 2005 and 2008 and mortgage lending as a share of lending to households increased sharply in some countries. The bulk of new lending was attributable to housing loans, which already account for more than 50% of total household loans. Having said that, even though the degree of financial intermediation has been on the rise over the last decade, there is still a considerable catching-up potential vis-à-vis the euro area. The latter's share of domestic private sector credit in GDP lies just above 140%. Only Estonia has reached a respective share of nearly 100%, while on the other end, Romania (40%) and Slovakia (45%) clearly lag behind.

Household indebtedness in the CESEE countries reflected a pattern similar to that in the cohesion countries during their financial integration:

- Household debt represents on average more than a quarter of GDP in the new member states of the European Union (EU10), but there is significant cross-country variation, with the number reaching more than 40 percent in some countries. These ratios are below the average of about 65 percent of GDP in euro zone countries, and closer to those for Ireland, Italy, Portugal, and Spain in the late 1990s.
- As household financial positions have grown, there has been a shift toward housing loans or mortgages on the liability side of the balance sheet and an increasing share of equities and pension and mutual funds on the asset side. Still there is much variability. Housing loans accounted for the bulk of household

¹⁵ Sources: Lilico (2010), Anioła & Gołaś (2012), Roman & Şargu (2011), Balás & Nagy (2010), IMF (2012a), PSZÁF (2012b), Szigel & Fáykiss (2012), Cussen et al. (2012), older: Walko (2008), Király et al. (2008); fx debt: Barrel et al. (2009), Yesin (2011), Steiner (2011), Beckmann et al. (2011), Csajbók et al. (2010), Dübel & Walley (2010), Brown et al. (2009), Rosenberg & Tirpák (2008), Brown & De Haas (2010), Fidrmuc et al. (2011), Pellényi & Bilek (2009); housing debt: ECB (2009), older: Stachó (2006).

credit in the Baltic states, the Czech Republic, Hungary, and the Slovak Republic, while the opposite was the case in Romania, the Russian Federation, Turkey, and Ukraine.

- A large share of household debt is denominated in or indexed to foreign currencies. This has exposed households to recent exchange rate depreciations to the extent that the currency composition of their assets, particularly labor income flows, leaves them unhedged. But again, there is considerable variation across countries.
- In some new member states (EU10), mortgages with variable (adjustable) interest rates account for the largest share of lending, thus exposing households to interest rate shocks.

In line with deepening integration of the CESEE-11 into European financial markets, the massive entry of foreign banks and the prospects of joining the euro area in the foreseeable future, the share of foreign currency loans in total domestic private sector loans has risen steadily in most of the CESEE countries. Nevertheless, there is still a great deal of cross-country heterogeneity in the region. In August 2008 (i.e. just before these shares were distorted in a few countries due to crisis-related depreciations of the local currencies), we can distinguish three groups of countries (based on data from national central banks and the ECB): Estonia and Latvia with a very high foreign currency loan share of about 85%; Romania, Bulgaria, Hungary, Croatia and Lithuania with a medium share ranging between 55% and 63%; and finally, countries with relatively small shares: Poland (26%), Slovakia (19%; this share fell to nearly 1% after the introduction of the euro in January 2009), the Czech Republic (9%) and Slovenia (7%; before euro adoption in January 2007, the share was 64% and had risen substantially in the period immediately before euro adoption). In most of these countries, the euro accounts for a clear majority of total foreign currency loans to the nonbank private sector. Notable exceptions are Hungary and Poland, where the Swiss franc predominates foreign currency loans to households.

The rise in retail foreign currency lending to households in Hungary after 2004 was, therefore, not an isolated phenomenon in the region. One of the main reasons for foreign currency lending was the differential between domestic and foreign interest rates. The expansion of foreign banks in the region and the nearly unlimited foreign currency liquidity also contributed to the rise of foreign currency lending. The main trigger of the upswing in retail foreign currency lending in Hungary, however, was the drastic cutback in the state subsidy on forint-denominated housing loans in 2003-2004. This increased even further the interest rate differential between forint denominated and foreign currency – in particular, Swiss franc – denominated loans. A specificity of Hungarian foreign currency lending was the fact that loans to households were almost exclusively denominated in Swiss franc (see Figures 2.11 and 2.13).

Foreign currency (FX) denominated loans first appeared in 2001 in relation to financial enterprises, mainly in the field of vehicle purchase financing. The expansion of FX-denominated vehicle loans surfaced primarily among the financial enterprises of foreign-owned banks. Between 2001 and 2004, the ratio of financial enterprise financing compared to the balance sheet totals of owner banks tripled. By 2005, the ratio had reached 11% of the balance sheet totals of foreign banks and, despite the substantial rearrangement of banks' balance sheets as a result of the retail credit boom, it remained at around 8% prior to the crisis.

The popularity of FX lending did not remain confined to vehicle financing. With the drop in state-subsidized forint denominated housing loans, FX, particularly Swiss franc denominated financing, became predominant among mortgage – initially housing, then home equity – loans from the beginning of 2004 (see Figures 2.10, 2.11 and 2.12). Until the onset of the crisis, such loans remained the main credit product of banks.

In the case of FX denominated vehicle and mortgage loans, foreign banks were leaders, while local banks were followers. In retail mortgage lending, the ratio of FX

loans began to increase as early as the beginning of 2004 among foreign banks, while this process only started at the beginning of 2005 among local banks.

As one of the final chapters of risk-based competition, Japanese yen denominated loans appeared as a new product in the shadow of the crisis. While foreign banks were unequivocally the ones to push Swiss franc denominated collateralized loans, in the case of yen-denominated loans, the “initiative” was local: it originated mainly in retail market leading OTP. Yen denominated loans quickly became popular among households that were completely unaware of exchange rate risks, as these products were accessible with even lower installments than Swiss franc denominated loans.

Besides, the spread of FX denominated products’ risks was exacerbated by loosening credit conditions and standards. The LTV ratio for mortgage loans increased constantly after 2004 and in many cases exceeded 100 percent. The banking system’s average LTV ratio for the housing loan portfolio was above 70 percent at the end of 2008, while in 2004 it was only around 50 percent. The average PTI ratio also increased, which was supported by the ever lower documented mortgage loans. Finally, increasing reliance on brokers as a sales channel also meant higher risks, because loans granted via their intermediation were characterized by significantly higher default rates (see Chapter 5).

Immediately after the crisis, the household loan portfolio continued to grow in the last quarter of 2008, albeit at a slower pace, but net flow turned negative in 2009. The negative effects of the financial crisis became increasingly obvious for households, as well; and this was gradually perceived in their income position. In addition, rising installments, due to the weakening of the forint, made households more cautious. Nonetheless, this did not make forint denominated loans more attractive, given the persistently high levels of forint interest rates. Thus, precautionary considerations became dominant on the supply side, as well. Several banks removed Swiss franc denominated loans from their product range at the beginning of the crisis, while others severely tightened credit conditions. Net lending was, therefore, already negative throughout 2009.

Household lending remained weak in 2010. New disbursement was partly moderated by regulatory changes introduced during the year. Moreover, the precautionary considerations of households intensified. In the course of 2010 the Swiss franc strengthened against the forint significantly, leading to a sharp increase in the debt-servicing burdens of households. Meanwhile, labor market environment remained unfavorable. Consequently, despite their frail income positions, households had to spend increasing amounts on debt service, which drastically decreased their willingness to borrow. An increasing portion of households' savings was spent on servicing outstanding foreign currency denominated debt, which decreased *households' asset/liability ratio* from 166% in 2008 to 132% in 2010 (see Figure 2.15). As regards banks, lending was inhibited mainly by the rapidly deteriorating portfolio. Through the deterioration of the capital position, substantial loan losses were also detrimental to household lending.

In order to alleviate households' debt distress, in 2009 and 2010, Hungarian authorities entered "gentlemen's agreements" with banks to convert foreign currency denominated loans to households into local currency loans without penalty, capitalize the increase in mortgage payments arising from the conversion, and possibly extend the term of the loan for creditworthy borrowers. But the option has not been widely exercised because forint interest rates are substantially higher than euro interest rates. Hungary also introduced legislation to provide temporary state guarantees for mortgage payments of the unemployed and also to expand the mortgage debt servicing guarantee scheme for the unemployed to other debtors whose payment capacity has been impaired by the financial crisis because of either a reduction in income or an increase in debt service burden due to revaluation effects. In such cases, the lender would be asked to reschedule the loan to temporarily lower the payment burden, and the government would guarantee the reschedule a portion of the loan, subject to restrictions.

The principal objective of the Government's steps directly affecting the financial intermediary system was to ease the repayment burden of and mitigate the exchange risks borne by household debtors, which, in turn, may also reduce the

country's vulnerability. The exchange rate cap and prepayment at a preferential fixed exchange rate available to borrowers of foreign currency denominated mortgage loans in 2011 were key elements in realizing this objective of financial stability. The exchange rate cap was aimed to temporarily manage the problem arising from high debt servicing burdens, whereas, after the grace period, customers may encounter higher monthly installments than the previous levels. With respect to foreign currency denominated mortgage loans, early repayment at a fixed preferential exchange rate significantly reduced the debt burden and eliminated the exchange rate risk of participants of the scheme. At the same time, early repayment put pressure on the forint exchange rate before the commencement of repayments, threatening to create higher debt servicing burdens on debtors who cannot participate in the scheme. In order to prevent the development of such a scenario, the central bank, by tapping its foreign exchange reserves, made available to the domestic banking sector the amount of foreign currency needed for the full repayment of foreign currency denominated mortgage loans. With banks using the country's foreign exchange reserves to repay their short-term foreign debts, vulnerability did not increase and forint did not depreciate considerably. However, early repayment at a preferential fixed exchange rate resulted in a substantial one-off loss for the banking sector, causing a decline in its capital position and lending capacity. This may, through additional deleveraging, result in significant real economic costs (see more in Chapters 5 and 6).

Households' deleveraging continued in 2011, although this decelerated considerably due to the strengthening of the Swiss franc during the year. For the year as a whole, foreign exchange loans declined, while forint lending increased slightly. At the end of 2011, deleveraging of households was accelerated by the preferential early repayment scheme as the repayment of foreign currency mortgage loans accelerated the decline in loans outstanding. As a result, the amount of household loans outstanding fell in 2011 by 1,065 billion forints, i.e. 10.6 percent, although the rate of decline would have been as much as 5.7 percent even without the early repayments. By February 29, 2012, the end of the repayment scheme, households

had paid back foreign exchange loans amounting to 1,355 billion forints, for which they used forint denominated refinancing loans amounting to a total of 313 billion forints.

Disregarding the impact of the early repayment, household credit demand continued to be weak in 2011. Although early repayments accounted for a significant portion of the decline in loans, borrowing by households otherwise remained subdued. The depreciation of the forint against the Swiss franc puts significant pressure on households' deleveraging, as well as on their disposable income. Apart from some one-off effects (e.g. real yield disbursements from private pension funds, bonus payments at the end of the year), household consumption remained subdued throughout 2011-2012. New borrowing, including refinancing loans, was the lowest in 2011 since the outset of the crisis: 9 percent less than in 2010 and 28 percent less than in 2009. Nevertheless, a rapid upturn cannot be expected following the early repayments in 2011-2012. First, the disposable income of households with foreign exchange loans continues to be burdened by the strong Swiss franc (the still open exchange rate cap scheme may help this group). Secondly, households that used the opportunity of early repayment are expected to rebuild their depleted savings rather than increase consumption or new borrowing.

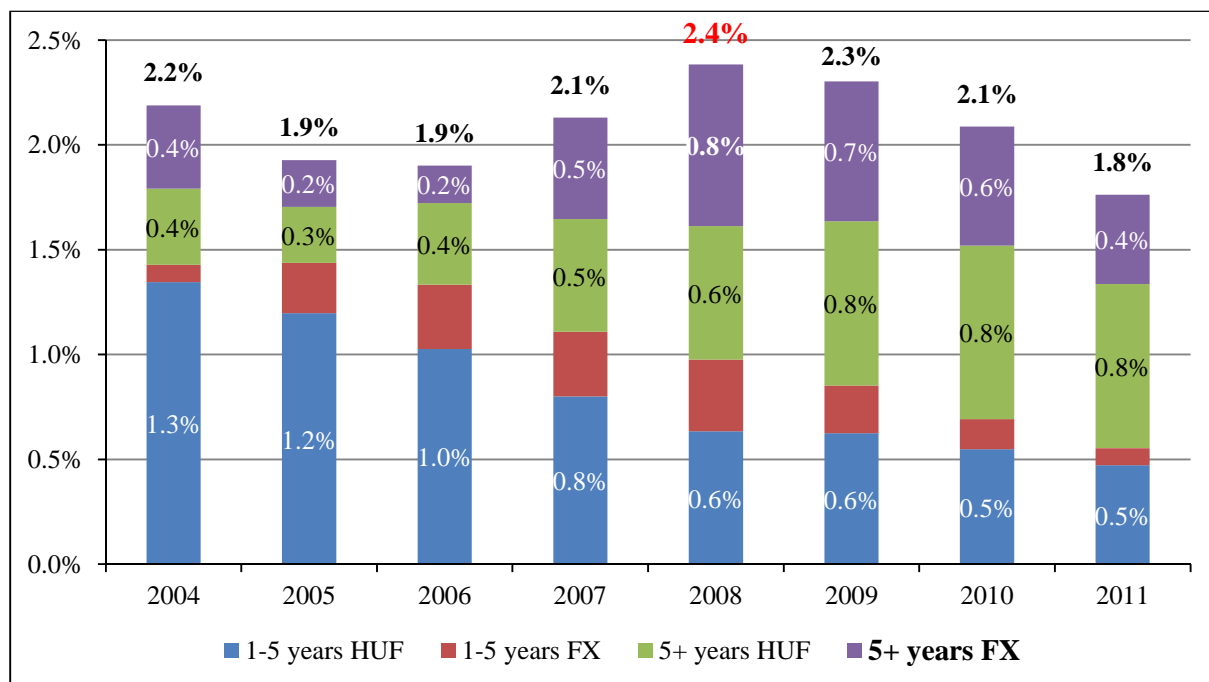
In addition to demand constraints, supply constraints are also becoming increasingly pronounced. 2011 was characterized by a tightening of the conditions of lending to households. Interest rates on both housing and home equity loans increased, compared to December 2010. The increase in APR was partly attributable to the rise in the central bank base rate, but spreads above the interbank rate also increased by 1–1.3 percentage points. Based on the tightening of price and non-price conditions, banks started to focus on less risky, premium clients. This tightening cannot be separated from other additional risks that arise as a result of early repayments and affect loans outstanding. Over the short term, an attempt to reduce these risks is expected in the banking sector, including the application of exchange rate fixing and the management of non-performing loans. Only following that will the banking sector focus on new disbursements and, within that, mainly forint-denominated

mortgage loans. In the medium term, interest rate spreads on new loans are expected to decrease, partly due to expected stronger competition in the household segment and partly due to the extension of the complete credit registry to households.

Lending to households in Hungary is currently the weakest in a regional comparison. In 2011-2012, lending to households in the CEE countries stagnated or increased. By contrast, in Hungary it has steadily contracted since the onset of the crisis. Although this contraction accelerated with early repayments, household lending has otherwise followed a declining trend as a result of deteriorating demand and strict credit supply.

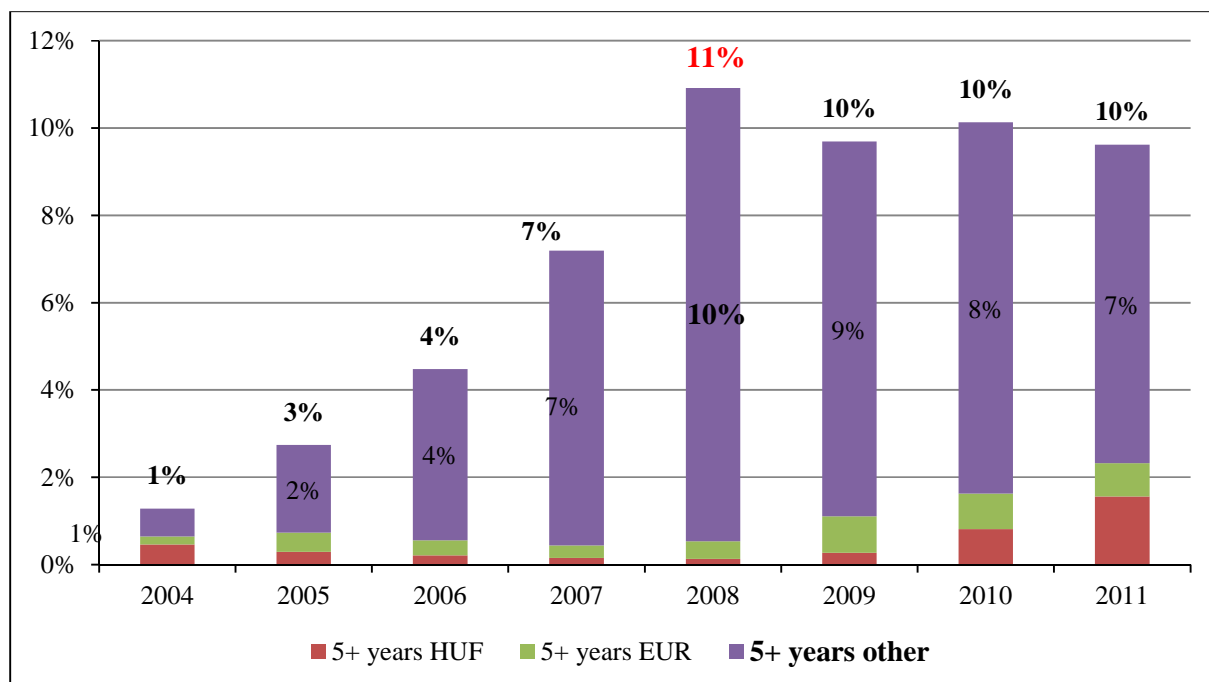
The delayed turning point in household lending is part of the inevitable adjustment process of the Hungarian financial system. The main risk in this regard is not only the downturn in lending but also the rapid deterioration of the portfolio. As unsecured loans are associated with weaker willingness to repay, primarily it was these loans that went delinquent at the beginning of the crisis. However, the quality of mortgage loans—which constitute the bulk of the loan portfolio— has also been deteriorating since 2009 with increased installment amounts resulting from unfavorable exchange rate and interest rate developments combined with a negative labor market environment. This not only worsens banks' stability and lending ability, it also generates severe social tensions. To tackle the problem, the Government adopted a moratorium on evictions from the properties serving as collateral for nonperforming loans as early as 2009. However, this regulation merely addresses the social aspect of the problem, and it further aggravates banks' situation. On the one hand, the law has clearly reduced willingness to repay; on the other hand, it forces banks to keep bad debts on their balance sheets and finance them.

Figure 2.10. Personal loans to households in Hungary by maturity as a percentage of GDP



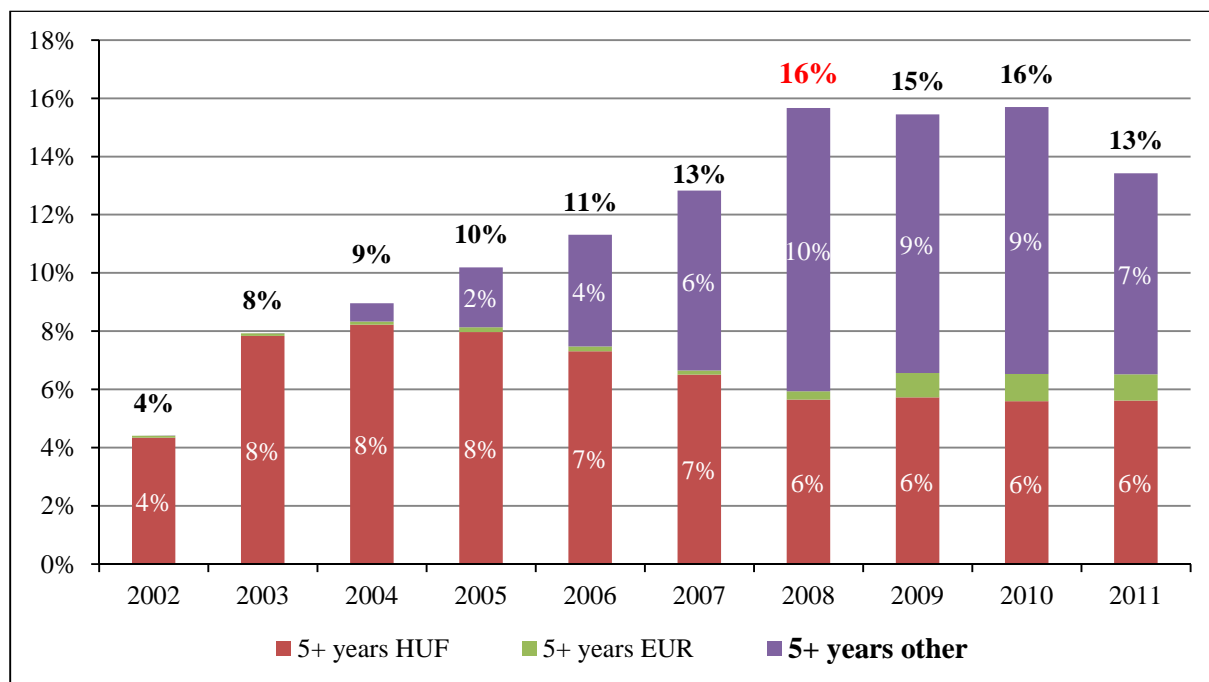
Source: own calculations from MNB and OECD data.

Figure 2.11. Mortgage for consumption loans to households in Hungary with 5+ years maturity (percentage of GDP)



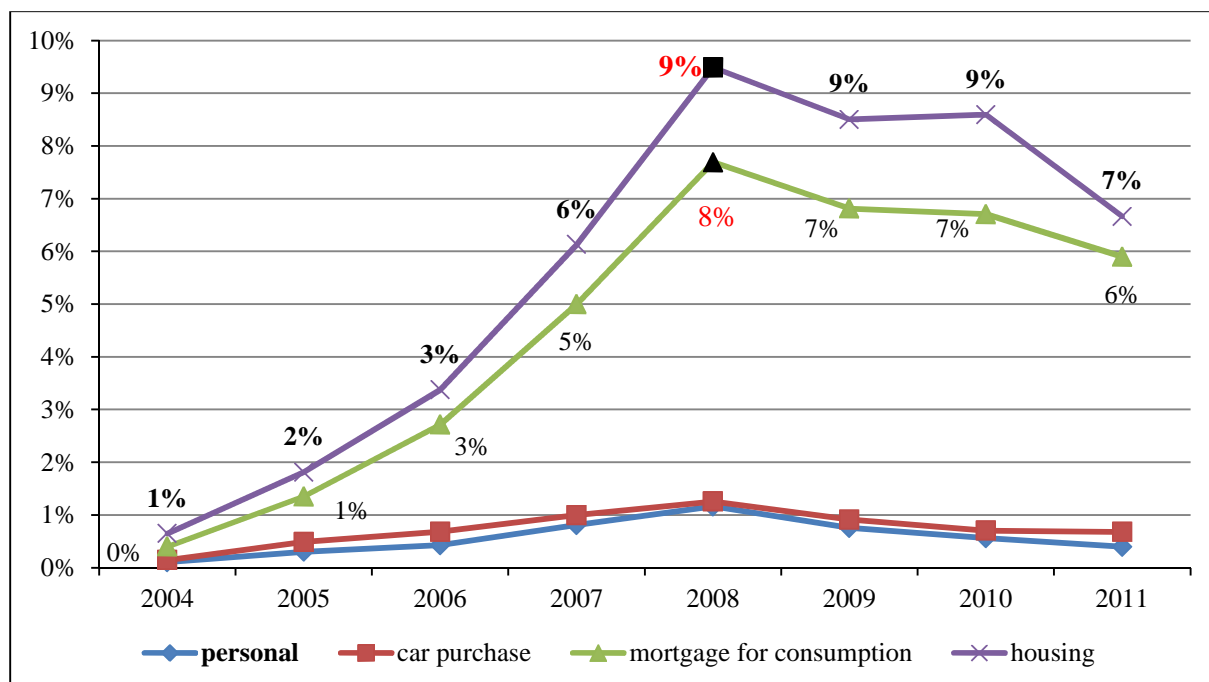
Source: own calculations from MNB and OECD data.

Figure 2.12. Housing loans to individuals in Hungary with 5+ years maturity as a percentage of GDP



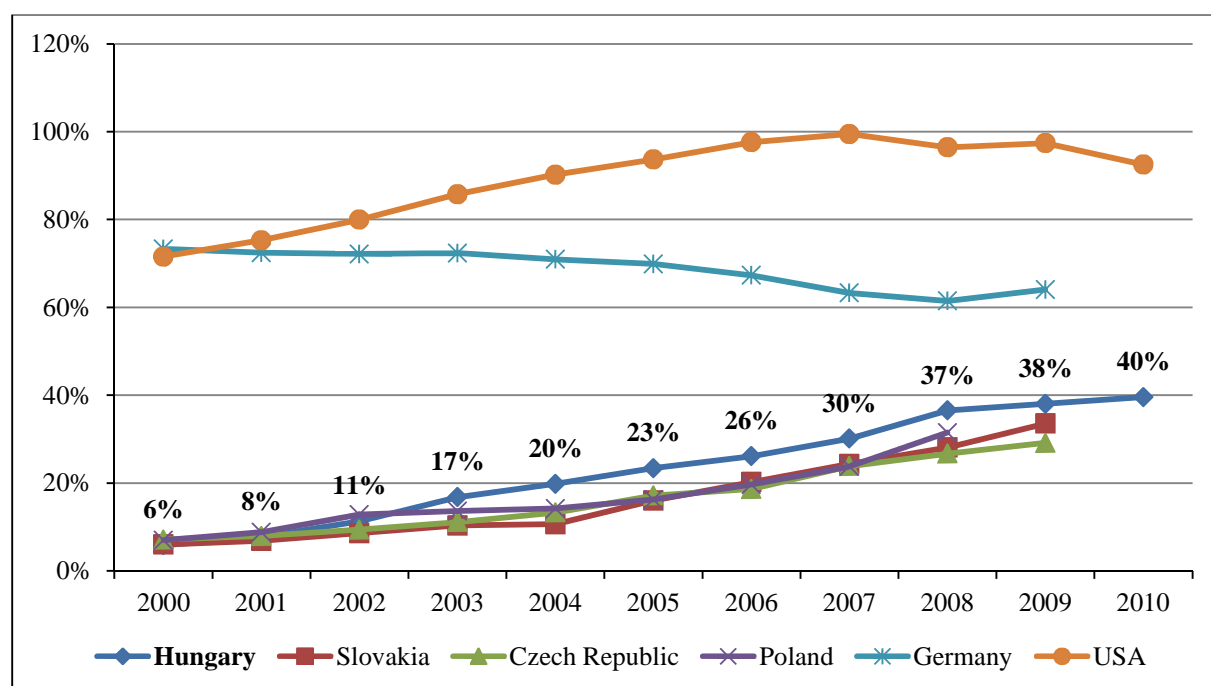
Source: own calculations from MNB and OECD data.

Figure 2.13. The amount of outstanding CHF consumer and housing loans to households in Hungary (percentage of GDP)



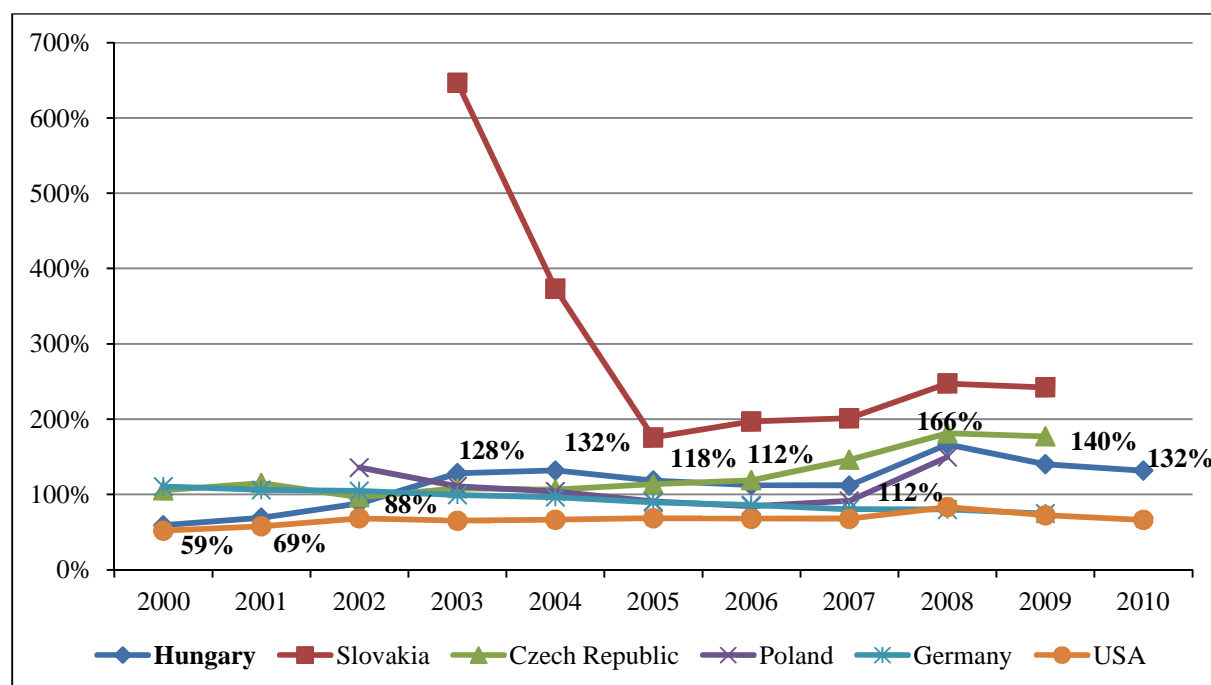
Source: own calculations from MNB and OECD data.

Figure 2.14. Households' liabilities as a percentage of GDP (2000–2010)



Source: own calculations from OECD data.

Figure 2.15. Households' financial assets/liabilities ratio (2000–2010)



Source: own calculations from OECD data.

2.3.2 Public Debt

2.3.2.1 General Government Debt¹⁶

The general government sector comprises central government, state government, local government, and social security funds. As shown in Figures 2.16 and 2.17, *general government debt* as well as *central government debt* (as a percentage of GDP) has stood much higher in Hungary than in the Czech Republic, Poland and Slovakia.

Hungary is, at present (end-2012), subject to an EU Council decision on the existence of an excessive deficit. In the reference year 2011 the general government budget balance showed a temporary surplus of 4.3% of GDP. The general government gross debt-to-GDP ratio was 80.6%, i.e. well above the 60% reference value. Compared with the previous year, the budget balance ratio temporarily improved by 8.5 percentage points and the public debt ratio declined by 0.8 percentage point. In 2012 the budget balance is forecast by the European Commission to return to a deficit of 2.5% and the government debt ratio is projected to decrease to 78.5%. With regard to other fiscal factors, the deficit ratio is not expected to exceed the ratio of public investment to GDP in 2012.

Looking at developments in Hungary's budgetary position over the period from 2002 to 2011, the deficit-to-GDP ratio stayed generally very high throughout the period. Starting from 9.0% of GDP in 2002, the deficit ratio declined for two years only, returning to 9.3% of GDP in 2006. In 2007 it improved to 5.1% of GDP, reflecting large revenue-raising and expenditure-reducing consolidation measures. Following the financial and economic crisis, an EU-IMF balance of payments support program was launched in 2008. By the end of the program, the deficit was cut to 4.2% of GDP, although underperforming the program target of 3.8% of GDP. In 2011 Hungary recorded a surplus of 4.3% of GDP thanks to one-off and temporary revenue measures (of about 10% of GDP), primarily related to the transfer of pension assets from private pension schemes to the state pillar, as well as some extraordinary

¹⁶ Sources: Mitra et al. (2010), Brown & Lane (2011).

sectoral levies. Hungary has been subject to an EU Council decision on the existence of an excessive deficit since joining the EU in 2004. The deadline for correction of the excessive deficit was extended twice and set for 2011 following the Council recommendation of 7 July 2009. In January 2012 the EU Council adopted a decision establishing that Hungary had not taken effective action in response to the Council recommendation of 7 July 2009. Overall, it concluded that while Hungary had formally observed the 3% of GDP reference value in 2011, this was not based on a structural and sustainable correction. As a consequence, on 13 March 2012, the Council adopted a decision to suspend part (29%, or 0.5% of GDP) of the 2013 EU cohesion fund commitments for Hungary, as well as a fifth revised recommendation asking Hungarian authorities to put an end to the excessive deficit by 2012. In this regard, it was recommended that Hungary take the necessary measures, including additional fiscal consolidation, to meet its deficit target of 2.5% of GDP in 2012 and to ensure that the deficit in 2013 remains well below 3% of GDP, even after the phasing-out of one-off measures (see more in Chapter 11).

The European Commission estimates indicate that cyclical factors made a limited contribution to the change in the deficit ratio, with the notable exception of 2009 when they induced a large increase. Moreover, non-cyclical factors broadly determined the volatile pattern of the general balance. Over the period under consideration, available evidence suggests that temporary and one-off factors made a very sizeable contribution to the improvement of the budget balance in 2011 (as explained above) and had a relatively large effect in 2010 (following the introduction of a large special levy on financial institutions in mid-2010 and of other sectoral levies later in the year). Smaller deficit-increasing temporary measures were taken over the period from 2006 to 2009. The remainder of the non-cyclical changes in the budget balance, as captured by changes in the structural balance, are explained by permanent effects. They seem to reflect a structural deterioration of Hungary's fiscal position until 2006, a consolidation over the period 2007-09, and a reoccurring deterioration thereafter.

Turning to developments in general government gross debt, between 2002 and 2011 the debt-to-GDP ratio increased cumulatively by 24.7 percentage points. Primary deficits were the major driving factor behind debt developments between 2002 and 2007, while deficit-debt adjustments and the growth/interest rate differential played a less important role. Such a pattern is indicative of the close link between primary deficits and adverse debt dynamics in Hungary before 2008. In 2008 this pattern reversed and the debt-to-GDP ratio rose significantly as a result of deficit-debt adjustment, in part related to the support granted to the banking sector. In 2009 the negative growth/interest rate differential induced the increase in the debt ratio, while the one-off large primary surplus – to a great extent compensated by deficit-debt adjustment – determined the decrease in 2011. The large positive deficit-debt adjustment in 2011 occurred primarily on account of the forint depreciation towards the end of the year, reflecting the high proportion of foreign-currency denominated debt.

As regards developments in Hungary's general government debt structure, the share of government debt with a short-term maturity declined steadily from 21.7% in 2002 to a low level of 8.7% in 2011. Taking into account the level of the debt ratio, fiscal balances are relatively insensitive to changes in interest rates. The proportion of government debt denominated in foreign currency at 51.8% is high (see Figure 2.18) and, given the overall debt level, fiscal balances are highly sensitive to changes in exchange rates. The Hungarian government has not incurred contingent liabilities resulting from government interventions to support financial institutions and financial markets during the crisis. The support granted to some domestic credit institutions in 2009 – in the form of foreign exchange loans and acquisitions of shares – was already recovered by the end of 2011. While no further support has been granted to the financial sector in response to the crisis since 2009 (a capital injection in the Hungarian Development Bank (MFB) was made as of the fourth quarter of 2011), the current government incurred contingent liabilities in relation to the mortgage relief granted to households under the agreement concluded with the Hungarian Banking Association on 15 December 2011.

Moving on to examine trends in other fiscal indicators, the general government total expenditure-to-GDP ratio declined from 51.5% in 2002 to 48.6% in 2011. This level remains high in comparison with other countries with a similar level of per capita income and even compared with some of the highly advanced economies. The pattern of the expenditure ratio has been volatile, broadly reflecting the consecutive fiscal expansion and consolidation periods. During the period between 2002 and 2011, “capital expenditure” recorded a sharp decline as a share of GDP, while a more limited decline was recorded in “compensation of employees”. “Other current expenditure” and, in particular, “social benefits other than in kind” (the largest budgetary expenditure item) increased their share in GDP. Government revenue in relation to GDP was relatively stable until 2006, but became very volatile thereafter. It increased cumulatively by close to 3 percentage points to 45.2% of GDP between 2002 and 2010. The jump by close to 8 percentage points in 2011 was due to one-off and temporary revenue measures. After the tax restructuring reform implemented in consultation with the IMF and the European Commission in the second half of 2009, a further reduction in direct taxation took place in 2011 following the introduction of a flat personal income tax rate (of 16%).

Looking ahead, Hungary’s medium-term fiscal policy strategy, as presented in the 2012-15 update of the convergence program (dated April 2012), envisaged a deficit ratio of 2.5% in 2012, with a further decline to 2.2% in 2013 and 1.5% in 2015. According to this fiscal strategy, the Hungarian government is planning a substantial structural consolidation in 2012 of about 2.1 percentage points of GDP (initially focused on the expenditure side, but later supported by substantial revenue measures, including a 2 percentage point increase in the VAT rate to 27%). Moreover, the structural deficit is projected to decline below the medium-term objective of 1.5% of GDP (specified in line with the Stability and Growth Pact) in 2013. According to information submitted in the 2012 convergence program update, primary expenditure excluding EU fund transfers (relevant expenditure), as a share of GDP, is projected to drop by 2 percentage points between 2012 and 2015. The annual growth rate of relevant expenditure is projected to be below the growth rate

of potential GDP in 2012 and above it thereafter. In 2013 only, the difference is matched by discretionary revenue measures. According to the European Commission's projections, the structural deficit will remain, nevertheless, above the medium-term objective by 2013. In November 2011 Hungary requested EU-IMF financial assistance, a prerequisite for which are concrete actions that show the government's strong commitment to engage in all policy issues relevant to macroeconomic stability.

Hungary, with 80.6% of GDP in 2011, is above the 60% of GDP gross debt limit under the Stability and Growth Pact. Assuming that Hungary achieves the overall fiscal position and public debt ratio projected by the European Commission for 2012, a balanced budget from 2013 onwards would reduce public debt to below 60% of GDP by 2019. Furthermore, a constant primary balance ratio at its projected 2012 level of 1.6% of GDP would reduce public debt to below 60% of GDP only by 2023. At the same time, maintaining the overall deficit ratio at its projected 2012 level of 2.5% of GDP would result in a very slow decline of the debt ratio (to 69.5% in 2024). These calculations are based on the assumption of a constant nominal rate of interest of 4.2% beyond 2013. (This assumption reflects past trends in the cost of outstanding public debt. However, under the current market circumstances and given Hungary's current sovereign risk premium, this assumption, and (ceteris paribus) the path of government debt projections, is subject to upside risks.) The nominal GDP growth rate is as projected by the European Commission in its Spring 2012 forecast for 2012 and 2013 and kept constant at the 2013 level thereafter. Deficit-debt adjustments are not taken into account in the projections. While these calculations are purely illustrative and can by no means be regarded as forecasts, the indication that maintaining the overall deficit ratio at the 2012 level would lead to a very slow decline in the debt ratio highlights the need for effective implementation of further consolidation measures. Moreover, based on preliminary illustrative simulations by the European Commission as of end-2011 and taking into account the available forecast, Hungary would need a larger structural fiscal effort than the minimum stipulated by the Stability and Growth Pact (i.e. 0.5 percentage point of GDP) in order

to meet the debt benchmark two years after the end of the transitional period on the basis of the forward-looking element.

On March 2nd, 2012 Hungary signed the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, committing, inter alia, to apply (and include in its national legislation) the fiscal rules specified under Title III, “Fiscal Compact”.

As regards fiscal governance, the fiscal responsibility law adopted by the previous government under the joint EU-IMF program was substantially altered in late 2010 and not implemented as recommended by the Council in 2009 under the excessive deficit procedure (EDP). Most importantly, the independent status and supervisory capacity of the Fiscal Council was weakened. While a debt ceiling of 50% of GDP was included in the Constitution, the new operational rules approved as of the end of 2011 provide for important escape clauses. Full compliance with the provisions for an enhanced national governance framework under Council Directive 2011/85/EU and with the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union should be ensured.

Turning to factors with an impact on Hungary’s public finances over the long term, a sharp ageing of the population is expected. According to the 2012 projections by the European Commission and the EU’s Economic Policy Committee, starting from a level of 22.0% of GDP in 2010, Hungary is likely to experience a notable increase in strictly age-related public expenditure amounting to 4.9 percentage points of GDP in the years to 2060. The de facto abolishment of the mandatory private pension pillar as of 2011 and the resulting takeover of the pension liabilities by the National Pension Insurance Fund has been included in this estimate. The growth of public pension expenditures will be mitigated to a certain degree by recent legislation which increases the statutory retirement age, tightens the conditions for early retirement, introduces CPI indexation of benefits and reforms the disability pension scheme.

Turning to fiscal challenges, Hungary must bring its budget deficit below the 3% reference value in a sustainable manner, in line with the renewed EDP requirements, and ensure that the debt ratio is put on a clear downward path. The structural consolidation envisaged for the medium term in the 2012–15 convergence program update, after two years of fiscal stance loosening, should be strictly adhered to. The full implementation of structural reforms relating to the health sector, early retirement, the labor market and social security, passed in 2011, is necessary to reduce further pressures on age-related government expenditure. Fiscal governance remains problematic in Hungary and is weakening investor confidence in the transparency, predictability and sustainability of Hungarian fiscal policies. In particular, concerns over the role and independent status of the Fiscal Council, as well as the potentially loose implementation of Hungary's numerical fiscal rules, need to be swiftly addressed by the government. Moreover, every effort should be made to fully comply with the obligations under the enhanced Stability and Growth Pact, and to effectively implement the provisions of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union.

Figure 2.19 shows that more than two-thirds of Hungary's central government debt has been financed by foreign investors (including IMF and the EU), whose risk appetite and risk perception plays an important role in pricing Hungarian debt instruments and, therefore, determining the costs of financing the budget deficit. At end-2011, the impact of the escalating sovereign debt crisis on the risk perception of Hungary was reflected in the local currency exchange rate and Hungarian asset prices. In addition to the decline in global risk appetite, country-specific factors also contributed to the negative sentiment, which culminated in the turbulence experienced in early January 2012. In April 2012, the Hungarian 5-year sovereign CDS spread reached the same level as in October 2011. Since then it has come down, aided by higher global risk appetite fuelled by the continuing quantitative easing monetary policies of major central banks but Hungary's CDS has remained the highest in the CEE region.

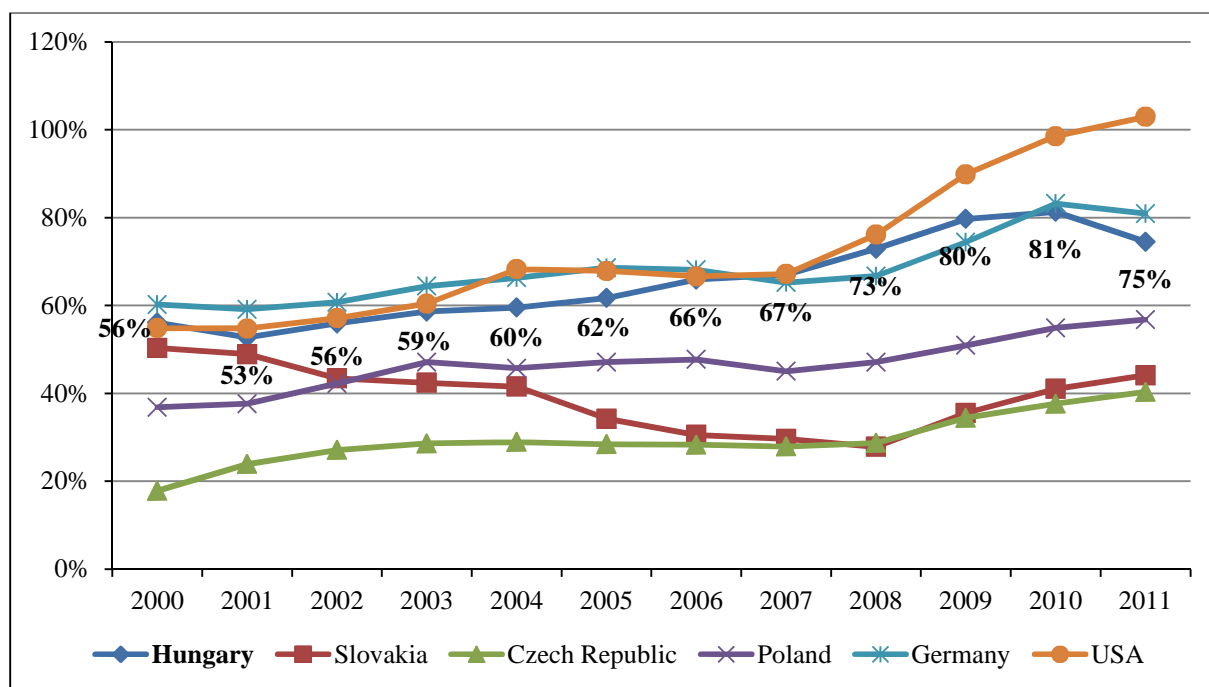
Hungary's relatively high perceived sovereign risk is due to country-specific factors. These country-specific factors include economic policy and regulatory steps (see Chapter 6 and 11) which amplified the uncertainty of the investment environment and protracted uncertainties surrounding the commencement and outcome of the EU/IMF loan negotiations. Improvement in the country-specific factor requires the earliest possible conclusion of the EU/IMF loan negotiations and a rebound in economic growth.

The extreme risk aversion resulting from the escalation of the sovereign debt crisis also reached Hungary through the risk premium shock channel. Along with the extremely volatile global risk appetite, the Hungarian risk premium was affected by analysts' expectations about the timing of an EU/IMF loan agreement. At the end of 2011, the risk premium stemming from economic policy steps that exacerbated uncertainty of the investment environment was gradually built into asset prices. This was also reflected in the credit rating decisions by the end of the year (see Table 2.1). All the three credit-rating agencies downgraded Hungary to the non-investment grade category. As a result of all of this, there was a substantial increase in the Hungarian sovereign credit default swap (CDS) spread until early 2012 (see Figure 2.21). Starting from early 2012, the deterioration reversed and Hungarian asset prices improved significantly. This was attributable to the salient recovery in global risk appetite and a more pronounced commitment by the government to the EU/IMF loan agreement, which boosted investor confidence even before the conclusion of the agreement. From March 2012, led by global and country-specific factors, risk perception of Hungary started to deteriorate again and the 5-year sovereign CDS spread reached the same level as in October 2011.

At the same time, downgrading Hungarian long term debt into the non-investment grade ("junk bond") category may also have a persistently unfavorable effect on the roll-over of Hungary's external liabilities as subsequent maturities are weighted mostly to 2013 and 2014 (see Figure 2.20). In parallel with the downgrade of Hungarian credit rating, its foreign currency bond yield grew by a greater extent than the 5-year sovereign CDS spread. This difference, following some correction, was

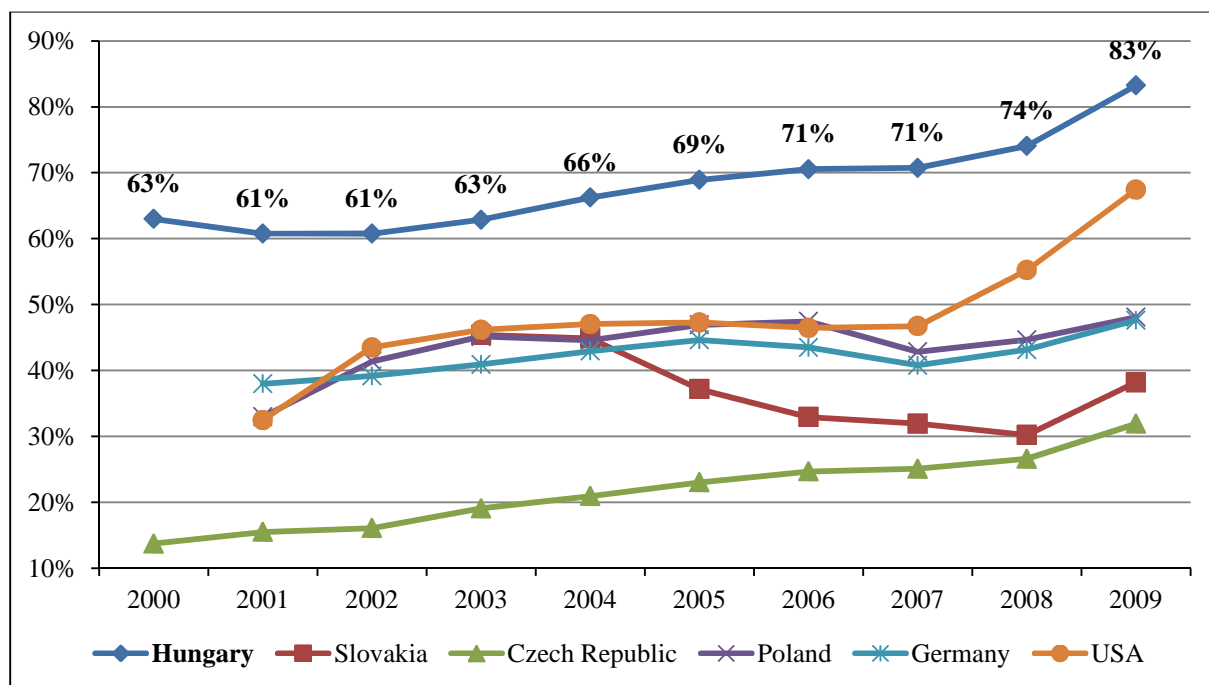
persistent even after the improvement in the global risk appetite in early January 2012. Although the divergence between the foreign currency bond yield and the CDS spread was observed on a regional level, as well, it was more pronounced in Hungary; this is attributable to the exclusion of euro bonds from eligible ECB collaterals. The unfavorable effect of the high yield, which was around 8 percent in mid-2012, may be exacerbated by recent market reaction to the postponement of the expected date of an EU/IMF agreement.

Figure 2.16. General government gross debt as a percentage of GDP



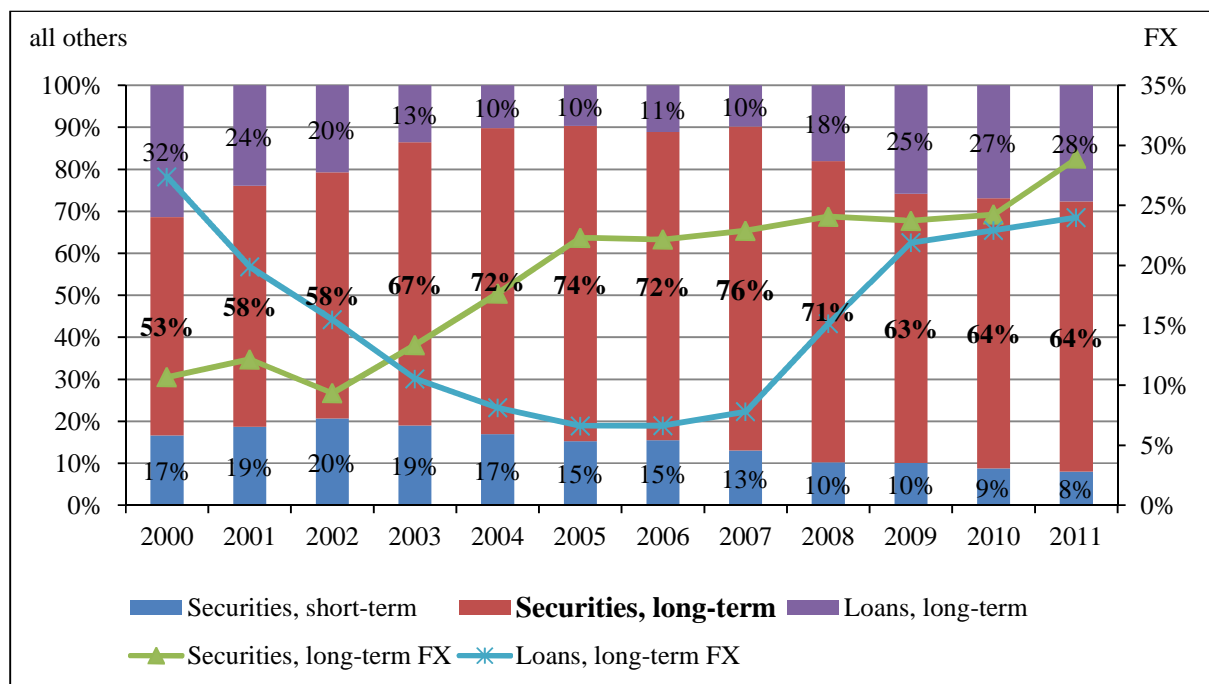
Source: Eurostat, IMF.

Figure 2.17. Debt of central government as a percentage of GDP (2000–2009)



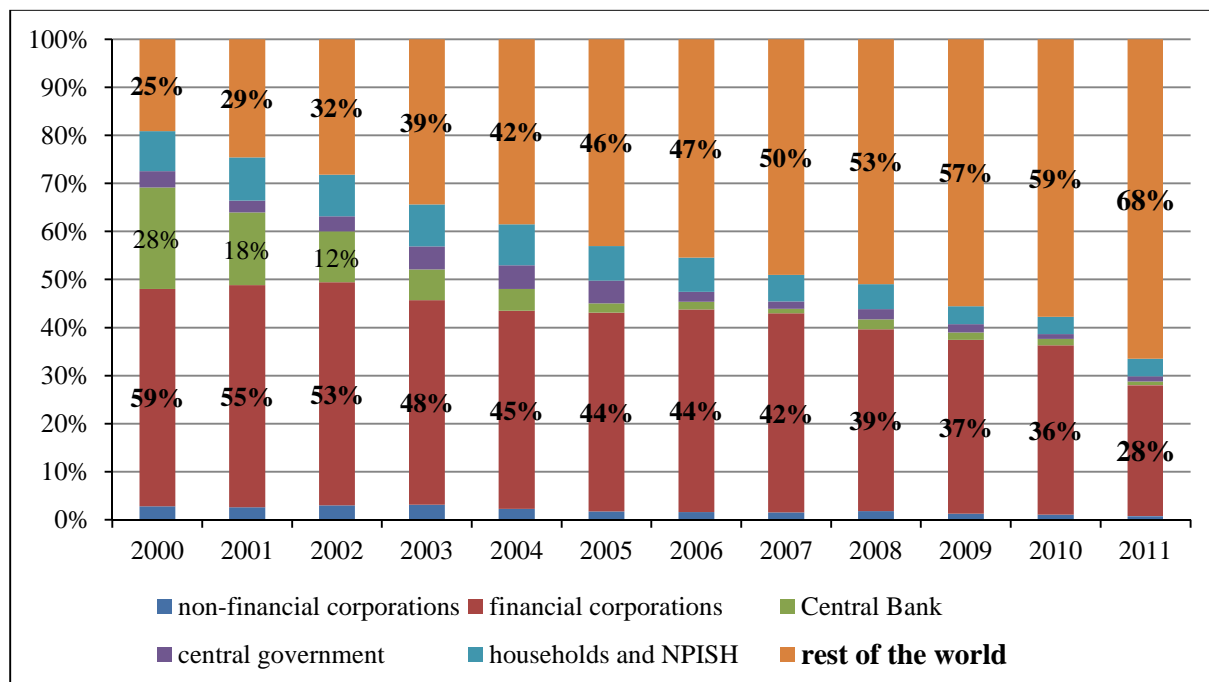
Source: World Bank.

Figure 2.18. General government debt in Hungary broken down by type as a percentage of total debt



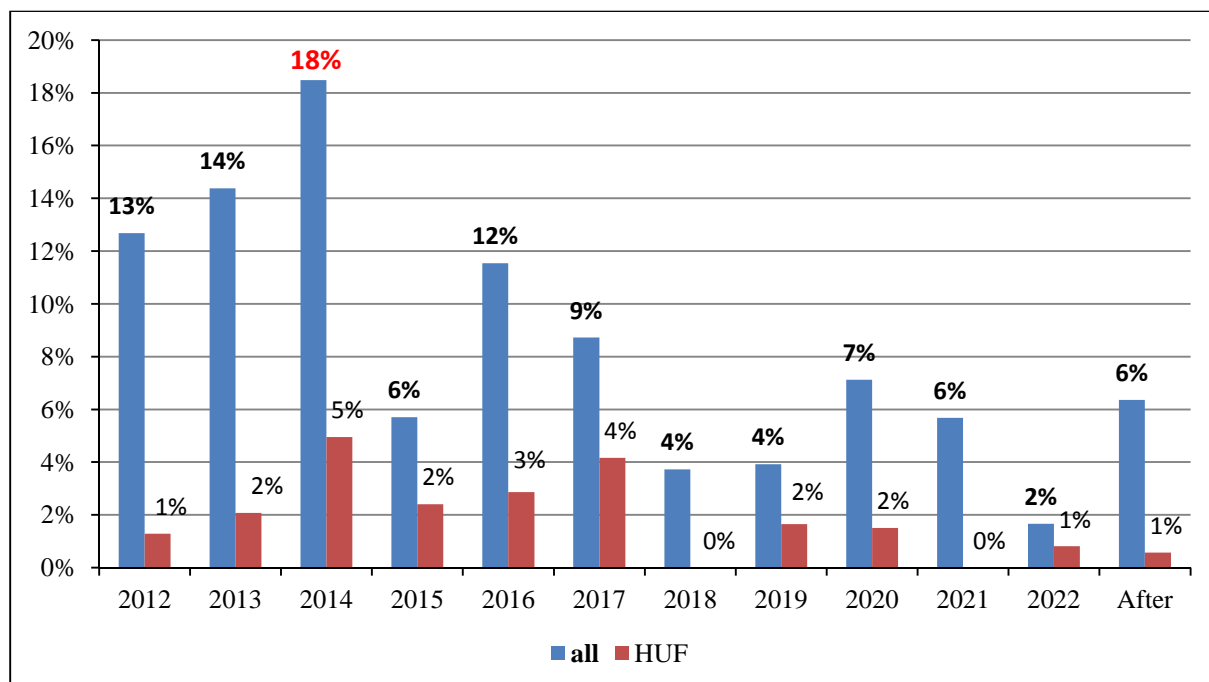
Source: own calculations from MNB data.

Figure 2.19. Central government debt in Hungary broken down by creditor as a percentage of total debt



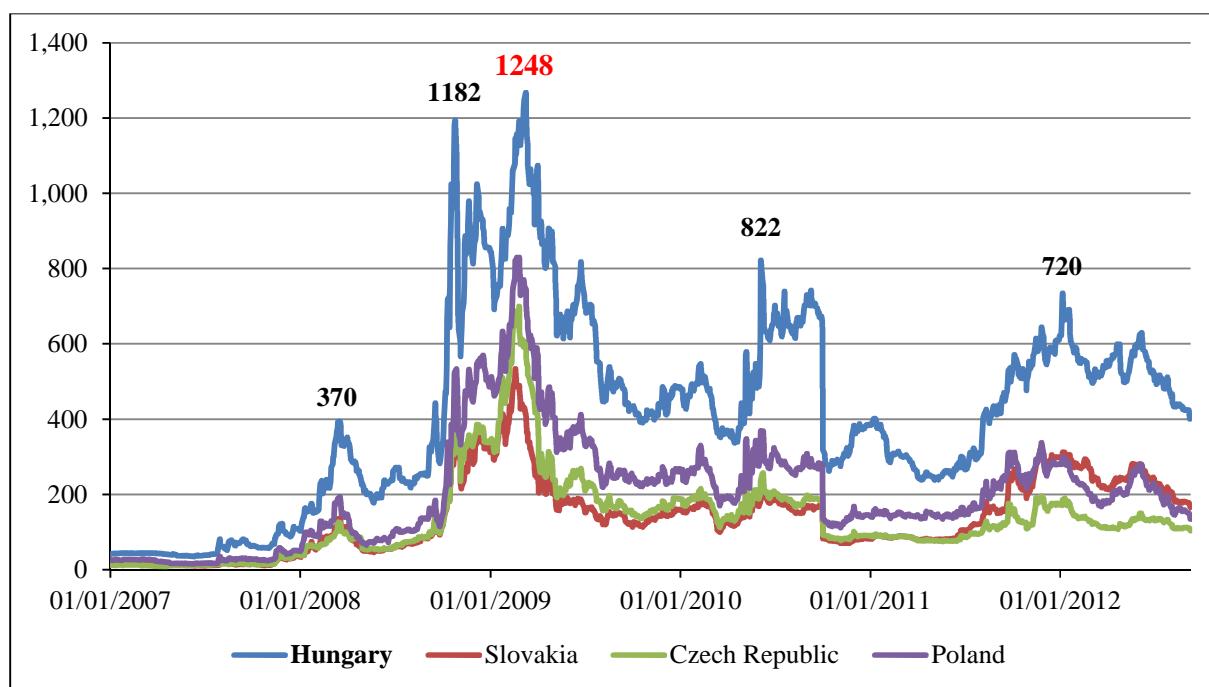
Source: own calculations from MNB data.

Figure 2.20. The maturity breakdown of Hungary's general government external debt as a percentage of total debt (December 31, 2011)



Source: own calculations from MNB data.

Figure 2.21. 5-year sovereign CDS spreads in basis points



Source: Thomson Reuters.

Table 2.1. Rating history of Hungary's long-term debt

Date	Moody's		Standard & Poor's		FITCH Ratings	
	Foreign currency debt	Domestic currency debt	Foreign currency debt	Domestic currency debt	Foreign currency debt	Domestic currency debt
02.02.2000	Baa1	A1	BBB+	A	BBB+	A
13.08.2000	Baa1	A1	BBB+	A	BBB+	A
14.11.2000	A3	A1	BBB+	A	BBB+	A
29.11.2000	A3	A1	BBB+	A	A-	A+
19.12.2000	A3	A1	A-	A+	A-	A+
12.11.2002	A1	A1	A-	A+	A-	A+
19.11.2002	A1	A1	A-	A	A-	A+
15.07.2003	A1	A1	A-	A	A-	A+
12.01.2005	A1	A1	A-	A	A-	A
27.05.2005	A1	A1	A-	A-	A-	A
06.12.2005	A1	A1	A-	A-	BBB+	A-
22.01.2006	A1	A1	A-	A-	BBB+	A-
26.01.2006	A1	A1	A-	A-	BBB+	A-
15.06.2006	A1	A1	BBB+	BBB+	BBB+	A-

20.09.2006	A1	A1	BBB+	BBB+	BBB+	A-
21.12.2006	A1	A1	BBB+	BBB+	BBB+	A-
22.12.2006	A2	A2	BBB+	BBB+	BBB+	A-
05.11.2007	A2	A2	BBB+	BBB+	BBB+	A-
17.03.2008	A2	A2	BBB+	BBB+	BBB+	A-
17.10.2008	A2	A2	BBB+	BBB+	BBB+	A-
07.11.2008	A3	A3	BBB+	BBB+	BBB+	A-
10.11.2008	A3	A3	BBB+	BBB+	BBB	BBB+
17.11.2008	A3	A3	BBB	BBB	BBB	BBB+
02.03.2009	A3	A3	BBB	BBB	BBB	BBB+
30.03.2009	A3	A3	BBB-	BBB-	BBB	BBB+
31.03.2009	Baa1	Baa1	BBB-	BBB-	BBB	BBB+
02.10.2009	Baa1	Baa1	BBB-	BBB-	BBB	BBB+
23.07.2010	Baa1	Baa1	BBB-	BBB-	BBB	BBB+
06.12.2010	Baa3	Baa3	BBB-	BBB-	BBB	BBB+
23.12.2010	Baa3	Baa3	BBB-	BBB-	BBB-	BBB
06.06.2011	Baa3	Baa3	BBB-	BBB-	BBB-	BBB
11.11.2011	Baa3	Baa3	BBB-	BBB-	BBB-	BBB
24.11.2011	Ba1	Ba1	BBB-	BBB-	BBB-	BBB

21.12.2011	Ba1	Ba1	BB+	BB+	BBB-	BBB
06.01.2012	Ba1	Ba1	BB+	BB+	BB+	BBB-

Source: ÁKK.

2.3.2.2 Local Government Debt¹⁷

The municipality segment became over-indebted in the pre-crisis years (see Figure 2.22). The increasing repayment burden has led to payment difficulties for a rising number of municipalities. Banks seek to prevent an increase in the non-performing loan (NPL) portfolio by debt restructuring, which only temporarily eases tensions in the finances of municipalities. However, banks have hardly set aside any loan loss reserves for the recently restructured loans.

The government took several steps to mitigate financial woes of the local government sector. The fact that the state assumed the debt of county municipalities resolved the situation of the financially most stressed municipalities. Another important change is that the newly adopted regulations introduce tighter control over credit operations. As a result, the sector's liabilities can only rise moderately. However, for the same reason, municipalities may easily face liquidity problems.

Municipality debt owed to the banking system dropped at end-2011, due to the assumption of the debt of county municipalities by the state. The total amount of municipality debt fell to 960 billion forints (circa 3% of GDP) at the end of 2011. This decrease was due to the takeover of county municipalities' debt of approximately 170 billion forints (circa 0.5% of GDP). At the same time, based on annual obligations and income, the finances of large and small villages and county municipalities have been the most stressed over the past few years.

Some 90 per cent of municipality bonds will enter the phase of principal repayment by the end of 2013. Nearly 50 per cent of all issued bonds reached the phase of principal repayment by end-2011. This proportion will rise to 90 per cent in 2012 and 2013. Our calculations reveal that the start of principal repayment will raise the entire sector's debt service by around 20 per cent (12 billion forints) in 2012.

The fact that 64% of all municipality debt is denominated in FX (Swiss franc) also exposes the finances of local governments to the exchange rate risk (see Figure

¹⁷ Sources for central government debt: Anderson et al. (2010), ÁKK (2010), OECD (2010, 2012), Beynet-Kierzenkowski (2012), local government debt: Gál (2011), Aczél-Homolya (2011), Homolya-Szigel (2008).

2.23). Although the Swiss franc appreciated vis-à-vis the forint, its adverse impact on installments has so far been counterbalanced by a lower Swiss base rate. As a result, this contributed to a rise in the debt service only to a limited extent. Banks' profitability may be hurt, however, by the lower interest on FX-based municipality bonds because the liabilities underlying them are re-priced on the basis of CDS spreads.

Restructuring can only temporarily help financially stressed municipalities. Debt restructuring can only temporarily improve the situation of the municipalities on the verge of bankruptcy, because only the pace of repayment changes while the overall debt remains the same. Nevertheless, with debt restructuring banks can charge an interest premium that reflects the altered risk profile of the portfolio and its cost of financing. This may ease tensions in profitability and also points to further increase in the interest margin on the foreign interbank interest rate.

Loan loss provisioning for restructured debt falls behind the increase in the municipality loan portfolio. Currently standing at 4 per cent, the 90-day delinquency rate increased markedly in 2011. Banks strive to slow the deterioration in the municipality loan portfolio by restructuring. The share of restructured loans rose from 0.5 per cent in June 2011 to 5 per cent by the end of 2011. While banks set aside loan loss provision for the NPL portfolio on an ongoing basis, there was practically no change in those for restructured debt in 2011. Restructured corporate and household loans should be covered by higher loan loss provisions, and this also holds for municipality loans.

A scheme similar to the exchange rate cap scheme may help financially stressed municipalities. However, it also carries risks over the long term. One of the banks actively engaged in the municipality segment announced a program similar to the exchange rate cap scheme introduced for household FX mortgage loans. Municipalities can join the program on a voluntary basis. Participants in the program can repay their debt at a Swiss franc exchange rate of 200 forints until end-2014. The difference between the prevailing market rate and the capped rate will accrue on a

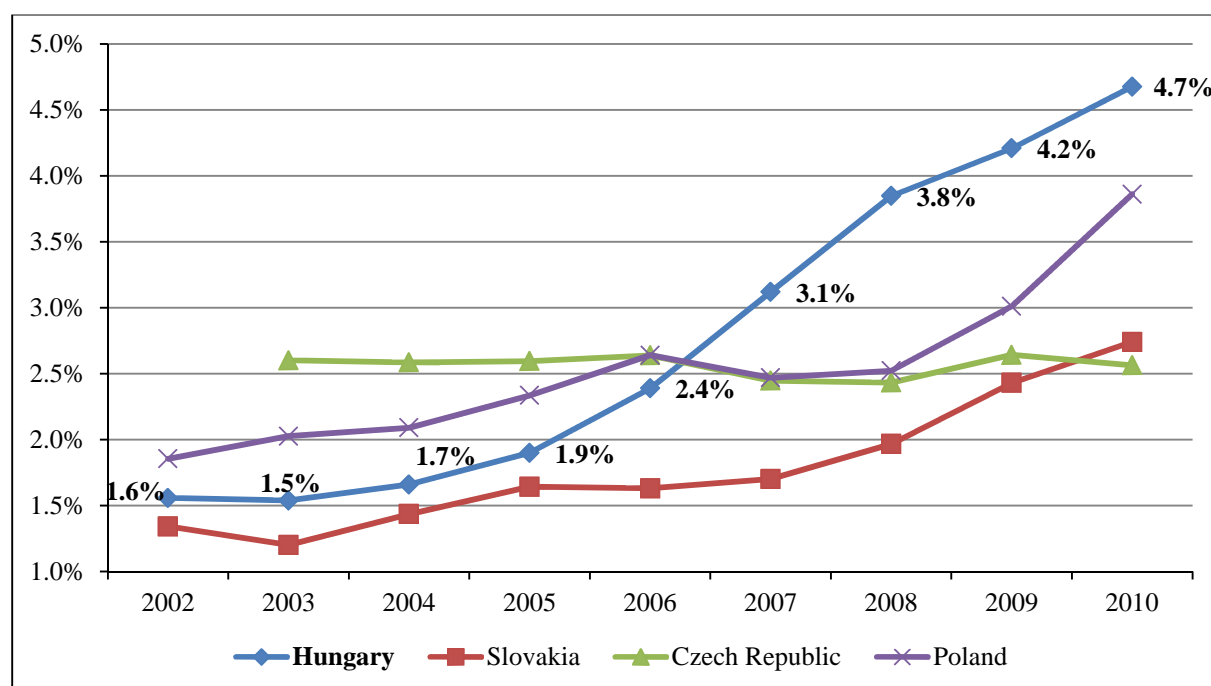
separate account. Upon restructuring interest premium on bonds will rise. Overall, the total debt service calculated until the end of the term of the loan will rise, but the repayment burden will be lower until 2014. The most important risk inherent in this scheme is that the financial mitigation available currently will be charged to the budgets of subsequent periods.

Increasingly severe borrowing limits put further indebtedness under control, however, they may also lead to liquidity problems. With effect from 1 January 2012, municipalities have to obtain the government's consent in order to be able to conclude a transaction incurring debt. Exemptions include loans serving as an advance on, own funds in respect of development aids from international organizations, loans maturing in less than 1 year, reorganization loans and loans in an amount not exceeding the certain threshold levels prescribed for different types of settlement. Borrowing conditional on government approval and low threshold values represent significant tightening. Debt service may become increasingly difficult for those financially stressed municipalities whose institutions (i.e. entities operated by municipalities) will be taken over by the state, because the funds for the financing of these institutions will no longer be provided. As a result, there will be less room for re-allocation of some of these funds for the purpose of the payment of the installments that fall due.

In a most recent effort to ease municipalities debt burden further, the government announced in October 2012 a new program to take over some of the debt of local governments. Under this scheme, whose details are still to be elaborated, the debt of municipalities representing less than 5000 inhabitants (97 billion forints) would be fully assumed by the central government while 40% of the debt of bigger municipalities (515 billion forints) would also be taken over by the state, amounting to a total of 612 billion forints (circa 2% of GDP). If realized, this measure would leave general government debt unaffected as local government has always been counted within the general government. On the other hand, the debt service requirements of municipalities would considerably decrease while the central government would have a better bargaining position vis-à-vis lending banks, which

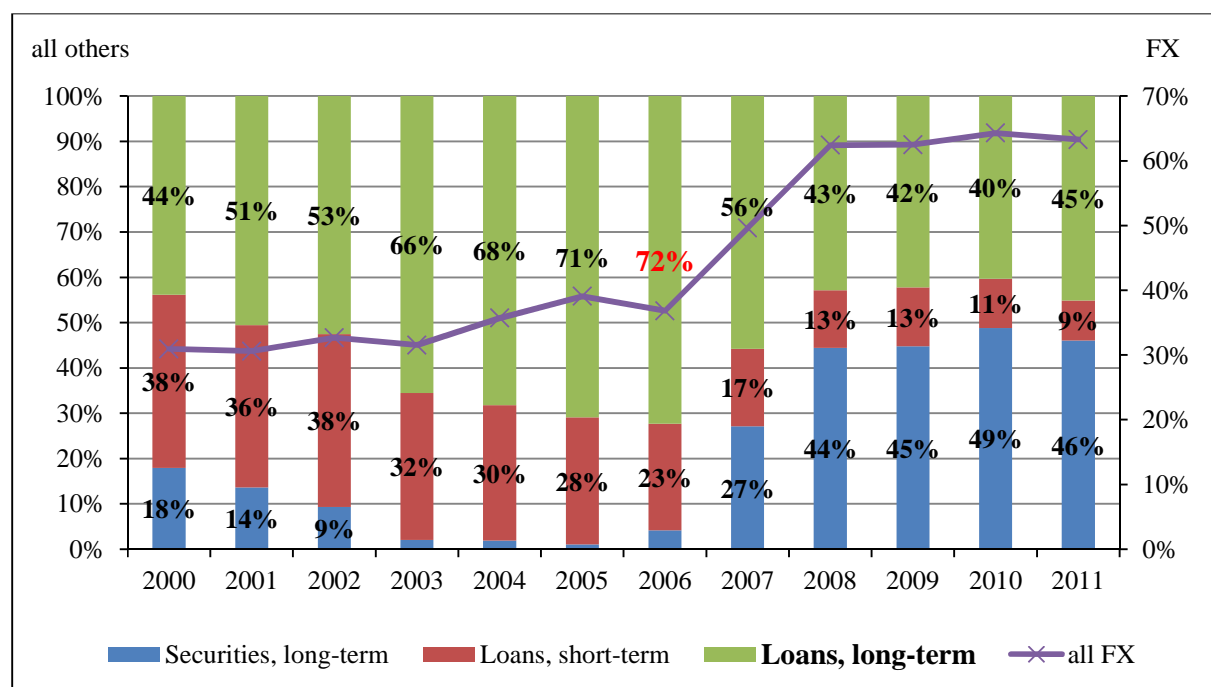
could possibly help to negotiate better terms of repayment of this debt stock. Unsurprisingly, immediately following this announcement, one credit rating agency reacted by pointing out – echoing market fears – that, once taken over, a potential decision on the central government's side not to or only partially service this debt would be regarded as a case of sovereign default. Although it is most likely that the government will refrain from such moves, the above market reaction clearly signals that the owners of domestic banks and other foreign investors in Hungary are bracing themselves for more unorthodox solutions for domestic debt-consolidation on the part of the Hungarian government.

Figure 2.22. Debt of state and local government as a percentage of GDP (2002–2010)



Source: own calculations from Eurostat and OECD data.

Figure 2.23. Local government debt in Hungary broken down by type as a percentage of total debt



Source: own calculations from MNB data.

3. The Structure of the Hungarian Financial Sector¹⁸

3.1. The Institutional Structure of the Hungarian Financial System

As attested by Figure 3.1., the number of institutions in the Hungarian financial system had been growing steadily up to 2010, while there is some setback after 2010, caused mainly by the reorganization as a reaction to the aftermath of the financial crisis of 2007-2008, as well as to certain government measures that affected certain subsectors negatively.

In terms of the number of institutions, the most stable sectors of the financial system since 2003 have been credit institutions and insurance companies. The names and owners of major players have barely changed in these two sectors, although there have been changes in the ownership structure of smaller participants.

The most important sector of the Hungarian financial system is that of credit institutions (banks, savings and credit cooperatives, branch offices of foreign banks and specialized credit institutions) operating as public limited companies (Plc.). Figure 3.1 show that their share in total assets has been hovering between 61 and 69% since 2003. Tables 3.2 and 3.3 and Figure 3.3 also suggest that the weight of credit institutions within both the financial system and the economy is decisive. Table 3.2 shows that their average annual rate of growth was 12% between 2000 and 2011, compared to 11% of the entire financial system. Figure 3.2 provides further insight into the close correlation of the dynamics of assets of credit institutions with the dynamics of total assets in the financial system: in the period between 2004 and 2011 the correlation coefficient of these growth rates is 0.86. The leading role of credit institutions is further underscored by their dominant share in profit generation in the financial system, presented in Table 3.3 and Figure 3.5.

Separately, Figure 3.4 shows that the subsector of investment funds has become the second biggest group of institutions in the Hungarian financial system, followed by

¹⁸ Most of the statistics in Sections 3.1-3.6 of this Chapter are taken from the Golden Book 2010 compiled by the Hungarian Financial Supervisory Authority, which was the last version of the Golden Book available at the time of writing this report.

financial enterprises and insurance companies. Once expanding private pension funds saw their assets cut drastically by government measures, as seen in Figure 3.4. Figure 3.6 adds to the picture by displaying the investment profit making ability of pension funds, the utmost volatility of which placed them in the limelight after the financial crisis.

Table 3.1. Number of institutions in the Hungarian financial system

	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Jun-12
Credit institutions (Plc.)	38	38	37	40	40	41	40	40	38	40
Cooperatives	182	178	174	168	157	148	140	138	132	129
Branches	-	-	3	4	6	10	11	10	10	10
Financial enterprises	187	204	215	235	247	262	266	264	249	251
Investment enterprises	18	16	17	16	17	20	25	27	n.a.	26
Investment fund managers	22	23	24	26	30	34	34	35	34	34
Investment funds**	n.a.	137	170	242	335	424	443	488	522	535
Venture capital fund managers	1	1	1	1	3	8	13	14	16	18
Venture capital funds	1	1	2	2	2	5	7	13	15	17
Insurance companies	37	37	36	33	36	38	37	37	n.a.	37
Insurance associations	26	22	26	25	27	24	23	22	n.a.	20
Insurance intermediaries	-	-	-	-	422	467	517	550	n.a.	523
Private pension funds	18	18	18	19	20	20	19	18	13	11
Voluntary pension funds	82	75	76	69	68	66	63	60	57	53
Voluntary health funds	39	45	42	47	38	37	35	35	32	33
Voluntary mutual aid funds	29	33	36	40	33	18	15	12	10	10
Total	680	828	877	967	1 481	1 622	1 688	1 763	1 748	1 747

Source: own collection from data published by PSzÁF and BAMOSz.

*The total number for 2011 is an approximation.

**Figures for 2004, 2005 and 2011 come from BAMOSz (2011a).

Table 3.2. Total assets of institutions in the Hungarian financial system (billion forints)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Jun-12	CAG
Banks	8 427	9 040	10 196	12 861	14 912	17 559	20 763	24 376	29 178	28 996	28 125	28 797	26 804	12%
MFB, KELER, Eximbank	n.a.	n.a.	n.a.	699	800	948	1 181	1 089	1 302	1 443	1 489	1 763	1 542	12%
<i>Credit institutions (Plc.)</i>	<i>8 427</i>	<i>9 040</i>	<i>10 196</i>	<i>13 560</i>	<i>15 712</i>	<i>18 507</i>	<i>21 944</i>	<i>25 465</i>	<i>30 480</i>	<i>30 439</i>	<i>29 614</i>	<i>30 560</i>	<i>28 970</i>	<i>12%</i>
Cooperatives	n.a.	n.a.	n.a.	898	1 053	1 263	1 360	1 520	1 577	1 603	1 734	1 745	1 634	9%
Branches	-	-	-	-	-	28	305	439	1 308	2 092	2 364	2 459	2 641	110%
Financial enterprises	n.a.	559	841	1 260	1 636	2 014	2 200	2 655	3 370	3 001	2 881	2 538	2 317	16%
Investment enterprise assets	n.a.	n.a.	n.a.	75	67	67	93	122	76	133	131	102	114	4%
Investment enterprise managed wealth	n.a.	n.a.	n.a.	787	584	717	902	1 067	924	955	1 215	1 314	1 287	7%
Investment fund managers	n.a.	n.a.	n.a.	29	30	37	49	54	55	56	54	n.a.	n.a.	9%
Investment funds	n.a.	n.a.	944	879	1 067	1 879	2 558	3 236	2 567	3 100	3 894	3 286	3 157	15%
Insurance companies	n.a.	n.a.	n.a.	1 205	1 382	1 641	1 959	2 252	2 215	2 396	2 414	2 356	2 334	9%
Insurance associations	n.a.	n.a.	n.a.	0,3	0,3	0,3	0,4	0,7	0,8	0,8	0,9	n.a.	n.a.	15%
Insurance intermediaries*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	29	23	27	n.a.	n.a.	-4%
Private pension funds	n.a.	n.a.	414	565	876	1 221	1 591	1 979	1 870	2 607	3 102	226	188	29%
Voluntary pension funds	n.a.	n.a.	353	422	540	642	719	784	698	804	862	834	851	10%
Voluntary health funds	4,1	6,3	7,9	13	21	29	38	44	49	54	56	56	57	27%
Voluntary mutual aid funds	0,6	0,8	1,0	1,2	2,0	3,3	3,9	3,0	1,6	2,1	2,0	1,9	2,0	11%
Total assets	n.a.	n.a.	n.a.	19 614	22 885	27 944	33 613	39 462	45 088	47 075	48 165	45 324	43 379	11%
GDP (Current prices)	13 089	15 104	17 119	18 738	20 665	22 018	23 676	24 992	26 546	25 623	26 748	28 080	28 351	7%

*Only the biggest (circa 1/7) are included in this table.

** Compounded annual growth rate for the years observed ending with 2011. Exception: Private pension funds' CAGR is calculated for the period ending with 2010.

Table 3.3. Total assets of institutions in the Hungarian financial system as a percentage of GDP

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*	Jun-12*
Banks	60%	60%	69%	72%	80%	88%	98%	110%	113%	105%	103%	95%
MFB, KELER, Eximbank	n.a.	n.a.	4%	4%	4%	5%	4%	5%	6%	6%	6%	5%
<i>Credit institutions (Plc.)</i>	n.a.	n.a.	72%	76%	84%	93%	102%	115%	119%	111%	109%	100%
Branches	-	-	-	-	0.1%	1%	2%	5%	8%	9%	9%	9%
Cooperatives	n.a.	n.a.	5%	5%	6%	6%	6%	6%	6%	6%	6%	6%
Banking system	n.a.	n.a.	77%	81%	90%	100%	110%	126%	133%	126%	124%	115%
Financial enterprises	4%	5%	7%	8%	9%	9%	11%	13%	12%	11%	9%	8%
Investment enterprises	n.a.	n.a.	0.4%	0.3%	0.3%	0.4%	0.5%	0.3%	0.5%	0.5%	0.4%	0.4%
Investment enterprise managed wealth	n.a.	n.a.	4%	3%	3%	4%	4%	3%	4%	5%	5%	5%
Investment fund managers	n.a.	n.a.	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	n.a.	n.a.
Investment funds	n.a.	6%	5%	5%	9%	11%	13%	10%	12%	15%	12%	11%
Insurance companies	n.a.	n.a.	6%	7%	7%	8%	9%	8%	9%	9%	8%	8%
Insurance associations	n.a.	n.a.	0.002%	0.001%	0.001%	0.002%	0.003%	0.003%	0.003%	0.003%	n.a.	n.a.
Insurance intermediaries	n.a.	n.a.	-	-	-	-	-	0.1%	0.1%	0.1%	n.a.	n.a.
Private pension funds	n.a.	2%	3%	4%	6%	7%	8%	7%	10%	12%	1%	1%
Voluntary pension funds	n.a.	2%	2%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Voluntary health funds	0.04%	0.05%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Voluntary mutual aid funds	0.01%	0.01%	0.01%	0.01%	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Total assets	n.a.	n.a.	105%	111%	127%	142%	159%	170%	184%	181%	162%	152%

Source: own calculations from data published by PSzÁF.

*Data after 2010 exclude Insurance associations, Insurance intermediaries and Investment fund managers.

Table 3.4. Share of institutions in total profit after tax in the Hungarian financial system

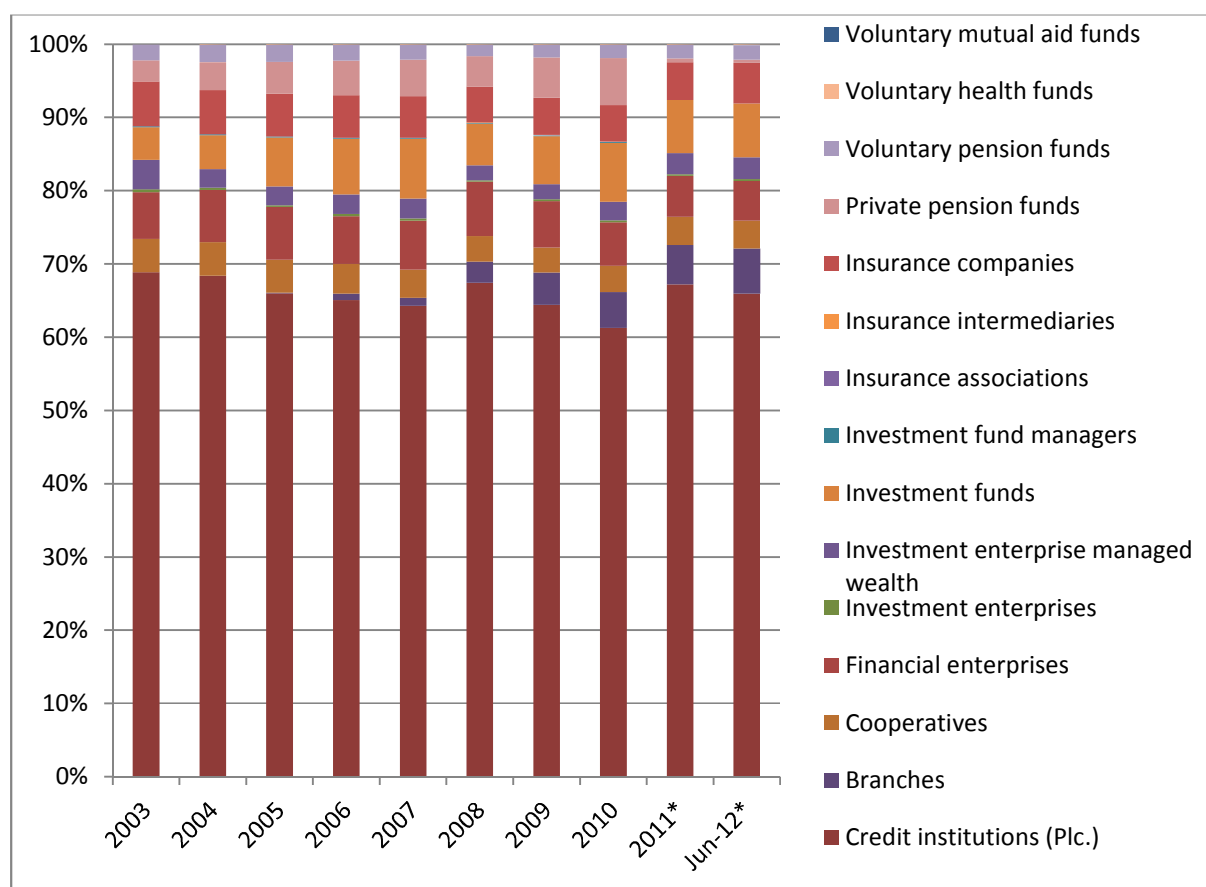
	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
Banks	78%	73%	69%	71%	69%	73%	68%	62%	60%	69%
MFB, KELER, Eximbank	n.a.	n.a.	3%	4%	5%	2%	2%	2%	1%	3%
Credit Institutions (Plc.)	78%	73%	72%	75%	74%	75%	70%	64%	61%	71%
Cooperatives	n.a.	n.a.	3%	3%	2%	2%	2%	3%	2%	2%
Branches*	n.a.	-	-	-	0%	0%	0%	2%	14%	3%
Financial Enterprises	10%	12%	13%	9%	8%	7%	10%	8%	-4%	8%
Investment Enterprises	n.a.	n.a.	-2%	0%	0%	1%	1%	2%	2%	0%
Investment Fund Managers	n.a.	3%	3%	3%	3%	4%	5%	5%	7%	4%
Insurers	12%	13%	10%	11%	13%	12%	12%	16%	19%	13%
Insurance Associations	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Insurance Intermediaries	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%
Private Pension Funds**	0%	0%	0%	0%	0%	0%	0%	0%	-1%	0%
Voluntary Pension Funds**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: own calculations from data published by PSzÁF.

*Profit before tax.

**Operating profit.

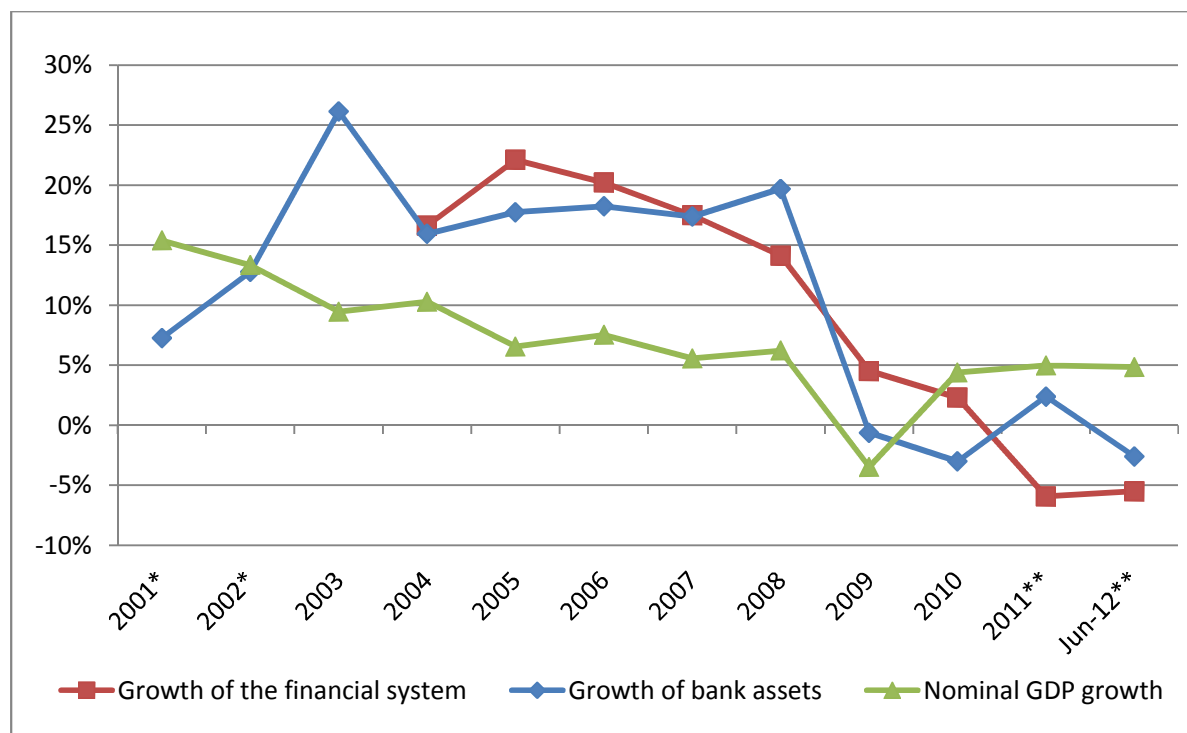
Figure 3.1. Institutional distribution of assets in the Hungarian financial system



Source: own calculations from data published by PSzÁF.

*Data after 2010 exclude Insurance associations, Insurance intermediaries and Investment fund managers.

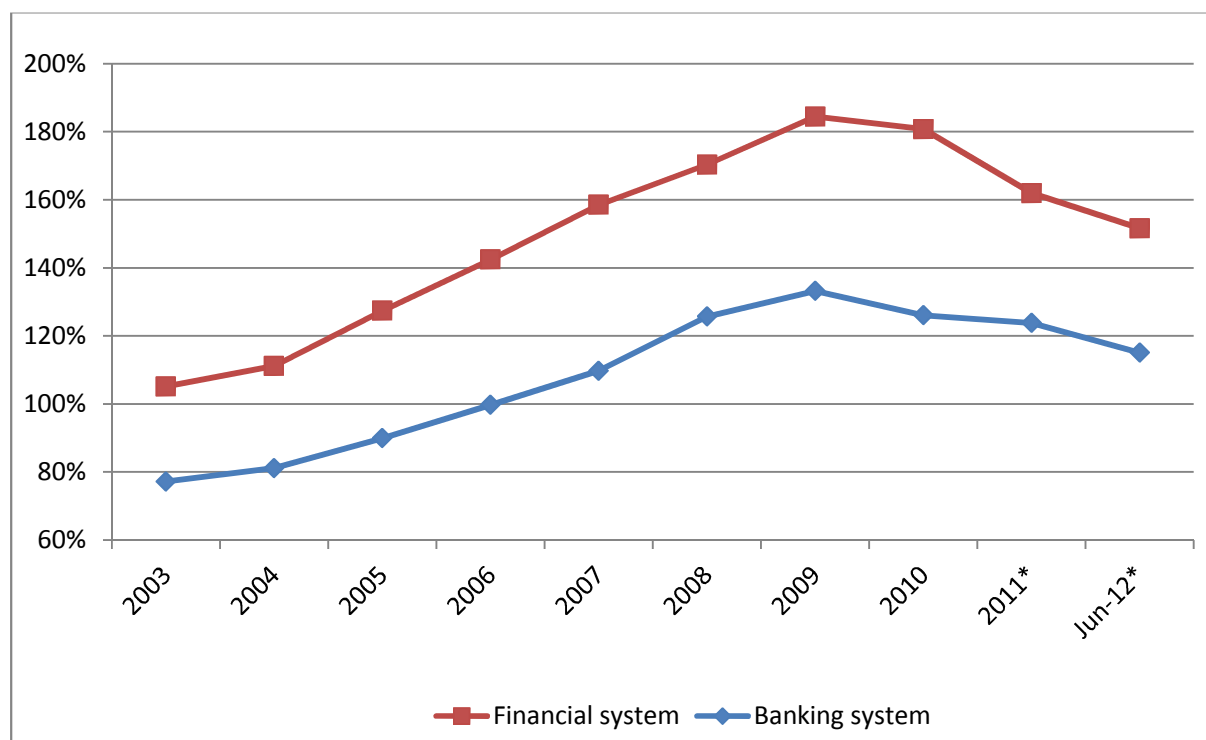
Figure 3.2. Growth of the Hungarian financial system, bank assets and nominal GDP



*Data up to 2002 exclude MFB, KELER and Eximbank.

**Data after 2010 exclude Insurance associations, Insurance intermediaries and Investment fund assets.

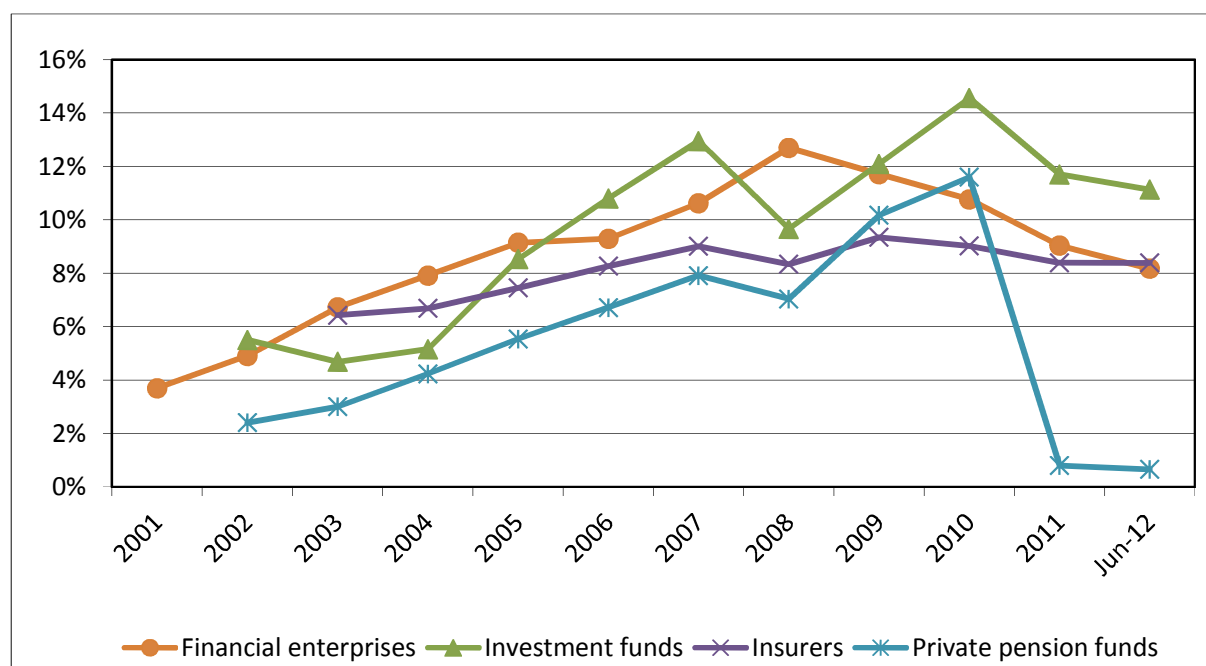
Figure 3.3. Asset/GDP ratios I.



Source: own calculations from data published by PSzÁF and KSH.

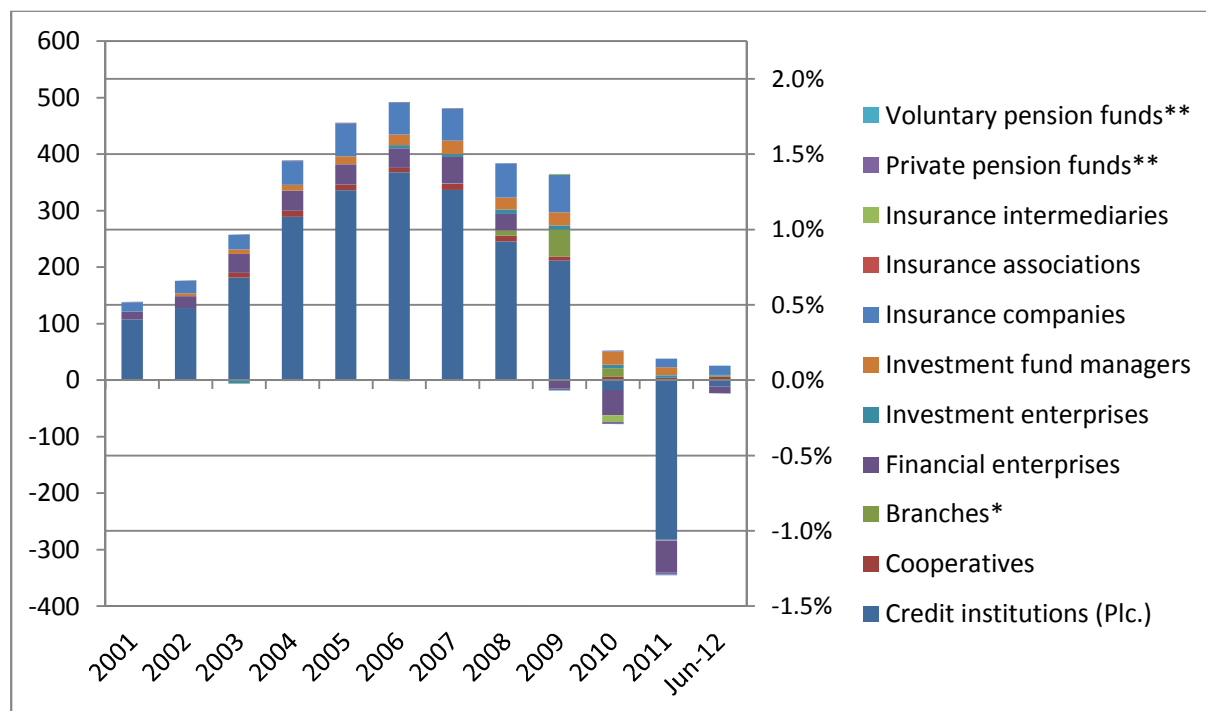
*Data after 2010 exclude Insurance associations, Insurance intermediaries and Investment fund assets.

Figure 3.4. Asset/GDP ratios II.



Source: own calculations from data published by PSzÁF and KSH.

Figure 3.5. Profit after tax of institutions in the Hungarian financial system (billion forints, % of GDP)

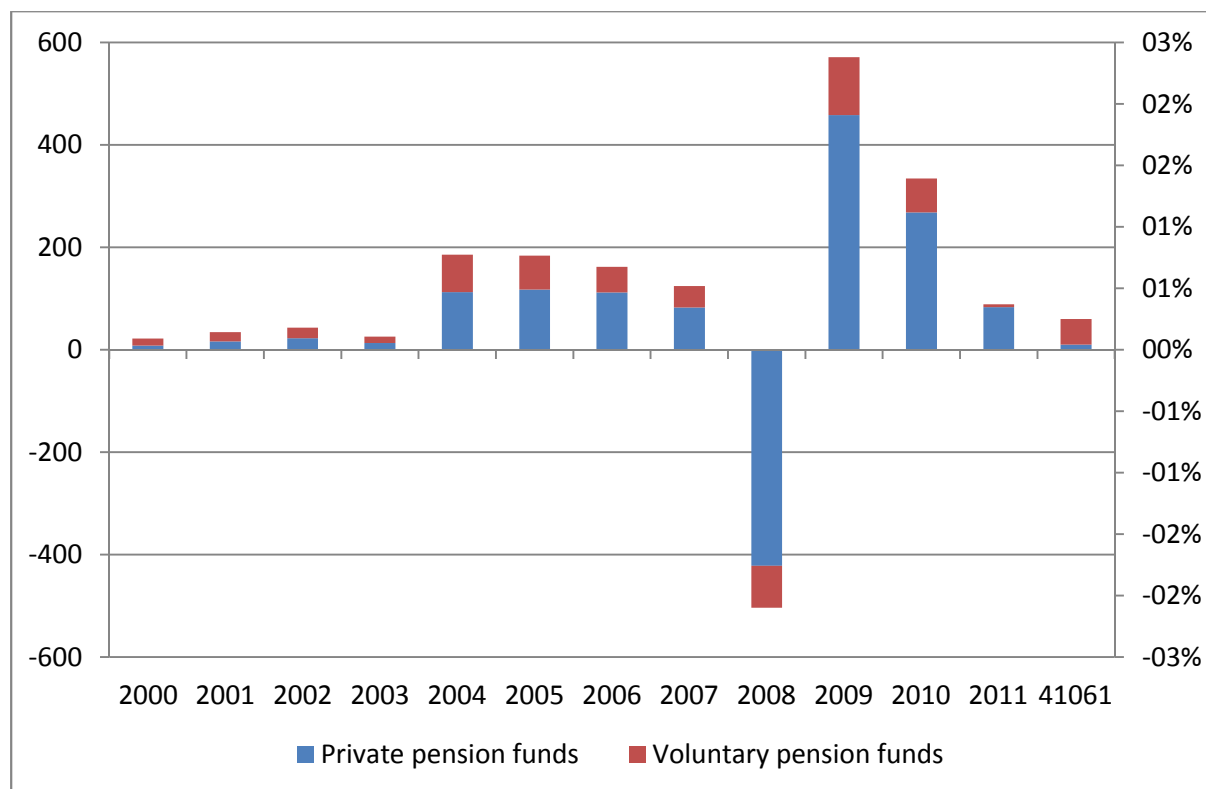


Source: own calculations from data published by PSZÁF.

*Profit before tax.

**Operating profit.

Figure 3.6. Investment profit of pension funds (billion forints, % of GDP)



Source: own calculations from data published by PSZÁF.

3.2. The Financial Market Sector

Financial institutions in Hungary include *credit institutions* and *financial enterprises*. These two forms of financial institutions are entitled by the Act on Credit Institutions and Financial Enterprises (§112, Para 3, No. 1, HPT, 1996) to provide the following financial services, provided that they are entitled to by the Hungarian Financial Supervisory Authority (PSzÁF):

- (1) accept deposits and other repayable funds,
- (2) extend credits and loans,
- (3) provide financial leasing,
- (4) carry out payment transactions (keep bank accounts, accept credit, debit, transfers orders, transfer cash),
- (5) issue electronic money,
- (6) issue other means of payment (traveler's cheques, promissory notes),
- (7) grant guarantees or make other bank commitments,
- (8) trade currency, promissory notes and cheques,
- (9) broker financial services,
- (10) act as a custodian of securities,
- (11) provide credit reference services.

Financial institutions are also entitled to provide auxiliary financial services such as (i) currency exchange, (ii) payment systems operation, (iii) cash processing and (iv) money broking (§112, Para 3, No. 2, HPT, 1996). Apart from the above financial services financial institutions are allowed to

- (a) act as insurance brokers,
- (b) act as securities brokers, nominees, provide investment services,
- (c) trade gold,
- (d) promote the lending activity of the state-owned Student Loan Center (DHK),
- (e) recruit members to voluntary mutual funds,
- (f) market collaterals,
- (g) work out bad debt,

- (h) sell data related to financial assets,
- (i) act as intermediary of EC transfers (§112, Para 4, HPT, 1996).

Credit institutions are financial institutions that collect deposits and extend loans (see (1) and (2) above). Only credit institutions are entitled to collect deposits and exchange currency. Three types of credit institutions exist: *banks*, *specialized credit institutions* and *cooperatives* (*savings* and *credit cooperatives*). *Banks* are credit institutions which collect deposits, extend loans and make payment transactions ((1), (2) and (4)). They are the only type of credit institutions that are entitled to provide all types of financial services. In this sense, banks can be called “universal” credit institutions as they are allowed to fulfill both commercial- and investment-type functions.

Specialized credit institutions can provide services based on customized legislation. This special group includes mortgage banks, home savings and loan associations as well as the Hungarian Development Bank (MFB), Hungarian Export-Import Bank (Eximbank) and Central Clearing House and Depository (KELLER). In the statistics of PSzÁF, MFB, Eximbank and KELER are usually treated separately to indicate that they are majority state-owned institutions fulfilling a special role in the Hungarian financial system.

Savings cooperatives are allowed to provide all financial services except for credit reference, operation of payment systems and cash processing, while *credit cooperatives* can provide the same financial services as savings cooperatives exclusively to their own members. *Branch offices* of foreign credit institutions can provide any type of financial services provided that they have been entitled to by their own authorities (§112, Para 5, HPT, 1996).

Financial enterprises are either credit institutions that provide financial services other than payment transactions, issue of electronic money, deposit collection and currency exchange or they are financial holdings. Other institutions under HPT include *cash transaction institutions*, *electronic money issuers* and *brokers of financial services* (§112, Para 6, HPT, 1996).

Credit institutions – and financial enterprises owned by credit institutions – may provide cross-border financial services subject to the approval of PSzÁF (§112, Paras 32/D, 32/E, HPT, 1996).

Banks and specialized credit institutions can operate in the form of public/private limited company or branch office, cooperative credit institutions as cooperative, financial enterprises as Plc., cooperative, foundation or branch office, money operations institutions and electronic money issuers as Plc., Limited Liability Company, cooperative or branch office. Start-up capital requirements prescribed by the law are (§112, Para 9, HPT, 1996):

- banks, financial holdings and branch offices of credit institutions based abroad: 2 billion forints (circa. 6.9 million euros),
- cooperatives: 250 million forints (circa 860,000 euros),
- financial enterprises: 50 million forints (circa 170,000 euros),
- money operations institutions: 37.5 million forints (circa 130,000 euros),
 - only cash transfer: 6 million forints (circa 20,000 euros),
 - only electronic money orders: 15 million forints (circa 50,000 euros),
- electronic money issuers: 100 million forints (circa 350,000 euros),
- brokers of financial services: 50 million forints (circa 170,000 euros).

The law specifies a voting share of 10 % – or the power to replace 20% of the executives of all decision-making bodies – as qualified control, the acquisition and increase of which needs the approval of both PSzÁF and the Competition Authority (GVH) (§112, Para 37, HPT, 1996).

3.2.1. Credit Institutions

Table 3.4 presents the 40 credit institutions¹⁹ that operated in Hungary in the form of joint stock (public or private limited) company in 2010²⁰. Their total assets represented 111% of Hungarian GDP. While in normal times credit institutions are

¹⁹ Garantiqa Creditguarantee, Venture Finance Hungary (MV) and Agro Enterprise Creditguarantee Foundation (not yet on the 2010 list) are financial enterprises that PSzÁF considers as credit institutions from a prudential point of view.

²⁰ One of them, Allianz Bank, merged with FHB Commercial Bank in 2010.

the biggest profit generating group in the Hungarian financial system, it was not the case in 2010 and 2011 (see more on this in Chapter 4). The overwhelming majority of Hungarian credit institutions are in foreign hands: 79% of their registered capital was owned in 2010 by foreigners²¹. Within the group of foreign owners, Italy represented 21%, Austria 19%, Belgium 17%, Germany 9%, US and South Korea 2% each, France 1% while China and Portugal both possessed negligible stakes. With its direct and indirect share of 16% the Hungarian State was the fourth most important shareholder of incorporated credit institutions while domestic private investors owned 5%. Excluding MFB, Eximbank and KELER, which are specialized credit institutions majority owned by the state, the changes in the ownership structure of banks, mortgage banks and home savings and loan associations after 2003 are presented in Table 3.2.

²¹Foreigners' share in the total assets of these 40 institutions was slightly more, 81%.

Table 3.2. Ownership structure of Hungarian credit institutions excluding MFB, Eximbank and KELER

	2003	2004	2005	2006	2007	2008	2009	2010	2011	03.2012
Domestic	14,0%	12,4%	13,0%	14,5%	12,3%	12,4%	12,6%	13,4%	10,3%	8,4%
-public	0,9%	0,9%	0,9%	0,8%	0,1%	0,1%	0,1%	0,1%	0,1%	0,0%
-private	13,1%	11,5%	12,1%	13,7%	12,2%	12,3%	12,5%	13,4%	10,3%	8,4%
Foreign	81,9%	80,4%	80,9%	79,5%	82,0%	86,4%	86,0%	86,4%	89,1%	91,1%
Repurchased & unidentified	4,0%	4,1%	4,1%	3,8%	5,7%	1,2%	1,4%	0,2%	0,5%	0,4%

Source: PSzÁF.

3.2.1.1. Large Banks

OTP Bank, the biggest Hungarian bank by assets is owned in 66% by foreign investors. The bank represented 21% of all assets of Hungarian incorporated credit institutions in 2010, and the four banks in OTP group gave 28% of all assets. While Hungary is its core market, OTP has vested interests in a number of banks in the Central and Eastern European region, which makes it the only domestic bank with a palpable regional scope (see Table 3.3). Foreign affiliates gave 32% of the consolidated profit of OTP group (OTP, 2012a:11) while they represented 46% of consolidated assets in 2011.

Table 3.3. OTP ownership in CEE regional banks (2011)

Name of affiliate	Country of operation	OTP share	% of OTP group profit
OAOT Bank	Russia	97.75%	25.4%
DSK Bank	Bulgaria	100%	7.9%
OTP Bank JSC	Ukraine	100%	3.2%
OTP banka Hrvatska	Croatia	100%	2.2%
OTP Bank Romania	Romania	100%	0.5%
OTP Banka Slovensko	Slovakia	98.94%	0.3%
Crnogorska Komerčialna Banka	Montenegro	100%	-2.8%
OTP banka Srbija	Serbia	92.6%	-3.9%

Source: OTP, 2012b.

Table 3.4. Credit institutions operating as joint stock companies (Plc.) in Hungary (2010)

Name (short name)	Majority ownership	Foreign	Domestic	Majority shareholder	Total assets (million HUF)	Share in total assets
1 OTP Bank	Foreign	66%	34%	none	6 213 397	21%
2 K&H Bank	Foreign (Belgium)	100%	0%	KBC Bank (KBC Group): 100%	3 213 379	11%
3 Erste Bank	Foreign (Austria)	100%	0%	EGE Ceps Holding (Erste Group Bank): 100%	2 948 517	10%
4 MKB Bank	Foreign (Germany)	100%	0%	Bayerische Landesbank: 95.23%	2 749 837	9%
5 CIB Bank	Foreign (Italy)	100%	0%	Intesa Sanpaolo Holding International: 67.6905%	2 482 860	8%
6 Raiffeisen Bank	Foreign (Austria)	100%	0%	Raiffeisen-RBHU Holding (Raiffeisen Zentralbank Österreich): 100%	2 400 580	8%
7 OTP Mortgage Bank	Foreign	66%	34%	OTP Bank: 100%	1 675 031	6%
8 UniCredit Bank	Foreign (Italy)	100%	0%	UniCredit Bank Austria (UniCredito Italiano): 100%	1 566 193	5%
9 Hungarian Development Bank (MFB)	Domestic	0%	100%	Hungarian State (Minister of National Development): 100%	1 189 217	4%
10 Budapest Bank	Foreign (US)	100%	0%	GE Capital	900 025	3%
11 FHB Mortgage Bank	Domestic	24%	76%	none	845 205	3%
12 Volksbank	Foreign (Germany)	100%	0%	Volksbank International: 98.6%	503 582	2%
13 Bank of Savings Cooperatives (Takarékbank)	Domestic	38%	62%	Savings cooperatives: 56.57%	379 938	1%
14 Merkantil Bank	Foreign	66%	34%	OTP Bank: 100%	277 388	1%
15 FHB Commercial Bank	Domestic	24%	76%	FHB Mortgage Bank: 72.6%	267 742	1%
16 Commerzbank	Foreign (Germany)	100%	0%	Commerzbank: 100%	262 298	1%
17 Fundamenta-Lakáskassza Home Savings Bank	Foreign (Germany)	100%	0%	Bausparkasse Schwabisch Hall (DZ Bank group): 51.25%	254 718	1%
18 Hungarian Export-Import Bank (Eximbank)	Domestic	0%	100%	Hungarian State (Minister of National Economy): 100%	194 696	1%
19 OTP Home Savings Bank	Foreign	66%	34%	OTP Bank: 100%	192 610	1%
20 KDB Bank	Foreign (South Korea)	100%	0%	Korean Development Bank: 100%	138 679	0%
21 UniCredit Mortgage Bank	Foreign (Italy)	100%	0%	UniCredit Bank Hungary: 100%	136 925	0%
22 Sopron Bank	Foreign (Austria)	100%	0%	Hypo-Bank Burgenland (GRAWE): 100%	97 129	0%
23 Cetelem Bank	Foreign (France)	100%	0%	Cetelem (BNP Paribas): 100%	85 895	0%
24 Allianz Bank	Foreign (Germany)	100%	0%	Allianz Hungary: 99.808%	77 534	0%
25 Deutsche Bank	Foreign (Germany)	100%	0%	Deutsche Bank: 100%	76 208	0%
26 Central Clearing House and Depository (KELER)	Domestic	47%	53%	MNB: 53.33%	69 437	0%
27 MagNet Bank	Domestic	30%	70%	n.a. (private persons)	56 246	0%
28 Banco Popolare Bank	Foreign (Italy)	100%	0%	Banco Popolare: 100%	48 975	0%
29 Porsche Bank	Foreign (Germany)	100%	0%	Porsche Bank: 100%	48 475	0%
30 Bank of China Credit Institution (BOCI)	Foreign (China)	100%	0%	Bank of China: 100%	38 950	0%
31 DRB South Transdanubian Regional Bank	Domestic	4%	96%	n.a. (legal persons)	38 335	0%
32 Kinizsi Bank	Domestic	0%	100%	n.a. (private persons)	35 545	0%
33 Mohácsi Savings Bank	Domestic	0%	100%	n.a. (private persons)	33 959	0%
34 Garantiqa Creditguarantee	Domestic	33%	67%	Hungarian State: 50.0249%	32 325	0%
35 Banif Plus Bank	Foreign (Portugal)	100%	0%	Banco Mais (BANIF group): 100%	29 395	0%
36 Credigen Bank	Foreign (France)	100%	0%	Sofinco (Credit Agricole group): 100%	20 862	0%
37 Gránit Bank	Domestic	0%	100%	Hungarian Capital Society (Sándor Demján): 96.5%	13 081	0%
38 Hanwha Bank	Foreign (South Korea)	100%	0%	Hanwha Securities: 98.2%	11 648	0%
39 Széchenyi Commercial Bank	Domestic	0%	100%	T&T Realtor and Asset Management (István Töröcskei): 100%	4 126	0%
40 Venture Finance Hungary (MV)	Domestic	0%	100%	MAG Hungarian Economic Development Center (MFB group): 100%	3 031	0%

Source: PSzÁF (2010b) and own calculations based on company websites.

Large banks with market shares of more than 5% include 7 institutions: K&H, Erste, MKB, CIB, Raiffeisen, OTP Mortgage and Unicredit. Except for OTP Mortgage, these banks are all 100% owned by foreign mother banks (KBC, Erste, BayernLB, IntesaSanpaolo, Raiffeisen and Unicredit, respectively) and operate as the Hungarian subsidiaries of large European financial holdings focusing mainly on the Central and Eastern European region. Except for BayernLB, which is a regional bank, the shares of the mother banks are listed in international stock exchanges. MKB, the owner of a Romanian (Nextebank) and a Bulgarian (Unionbank) franchise, is also exception from the rule that the activities of the Hungarian daughter banks are confined to Hungary.

These leading banks – together with the 8th, GEC-owned Budapest Bank, which is usually included in the group of “large banks”, as classified by PSzÁF – are universal in the sense that they operate as the leading institution of a financial group. As such they provide commercial and investment banking as well as other financial services directly or indirectly, operate investment funds and some of them own pension and healthcare funds, insurance companies, mortgage banks and home savings and loan banks. Table 3.5 demonstrates the range of services provided by the large banks and their daughter companies in Hungary. As we shall see in further chapters, in most sectors of the Hungarian financial system, the influence of large banks is tangible. They or their affiliates possess market leading positions in all the segments of the financial and capital market sector while they also possess smaller stakes in the insurance and pension/health funds markets. Nevertheless, large banks seem to show relatively little interest for the insurance sector and vice versa. For example, market leading bank OTP sold its insurance company, Garancia, to Groupama in 2008 and Allianz Hungária Insurance, the second biggest insurer, divested its banking operation, Allianz Bank, in 2010.

Table 3.5. Large universal banks in Hungary

	Ba nk	Mortga ge	Hom e savin gs	Leasin g, Factori ng, Car	Real estat e finan	Invest ment service s	Invest ment fund	Insura nce	Pensi on/ Healt h
--	----------	--------------	-------------------------	------------------------------------	-----------------------------	--------------------------------	------------------------	---------------	----------------------------

				finance	ce				fund
OTP									
K&H									
Erste									
MKB									
CIB									
Raiffeis en									
Unicredi t									
Budape st									

Source: own collection based on company websites.

3.2.1.2. Branch Offices of Foreign-Based Banks

10 branch offices of foreign banks (shown in Table 3.6) are also present in Hungary. Technically, branches have been the most dynamic group of institutions: their assets grew by an annual average rate of 108% between 2005 and 2011²². However, most of this dynamism is due to the fact that the biggest institutions had been previously operating as banks (Citibank, BNP Paribas, ING) when they switched to operate as branches in order to save costs and focus on their core business. Judging by their asset size, branches would be considered as small- or medium sized banks in the Hungarian market were they based in Hungary. Their total assets combined were more than 5% of all assets in the financial system and almost reached 9% of Hungarian GDP in 2011. The total assets of incorporated credit institutions and branch offices of foreign banks combined amounted to 120% of GDP in 2011.

Table 3.6. Branches of foreign-based banks in Hungary (2010)

		Total assets (million HUF)
1	Citibank Europe plc.	628 603
2	BNP PARIBAS	559 921
3	AXA Bank Europe SA	550 050
4	ING Bank N.V.	408 486

²² They registered 28 billion forints of assets in 2005 and ended 2011 with 2,459 billion forints of assets.

5	Crédit Agricole Corporate and Investment Bank	144 390
6	Oberbank AG	44 025
7	Banco Primus	15 498
8	BNP Paribas Securities Services	7 307
9	Cofidis	5 087
10	Fortis Bank SA/NV*	302

Source: PSzÁF (2010b).

On the other hand, only two domestic institutions operate foreign branches (OTP and FHB in Germany).

3.2.1.3. Specialized Credit Institutions

3.2.1.3.1. Hungarian Development Bank (MFB)

Hungarian Development Bank Private Limited Company (MFB), the biggest Hungarian-owned incorporated financial institution by total assets is a specialized bank whose legal status and activities are laid down in Act XX of 2001 on Hungarian Development Bank. From the financial services listed above MFB is entitled to provide (2), (3), (7), (9), (10) and (11). It is allowed to provide (1) only to legal entities, (4) excluding account keeping²³ and (8) excluding currency exchange (§ 20, Para 3, No. 2, MFB, 2001). As part of its prudent operation based on the tasks listed below, MFB is also allowed to purchase the coupons of investment and venture capital funds (§ 20, Para 3, No. 4, MFB, 2001).

MFB is mainly involved in financing activities and investments to which a high degree of public (Hungarian or EU) interest is attached and/or which are initiated and carried out by Hungarian government institutions. The Hungarian State guarantees the repayment of all loans or credits provided to MFB by domestic or foreign investors (§ 20, MFB, Para 5, No. 1, MFB, 2001). At the same time, it sets a ceiling to MFB's indebtedness, which was 1,400 billion forints, or, 5% of GDP, in 2010 (§ 169, Para 47, No. 1, KT, 2010).

²³ MFB is, however, entitled to provide every element of (4) to companies in which it has direct ownership.

MFB is the centerpiece of the MFB group, which includes other credit institutions such as Eximbank, MEHIB, Garantiqa and MV as well as the Student Loan Center (DHK). Informally speaking, MFB is the “bank of the government” responsible for carrying out some of the economic functions of the state. Formally, MFB:

- i) raises funds in the domestic and international money and capital markets,
- ii) extends loans and capital to finance preferential state and local government development programs or investments,
- iii) provides prioritized Hungarian companies– primarily small and medium enterprises including agricultural producers –with loans and working capital and refinances the lending activity of the National Microcredit Program²⁴ operated by the Hungarian Foundation for Enterprise Promotion (MVA),
- iv) financially executes state and local government projects related to EU membership and manages the drawing of European Community (EC) funds (e.g. mediation of subsidies and financing and mediation of sources from international institutions),
- v) attends its tasks related to state, communal and international development disbursements (e.g. management of mediation and use of development disbursements and subsidies, relating contributory tasks, settlement and valuation of used disbursements),
- vi) exercises the owner rights of the Hungarian State, facilitates the realization of significant projects of state-owned companies and fulfills other roles defined in the MFB Act (e.g. financing the real estate purchase of designated political parties or the necessary investments of the victims of natural disasters) (MFB, 2011:6).

3.2.1.3.2. Hungarian Export-Import Bank (Eximbank)

Hungarian Export-Import Bank Private Limited Company (Eximbank) is a specialized credit institution whose legal status – together with that of Hungarian Export Credit

²⁴ Micro credits are granted by the Local Enterprise Centers to companies with less than 10 employees and a maximum revenue of 200 million forints (circa 690,000 euros) for a maximum of 8 years up to a maximum of 7 million forints (circa 24,000 euros). Micro credits carry a preferential interest rate and are considered de minimis subsidies from the European Community.

Insurance Private Limited Company (MEHIB) – is specified by Act XLII of 1994 on Eximbank and MEHIB (§ 42, EMT, 1994). In Hungary, Eximbank and MEHIB jointly operate as the state's export credit agency, facilitating the sale of Hungarian goods and services in foreign markets. Eximbank grants pre- as well as post-shipment export financing facilities and provides export-related loan and commercial guarantees, while MEHIB provides export credit insurance (Eximbank, 2011).

Eximbank is wholly owned by the Hungarian State, with the shareholder's rights exercised by the Minister of National Economy. Eximbank cooperates with MFB in its raising of funds on international financial markets. According to Act CLXIX of 2010 on the Budget of Hungary, Eximbank borrowings enjoy state guarantee currently up to the maximum amount of 320 billion forints or 1.2% of GDP in 2010. MEHIB insurance against non-market risks also enjoys state guarantee up to the maximum amount of 500 billion forints or 1.9% of GDP in 2010 (§ 169, Para 48, No. 1, 4, KT, 2010).

3.2.1.3.3. Central Clearing House and Depository (KELER)

KELER was established in 1993 by the National Bank of Hungary (MNB), the Budapest Stock Exchange (BÉT) and the Budapest Mercantile Exchange (BÁT) with an ownership structure of 50, 25 and 25%, respectively. Now, MNB owns 53% while Austrian-owned BÉT owns 47%. It has been operating as a specialized credit institution since 2004, whose activities are laid down in a number of laws: Act CXII of 1996 on Credit Institutions and Financial Enterprises (HPT), Act CXX of 2001 on the Capital Market (TPT) and Act CXXXVIII of 2007 on Investment Firms and Commodity Dealers, and on the Regulations Governing their Activities (BSzT). Its central task is to provide capital market players (investment enterprises, credit institutions, mercantile exchange service providers, investment fund managers and the issuers of securities) with securities depository and clearing services. More precisely, KELER:

- i) issues dematerialized²⁵ securities and keeps a central record using ISIN identification;
- ii) guarantees spot and derivative transactions on BÉT and contributes to real time gross settlement as an operator of MNB's VIBER payment system in the OTC market;
- iii) carries out cross-border securities clearing services.

3.2.1.3.4. Mortgage Banks

The activities of mortgage banks are stipulated in Act XXX of 1997 on Mortgage Banks and Mortgage Bonds (JHT) and are regularly controlled by PSzÁF. Mortgage banks can be established with a start-up capital of 3 billion forints (circa 10.3 million euros) (§ 30, Para 2, No. 3, JHT, 1997). These institutions provide mortgage- and/or state guarantee-backed loans in Hungary or in other countries of the European Economic Area (maximum 15%) to all types of clients. The banks' internal rules regulating the evaluation of collateral are subject to PSzÁF approval (§ 30, Para 5, No. 4, JHT, 1997). Mortgage banks raise capital mainly by issuing mortgage bonds to third parties. The value of collateral should always exceed the value of mortgage bonds, what is continuously checked by an appointed controller – typically an auditing firm – authorized by PSzÁF (§ 30, Para 16, JHT, 1997). In connection with the issued bonds mortgage banks are also allowed to provide their clients with investment services (§ 30, Para 3, No. 1, 2, 5, JHT, 1997). The ratio of mortgage loans with maturities over 5 years should be at least 80% in their portfolio (§ 30, Para 5, No. 1, JHT, 1997). Mortgage banks are permitted to purchase shares only in those non-financial companies that are interested in the real estate sector up to 10% of their total capital. They are also allowed to buy real estate with the purpose of investment up to 5% of their total capital (§ 30, Paras 9, 10, JHT, 1997).

In the Hungarian institutional setting, two kinds of mortgage banks exist. One type typically operates as a member of a group and collects funds for its mother bank

²⁵ Dematerialized securities exist only in electronic form and are registered by the central clearing house by simple book entry. Dematerialized securities were first allowed to be registered in 1997 and the protocol of converting printed securities into dematerialized ones is described by TPT of 2001. Today virtually all traded securities are dematerialized.

through mortgage bond issues that it can disburse in the form of mortgage loans. The second type acts mainly as a mortgage loan bank through contracted agents, other banks or its own commercial banking unit. Original legislation intended to make room for the second type of mortgage banks but it was later changed to include the first type, as well. As shown in Table 3.2, 3 mortgage banks (OTP, FHB and Unicredit) operate in Hungary, accounting for 5% of all financial assets or 10% of GDP in 2010. Market leading OTP Mortgage Bank has twice as much assets as FHB Mortgage Bank, while Unicredit's market role is marginal. OTP and Unicredit fall in the first category while FHB Mortgage Bank, the leading unit of FHB group, falls in the second.

3.2.1.3.5. Home Savings and Loan Associations

The introduction of the institutional form of home savings banks was based on German legislation, which is reflected in Act CXIII of 1996 on Home Savings and Loan Associations (LPT). Home savings banks offer a rather conservative and predictable form of savings for home purposes coupled with the opportunity to take out a mortgage loan when the saving period expires. A home savings bank can be established with a capital of 1 billion forints (circa 3.4 million euros) with PSzÁF permission and is allowed to collect deposits and extend loans in the form of home savings contracts. The saving period lasts for a minimum of 4 years with monthly payments of maximum 20,000 forints (circa 70 euros). The saving scheme receives preferential treatment from the state: payments are subsidized in 30% throughout the saving period and tax on deposit interest payments is not applied.

Currently, three home savings banks operate in Hungary, all of them foreign-owned, giving 1% of all financial assets, which is less than 2% of GDP. German-owned Fundamenta-Lakáskassza, a company established after the merger of Fundamenta and Lakáskassza in 2003, is leading the market, followed closely by the previously dominant OTP Home Savings Bank. Erste Home Savings Bank only started operation in 2011 and, thus, is not displayed in Table 3.2. Besides the minor differences in their pricing and interest rates, these banks also differ in their business models. While

Fundamenta-Lakáskassza uses agents and commercial banks to attract new clients, OTP and Erste rely on the branch network of their mother bank.

3.2.2. Cooperatives

Savings cooperatives are relatively old financial institutions in Hungary. The first cooperatives were allowed to operate in the late 1950s with a limited license to collect deposits in rural regions. They were the first typically commercial financial institutions in the sense that they were granted permission to extend credits to city-dwellers, as well, years before the creation of the two-tier banking sector in 1987. Their 1600 branches are present in half of the settlements in Hungary and represent 60% of the total Hungarian branch network of credit institutions. This wide coverage lends them their typical local appeal (Takarékbank, 2006).

In 2010, 138 cooperative credit institutions operated in Hungary, all of them owned by Hungarian private or legal persons²⁶. 134 of these were savings cooperatives and 4 credit cooperatives. Their total assets grew at an average annual rate of 9% between 2003 and 2011, and amounted to 4% of total assets, or 6% of Hungary's GDP in 2010. Thus, compared to incorporated credit institutions, cooperatives are considerably smaller players in the money market. The average asset size of incorporated credit institutions (740.3 billion forints or circa 2.6 billion euros) is almost 60 times the average asset size of cooperatives (12.5 billion forints or circa 43 million euros). The group of cooperatives is also more homogenous: the ratio of the biggest to the smallest cooperative was 46:1 in 2010, while the same ratio for incorporated credit institutions was 2050:1. Their profit making ability seems more stable than that of the banks and financial enterprises as cooperatives seem to have fared the crisis better due to less mortgage loans and their considerably lower foreign exchange exposure.

²⁶ The owners of such cooperatives can be private or legal persons who buy at least one so called "share coupon" with a face value of 10,000 forints/piece. One owner may own a maximum of 15% of the total registered capital.

3.2.3. Financial Enterprises

Financial enterprises are a very diverse group of financial institutions, providing specialized financial services such as car, real estate and other types of leasing, factoring, consumer loans. 251 of these operated in Hungary in 2012, with a share in total assets of more than 8%, or more than 5% of GDP, making it the third most significant group of institutions by asset size. Their assets grew relatively dynamically, at an annual average rate of 16% between 2001 and 2011. We show the biggest 20 of these institutions as of year 2010 in Table 3.7. It is apparent from the table that most of these institutions operate as a member of a financial group.

Table 3.7. Leading Hungary-based financial firms (2010)

		Total assets (million HUF)	Share in total assets
1	CIB Credit	281 414 626	10%
2	Lombard Finance and Leasing	274 377 678	10%
3	Erste Leasing Car Finance	155 042 236	5%
4	Budapest Car Finance	135 020 483	5%
5	CIB Leasing	126 716 858	4%
6	AEGON Hungary Credit	114 137 747	4%
7	OTP Factoring	90 977 571	3%
8	K&H Pannonleasing	74 885 192	3%
9	MKB-Euroleasing Car Finance	66 650 360	2%
10	UCB Real Estate Credit	65 728 663	2%
11	UniCredit Leasing Hungary	64 059 335	2%
12	RAIFFEISEN LEASING	51 495 386	2%
13	Hypo Alpe-Adria Leasing	51 208 017	2%
14	Santander Consumer Finance	42 631 988	1%
15	PSA Finance Hungária	41 975 262	1%
16	ING Financial Leasing	41 736 716	1%

	Hungary		
17	OTP Home Leasing	40 861 400	1%
18	CIB Property	39 518 480	1%
19	Budapest Leasing	37 349 036	1%
20	Deutsche Leasing Hungaria	34 952 068	1%

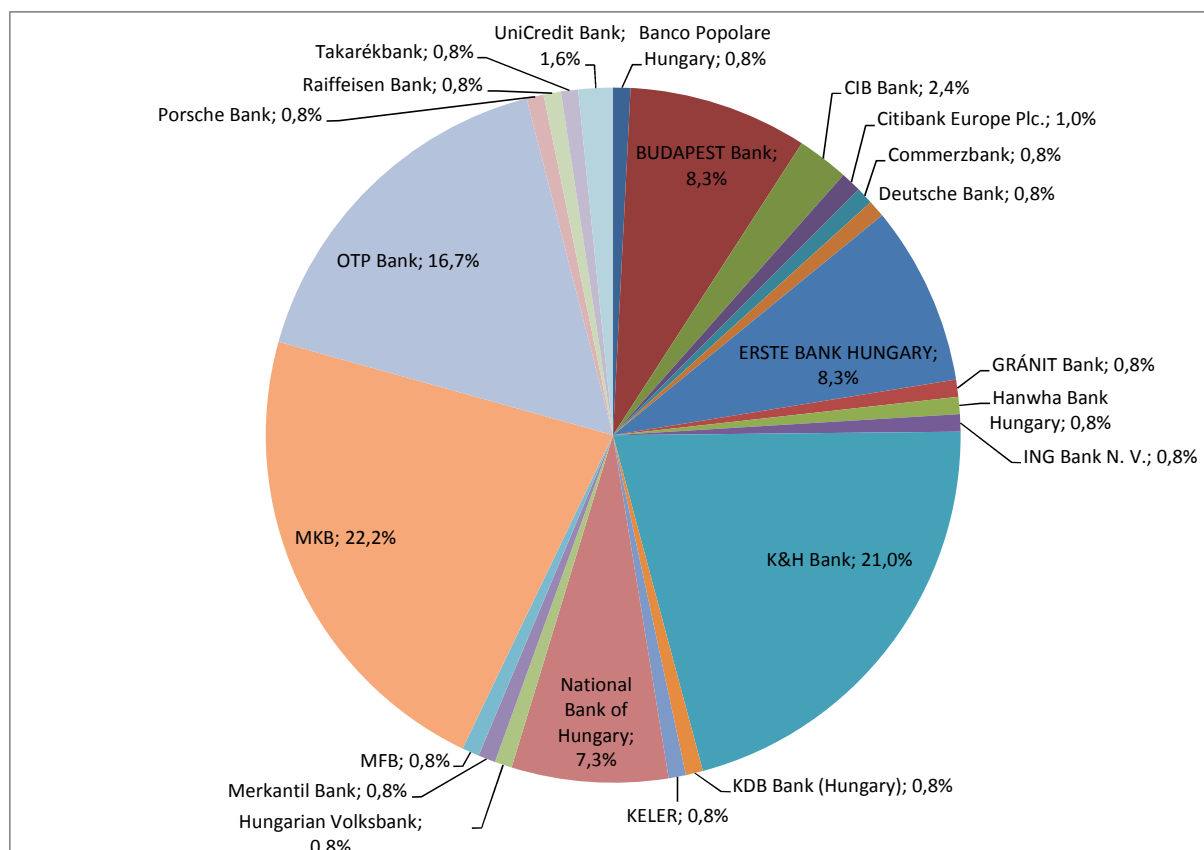
Source: PSzÁF (2010b).

3.2.3.1. GIRO

GIRO is a financial enterprise which has been operating as the automated clearing house of the Hungarian payment system, providing interbank clearing and settlement services mainly for small amount, large volume transactions since 1994²⁷. It was established in 1988 by 11 financial institutions and MNB and now has a capital of 2.496 billion forints owned by 23 shareholders, including domestic commercial banks, KELER and MNB. The ownership structure is such that large banks clearly outweigh smaller banks, MNB and KELER (see Figure 3.5).

Figure 3.5. GIRO's ownership structure (2010)

²⁷ Two systems operate for interbank settlements in Hungary: GIRO's Interbank Clearing System and MNB's Real-Time Gross Settlement System (VIBER, introduced in 1999). GIRO's system primarily serves bank account holders and processes mass transactions with lower values. VIBER is used for processing money and capital market transactions between banks with a lower number of transactions but with several hundred times higher transaction values.



Source: GIRO (2011).

GIRO's interbank clearing system is accessible for its "clearing members": credit institutions, MNB, KELER and the Hungarian State Treasury (MÁK). Non-member credit institutions can use the service indirectly through correspondent banks. Besides interbank clearing and settlement, GIRO also offers other important information-related services such as access to public databases maintained by the government and market players, a credit reference system (KHR) since 1998 run by its affiliated company, Interbank Informatics Service (BISz), and electronic signature certification services. An important feature of the operation of KHR is that financial institutions, investment enterprises, insurance companies, warehouses and the Student Loan Center (DHK) actively engaged in activities (2) through (7) of HPT – see Section 3.2 – are required to join as credit reference suppliers. This database, therefore, covers all lending, bank card and guarantee transactions of all the clients in the Hungarian financial system. Up to 2011, a full debtors' list existed for businesses while only a negative list for retail customers. The new legislation calling

for the introduction of the so called “positive retail debtors’ list” was included in Act CXXII of 2011 on the Central Credit Information System (KHRT).

3.2.3.2. Financial Enterprises Prudentially Considered as Credit Institutions

3.2.3.2.1. Garantiqa Creditguarantee

Garantiqa, a member of MFB’s financial group, is a financial enterprise which is prudentially regarded by PSzÁF as a credit institution. Established in 1992, it aims to promote commercial lending, leasing and factoring services to small- and medium-sized Hungarian enterprises by guaranteeing their financial liabilities. Its majority owners are the Hungarian State (50%) and MFB (14%), the remaining 85 owners are financial institutions and other entities operating in Hungary with a vested interest in supporting the realization of Garantiqa’s strategic objectives and benefiting from its services (Garantiqa, 2011). The group of potential beneficiaries of Garantiqa’s guarantees include financial institutions, venture capital funds, MVA and Local Enterprise Centers. The Hungarian State provides counter guarantee for 85% of the value of Garantiqa guarantees up to the maximum amount of 550 billion forints or 2% of GDP (§ 169, Para 48, No. 1, 2, 5, 6, KT, 2010).

3.2.3.2.2. Venture Finance Hungary (MV)

Venture Finance Hungary Private Limited Company (MV) is another financial enterprise treated by PSzÁF as a credit institution. It was incorporated in 2007 and is owned by MAG, a member of MFB’s financial group. Its tasks are twofold. It is partly responsible for channeling preferential loan and equity financing made available mostly by the EC and MFB to Hungarian companies using financial institutions as well as Local Enterprise Centers as financial mediating partners. MV’s other task is the extension of guarantees to micro-, small- and medium-sized enterprises²⁸. MV grants guarantees of 85% of the value of financing with a maximum maturity of 25 years. The Hungarian State provides back guarantee for 100% of the value of its guarantees granted within the Economic Development Operative Program and the

²⁸ Companies or groups of companies with consolidated annual revenue of maximum 1.5 billion forints (5.2 million euros) are considered micro-, small- or middle-sized enterprises by MV.

Central-Hungarian Operative Program up to the maximum amount of 100 billion forints or 0.3% of GDP (§ 169, Para 53, No. 1, 2, 3, KT, 2010).

Since 2010, MV has been active as the funding intermediary of the EU-funded JEREMIE program that focuses on venture capital financing, mainly targeting innovative businesses in their seed or early stage. In 2010, 8 venture capital funds were set up with a capital of 44.9 billion forints (0.2% of GDP), 70% of which was provided by MV.

3.2.4. Other Institutions in the Financial Market Sector

3.2.4.1. National Deposit Insurance Fund of Hungary (OBA)

The legal status of the National Deposit Insurance Fund of Hungary (OBA) is specified by the Act on Credit Institutions and Financial Enterprises (§112, HPT, 1996). All Hungary-based credit institutions are required by law to join OBA, except for the branch offices of foreign banks headquartered abroad, which are already members of other deposit insurance funds in accordance with Directive no. 94/19/EC of the European Parliament and the Council (§112, Para 97, HPT, 1996).

The fund's Board of Directors includes a person appointed by the Minister in charge of the regulation of the financial system, MNB's Deputy Governor, the president of PSzÁF, 2 persons appointed by the credit institutions and OBA's executive director, appointed by the board. The head of the board is elected every year from and by its members (§112, Para 110, HPT, 1996).

OBA plays a passive role in the stabilization of the financial system through paying compensation after frozen deposits of private individuals and companies up to the maximum amount of 100,000 euros per person and credit institution (§112, Paras 98, 101, HPT, 1996). OBA does not actively participate in the supervision of financial institutions. Its supervising responsibilities start and end by notifying MNB and PSzÁF of legal measures taken against credit institutions which fail to comply with requirements of deposit identification or fall behind in the payment of the annual fee (§112, Paras 124, 127, HPT, 1996). OBA does not actively participate in the stabilization, reorganization, bail-out or bail-in of Hungarian credit institutions, either. As OBA's executive director notes in an interview (Palkó, 2012), OBA's legal status should be reconsidered to include tasks of recapitalization of and/or lending to troubled credit institutions just like it is the practice in many countries of Europe. According to Fekete-Győr, "these opportunities of intervention are always cheaper than the reimbursement of deposits" (Palkó, 2012).

OBA's revenues come from its membership fee (0.5% of registered capital), regular annual (2-3‰ of all deposits) and extraordinary (max. 2‰ of deposits) payments

from credit institutions, 80% of the fines collected by PSzÁF from credit institutions – other than saving cooperatives which are members of other deposit insurance organizations – and state-guaranteed loans from MNB or credit institutions (§112, Paras 119, 120, 121, HPT, 1996). OBA's assets in 2011 amounted to 91.9 billion forints, which is 0.3% of all assets and less than 1% of all deposits in the banking sector (OBA, 2011).

3.2.4.2. National Savings Cooperatives Institutional Representative Fund (OTIVA)

Faced with competition from new and better-funded commercial banks, savings cooperatives realized the need to cooperate. In 1989, they established their “peak bank”, Takarékbank, which is now the 13. biggest Hungarian credit institution by assets. Later in 1990 they formed their lobby institution, the National Association of Savings Cooperatives (OTSz) and in 1994 they set up together with the Hungarian State their own stability fund, the National Savings Cooperatives Institutional Representative Fund (OTIVA) (Takarékbank, 2006).

OTIVA manages the Security Reserve Fund (BTA) to prevent and handle crisis situations in the cooperatives sector and also to complement the services provided by OBA. Joining OTIVA is voluntary, its members include 102 savings cooperative (76% of the sector), 3 banks (DRB, Kinizsi and Mohácsi, former cooperatives turned into banks), Takarékbank and the Hungarian State. In 2011, OTIVA’s assets totaled 16.2 billion forints, which is slightly less than 1% of all assets and slightly more than 1% of all deposits in the cooperative sector (OTIVA, n.a.).

3.2.5. Student Loan Center (DHK)

Student Loan Center Private Limited Company (DHK) was established by the Ministry of Education in 2001 by Government Decree 119 of 2001 (Decree 119, DHK, 2001) to manage the student loan system. In 2010, its ownership rights were transferred to MFB. DHK raises its funds in the capital market, where it benefits from its preferential status of being a state-owned company. Its sources come from loans granted by commercial banks and international financial institutions (e.g. European Investment Bank) and the subscription of its bonds by institutional investors in the primary bond market. DHK is not a financial institution but it is licensed to brokering the issue of electronic money.

DHK disburses two types of student loans to college students below the age of 35. The maximum amount of the freely usable type is 250,000 forints (≈average monthly wage) per semester and has a variable interest rate. The second type – available from September 2012 – can only be spent on the tuition fee by students enrolled in

fully or partly self-financed programs but it comes with no upper limit and carries a state-subsidized, fixed interest rate of 2%. Maturity of these loans is generally 10 to 15 years. Over the 10 years since its inception in 2001, DHK granted student loans of the first type to 320,000 students in the value of 229 billion forints (circa 790 million euros or less than 1% of GDP). The share of non-performing loans has so far been low (2.8%) and almost one-third of the debtors have already repaid their obligations. Although DHK is not a non-profit institution, its profit and loss statement consistently shows a profit or loss figure close to zero.

3.2.6. Cross-Border Services in the Financial Market

In Hungary, 104 foreign financial enterprises provide payment transactions such as cash transfer or money remittance, 96 foreign-based institutions are involved in providing commercial or investment banking services and 15 foreign – mostly UK-based – companies are licensed to issue and/or distribute electronic money.

3.3. The Capital Market Sector

Institutions in the capital market sector include investment enterprises, investment fund managers, venture capital fund managers, commodity dealer service providers, KELER (see 3.2.1.2.3) and the Budapest Stock Exchange. The rules governing their activities are detailed in Act CXXXVIII of 2007 on Investment Firms and Commodity Dealers, and on the Regulations Governing their Activities (BSzT) and in Act CXX of 2001 on the Capital Market (TPT).

BSzT defines (§138, Para 5, No. 1, BSzT, 2007) investment services as:

- (1) taking and forwarding orders,
- (2) carrying out orders,
- (3) proprietary trading,
- (4) portfolio management,
- (5) investment consulting,
- (6) equity underwriting,
- (7) private placement,
- (8) operation of a multilateral trading system.

Auxiliary investment services include (§120, Para 5, No. 2, BSzT, 2007):

- (a) financial asset depository, registry and account keeping,
- (b) custody and related security account keeping,
- (c) investment lending,
- (d) capital structure and M&A consulting,
- (e) investment-related currency trading,
- (f) investment and financial analysis,
- (g) underwriting-related services,
- (h) investment services related to assets underlying derivatives.

Both investment enterprises and credit institutions are allowed to carry out investment services, subject to PSzÁF approval. This legislation makes it possible in Hungary for credit institutions to provide both traditional commercial banking and investment banking services “under one umbrella”. Beside the above listed services, investment enterprises can provide the following services (§138, Para 8, No. 5, BSzT, 2007):

- i) commodity trading,
- ii) equity book keeping,
- iii) nominee services,
- iv) brokering of financial services,
- v) insurance brokering,
- vi) securities lending,
- vii) trading of client information,
- viii) group financing.

3.3.1. Budapest Stock Exchange

Budapest Stock Exchange (BÉT) is the single most important player in the capital market and the only stock exchange based in Hungary: it operates the only regulated and standardized market for securities. The conditions and requirements of issuing securities (equities, fixed income, investment coupons), going public and trading these securities on the stock exchange are laid down in Act CXX of 2001 on the

Capital Market (TPT) and are continuously checked by PSzÁF. The capital requirement for a stock exchange is 150 or 500 million forints (circa 520,000 or 1.7 million euros) depending on the type of transactions (derivative or other) but the branch office of a foreign-based exchange may also receive a license (§ 120, Para 299, TPT). Since the Hungarian securities market is relatively small (see later), however, the trend points towards further regional integration of stock exchanges in the Central and European region. In this regard, it might be an important factor that a shareholder will need the permission of both PSzÁF and the Competition Authority (GVH) if it intends to increase its share in BÉT to 66%, 75% or 100% (§ 120, Para 307, No. 3, TPT, 2001).

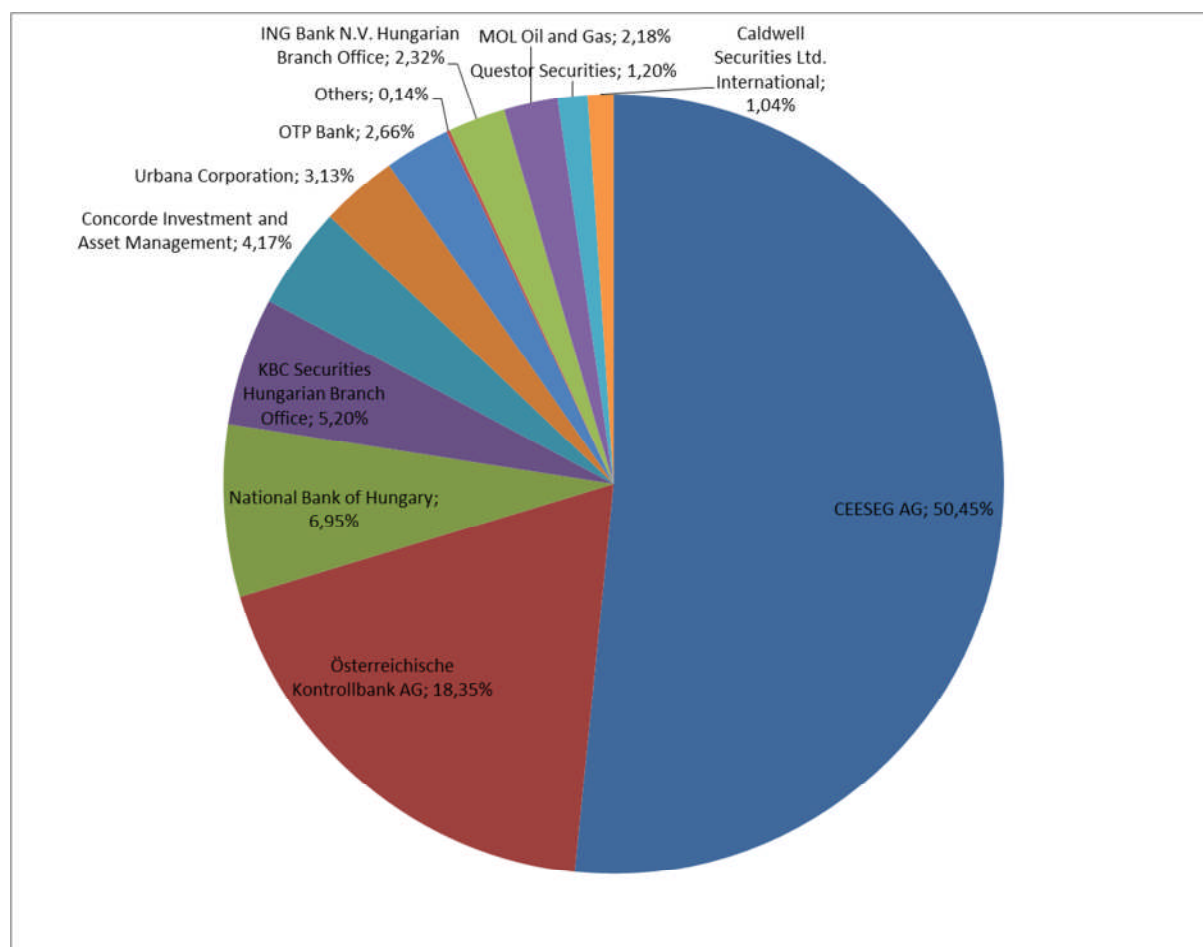
Since BÉT's merger with Budapest Mercantile Exchange (BÁT) in 2005 it has operated both as a stock exchange and as a mercantile exchange. The bulk of its turnover comes from prompt equity transactions (56% of total turnover) and currency derivatives (22%) and some from equity (12%), index (6%) and interest rate derivatives trading. BÉT also provides trading platform for a fixed income market of secondary importance (4%). The weight of grain, commodity-type futures transactions is less than 1%.²⁹ Apart from domestic assets, BÉT also offers trading in foreign shares on its BÉTa Market, where two market makers (Erste, OTP) provide liquidity behind foreign share transactions. However, the trading volume on the BÉTa Market is negligible (0.1% of total prompt equity turnover), which is probably due to the fact that domestic investors usually trade foreign shares using the platforms of their brokerage or bank or on an internet-based system provided by foreign-based investment firms.

BÉT has been majority owned by Austrian shareholders since 2004 when Österreichische Kontrollbank AG (56.3%) and Wiener Börse AG (12.5%) jointly acquired a majority stake. In 2008 Wiener Börse increased its share to 50.45% by purchasing part of the stake of Österreichische Kontrollbank. In 2010, on the

²⁹ Within the equities category, almost 98% is equities, 2% is certificates and the remaining turnover comes from investment coupon and compensation coupon transactions. Within the fixed income category, less than 92% is government bonds, 6% is treasury bills, less than 2% is corporate bonds and almost 1% is mortgage bonds trading.

initiative of Wiener Börse, leading Austrian banks and other companies listed on the Vienna Stock Exchange founded Central and Eastern Europe Stock Exchange Group AG Holding, which now owns and jointly operates the stock exchanges in Vienna, Prague, Ljubljana and Budapest. These exchanges now account for roughly two-thirds of total equity turnover in the Central and Eastern European region. BÉT's ownership structure is fragmented with altogether 77 shareholders. Figure 3.6 shows the structure highlighting owners with a share of more than 1%.

Figure 3.6. BÉT's ownership structure (2012)



Source: compiled from BÉT statistics.

3.3.2. Investment Enterprises

Investment enterprises can be established with a capital of 730,000 euros, or 125,000 euros if they are only engaged in activities (1), (2) and (4), or 50,000 euros if they are only allowed to carry out proprietary trading. Besides the capital requirements, massive investments are needed to insure a secure and transparent multilateral trading platform. Foreign-based investment enterprises and branch offices of foreign-based banks may provide services in Hungary if they are licensed by their home authority. In 2010, PSzÁF supervised 27 investment enterprises, the first ten by assets are shown in Table 3.8.

Table 3.8. Hungary-based investment enterprises (2010)

		Total assets (million HUF)	Share in total assets
1	Erste Investment	62 238	47%
2	CONCORDE Securities	16 941	13%
3	KBC EQUITAS Broker*	9 760	7%
4	CASHLINE Securities	8 735	7%
5	BUDA-CASH Broker	8 408	6%
6	QUAESTOR Securities Trading and Investment	7 753	6%
7	EQUILOR Investment	6 591	5%
8	HUNGÁRIA SECURITIES	1 846	1%
9	CODEX Broker and Custody	1 282	1%
10	STRATEGON Securities	1 091	1%

Source: PSzÁF (2010b).

*It has since changed its name to KBC Securities Hungarian Branch Office as shown in Table 3.9.

Investment enterprises in Hungary represent a small group of institutions. Their managed client portfolio grew by an annual average rate of 7% between 2003 and 2011 and accounts for 3% of all assets in the financial system, or less than 5% of GDP. Most of these institutions in Table 3.8 are independent competitors of banks – most of which have internalized investment services after 2000 – and branch offices of foreign-based financial institutions or investment enterprises. Nevertheless, market leading Erste Investment continues to operate as a separate member of a financial group.

Since the role of banks and other foreign-based enterprises is decisive in the Hungarian capital market, the ranking based on the total turnover of prompt and derivative trades on the Budapest Stock Exchange is more telling of the sector's power relations. Total duplicated³⁰ turnover of these trades is 50% of GDP, more than half of which is generated by the first five firms. Out of the 34 firms shown 12 are Hungarian branches of foreign companies, 8 are credit institutions and only 14 are domestic brokerages. Investment enterprises generate "only" 51% of total turnover. The share of investment enterprises is much smaller in the much bigger OTC market for financial assets. Here, they give only 6%, while credit institutions and branches of foreign-based companies are responsible for 56% and 38%, respectively. (See more market statistics in later parts of Chapter 3).

Table 3.9. Doubled exchange turnover of investment enterprises (2011, million forints)

Company		Prompt		Derivatives			Share in total turnover
		Equities	Fixed income	Currency	Equities	BUX	
1	ERSTE Investment	1 431 627	12 355	490 275	432 242	181 066	18.2%
2	RAIFFEISEN BANK	225 306	111 831	1 051 621	259 228	9 838	11.9%
3	CONCORDE Securities	1 126 370	624	76 233	20 602	26 315	8.9%
4	KBC Securities Hungarian Branch Office	638 906	130	336 965	45 626	91 791	8.0%
5	EQUILOR Investment	542 734	181	186 787	62 715	23 151	5.8%
6	BUDA-CASH Brokerage	347 139	0	60 926	367 892	37 491	5.8%
7	UniCredit Bank Hungary	671 538	10 809	0	0	39 940	5.2%
8	WOOD & Company Financial Services a.s.	624 044	0	0	0	0	4.5%
9	IPOPEMA Securities Spółka Akcyjna	556 400	0	0	0	0	4.0%
10	Hungarograin Brokerage	9 171	0	455 434	295	6 908	3.4%
11	MKB	84 704	19 744	235 766	44 980	1 950	2.8%
12	OTP Bank	218 412	64 829	10 491	72 634	3 439	2.6%
13	Random Capital Broker	205 019	0	0	4 925	136 097	2.5%

³⁰ Calculated by adding total long and total short positions.

14	Takarékbank	99 689	15 168	70 443	91 796	14 699	2.1%
15	CIB Bank	215 787	9 324	15 369	18 850	30 341	2.1%
16	QUAESTOR Securities Trading and Investment	115 932	0	0	76 854	75 512	1.9%
17	ING Bank N.V. Hungarian Branch Office	217 549	31 031	0	0	0	1.8%
18	HUNGÁRIA SECURITIES	103 970	0	0	27 634	52 617	1.3%
19	Solar Capital Markets	134 134	0	12 241	22 755	4 598	1.2%
20	DB Securities Spółka Akcyjna	126 601	0	0	0	0	0.9%
21	STRATEGON Securities	11 902	0	56 658	34 596	21 488	0.9%
22	K&H Bank	0	80 754	0	0	0	0.6%
23	Raiffeisen Centrobank AG	75 590	0	0	0	2 290	0.6%
24	CASHLINE Securities	20 675	0	22 566	23 517	4 383	0.5%
25	The Royal Bank of Scotland plc	0	60 823	0	0	0	0.4%
26	Citibank Europe plc Hungarian Branch Office	0	54 893	0	0	0	0.4%
27	Goldman Sachs International	0	47 745	0	0	0	0.3%
28	CODEX Custody and Securities	33 073	0	0	289	4 305	0.3%
29	REÁLSZISZTÉMA Brokerage and Investment	19 639	0	2 711	4 253	3 757	0.2%
30	Nomura International Plc	0	26 202	0	0	0	0.2%
31	Deutsche Bank AG Hungarian Branch Office	0	18 788	0	0	0	0.1%
32	BNP Paribas S.A.	0	16 907	0	0	0	0.1%
33	SPB Investment	8 842	0	0	0	0	0.1%
34	FHB Bank	941	205	0	0	0	0.0%

Source: own calculations from BÉT statistics.

3.3.3. Investment Fund Managers

Act CXCV of 2011 on Investment Fund Managers and Collective Investment Forms (BAT) lays down the rules of operation for investment funds. Investment funds are collective investment enterprises that issue and trade investment coupons. Their main activity is investment management, which is subject to PSzÁF approval. Auxiliary activities include portfolio management, investment consulting, security account keeping and security lending. PSzÁF is to be notified in advance of any cross-border activities. Investment funds can be established with a capital of 125,000 euros or, in the case of real estate funds, 300,000 euros.

34 investment fund managers operated in Hungary as of March 2012. The net asset value of their investment coupons issued represents 7% of all assets in the financial system, or 11% of GDP, which secures them the second place after credit institutions. Their asset dynamics has been among the highest, showing an annual average growth rate of 15% of the managed funds, reflecting the growing trend of financial disintermediation. Table 3.10 shows the list of the 20 leading Hungary-based investment fund managers operating in 2010.

Table 3.10. Investment fund managers in Hungary (2010)

		Net asset value (million HUF)	Share in total net asset value
1	OTP Fund Management	1 110 690	29%
2	K&H Investment Fund Management	641 645	16%
3	Erste Fund Management	446 290	11%
4	Budapest Fund Management	231 447	6%
5	CIB Investment Fund Management	185 045	5%
6	Raiffeisen Investment Fund Management	161 738	4%
7	AEGON Hungary Investment Fund Management	158 149	4%
8	ING Investment Fund Management	134 795	3%
9	MKB Investment Fund Management	131 262	3%
10	Concorde Investment Fund Management	115 571	3%
11	Pioneer Investment Fund Management	112 666	3%
12	QUANTIS Investment Management	97 065	2%

13	AXA Hungary Investment Fund Management	85 868	2%
14	Generali Fund Management	51 635	1%
15	OTP Real Estate Investment Fund Management	34 559	1%
16	FINEXT Investment Fund Management	30 997	1%
17	Aberdeen Asset Management Hungary	26 906	1%
18	Takarék Fund Management	20 426	1%
19	DIVINUS Investment Fund Management	20 168	1%
20	EURÓPA Investment Fund Management	16 581	0%

Source: PSzÁF (2010b).

The six leading fund managers that possessed 71% of the investment coupon market are members of financial groups owned by large domestic banks. In these cases mother banks profit from the synergies within their financial group as investment fund managers use their custodian services for safe keeping and handling the assets bundled in the investment fund³¹. The rest of the fund managers are owned by insurers, brokerages or other types of investors, mostly foreign-owned. Synergies also exist between brokerages and investment fund managers as brokerages can also provide custodian services (see point (a) in auxiliary investment services).

Data show that the number of managed funds grew dynamically from 137 in December 2004 to 535 in June 2012. 81% of the funds invest in different types of domestic or foreign financial assets – 49% in bonds, 8% in equity, 3% in both, 5% in derivatives, 3% in other assets and 14% are guaranteed funds – while two fund managers (OTP and Biggeorge's) manage real estate funds, which represent 11% of all net asset value. The remaining 8% of the wealth is managed in closed end funds.

Additionally, it is important to note that investment fund managers not only manage investment funds but also manage a decisive part of the portfolio of pension funds, health funds, mutual aid funds and insurance companies. Table 3.11 shows the distribution and the total amount of the wealth of the fund and the insurance sectors managed by investment fund managers. See further information on asset management in Chapter 9. The table also shows that the portfolio managed for the

³¹ Olasz-Kóczán (2010) describes the operation and structure of the Hungarian market for custodian services in great detail.

fund sector fell sharply in the second quarter of 2011 when private pension funds transferred 93% of their portfolio to the State (see more details in subsection 3.5.1). Nevertheless, investment fund managers are still responsible for managing an asset pool equivalent with 24% of GDP.

Table 3.11. Investment and wealth management by fund managers (billion forints)

	Mar-11	Jun-11
Open end investment funds	2 209	2 181
Other (guaranteed, derivative, real estate, closed end) funds	1 614	1 614
<i>Total investment funds managed</i>	<i>3 823</i>	<i>3 795</i>
Wealth managed for the fund sector (pension, health, mutual aid funds)	3 782	955
Unit-linked products	591	576
Other insurance wealth	910	892
Wealth managed for the insurance sector	1 501	1 467
Wealth managed for others (local governments, corporates, households)	386	371
<i>Total wealth managed</i>	<i>5 669</i>	<i>2 793</i>
Total assets managed	9 492	6 588

Source: BAMOSz (2011a).

3.3.4. Venture Capital Fund Managers

Venture capital funds are an alternative instrument of financial disintermediation: they collect funds by issuing venture capital fund coupons with a minimum maturity of 6 years and invest these funds on the commission of their clients. The strict rules governing venture capital fund managers' activities are specified in Act CXX of 2001 on the Capital Market (TPT). Their registered capital must be at least 250 million forints (circa 850,000 euros). Their investment in and lending to one group of companies combined is not to exceed 25% of their total capital. They may lend out a maximum of 50% of their sources to companies in which they have a controlling stake, but loans granted to one group of companies should not be more than twice the invested amount. Venture capital funds may not invest in real estate while they may purchase shares listed on the stock exchange only if they acquire at least 10% of the issuer within 1 year (§ 120, Paras 296/G-296/P, TPT, 2001).

Currently, 18 venture capital fund managers are registered by PSzÁF, 8 of which manage so called common or co-investment funds established with EU contribution through the Jeremie program. Venture capital fund managers are not displayed explicitly in PSzÁF statistics and the basic data of their managed funds is collected from various other sources in Table 3.12. The table shows that the total asset value managed in these funds is a marginal 0.3% of Hungarian GDP. The presence of credit institutions in this segment is almost non-existent, with the exceptions of MFB and OTP.

Table 3.12. Venture capital funds in Hungary (2012)

Fund manager	Owners	Fund name	Capital (million HUF)	Start	Maturity
1 Biggeorge's-NV EQUITY	2 private persons	Biggeorge's-NV EQUITY I.	4 000	2008	10
		Biggeorge's-NV EQUITY II.	n.a.	2012	n.a.
2 Carion Capital	Carion Holding	Carion I.	250	2011	7
3 Catalyst Partners	n.a.	-	-	-	-
4 Central-Fund	8 private persons and companies	Centech New Hungary	5 200	2009	n.a.
5 Corvinus	MFB Invest (MFB group)	Corvinus First Innovation (CELIN)	5 000	2005	15
6 DAY ONE	4 private persons	Day One	402	2011	6
7 DBH Investment	Development Bridge Head Group	DBH	5 000	2009	10
8 Euroventures	n.a.	Euroventures IV.	7 100	2010	10
9 FINEXT STARTUP	4 private persons	FINEXT STARTUP	7 360	2010	n.a.
10 First Hungarian	8 private persons and companies	Central Fund	n.a.	2008	n.a.
11 Informatics	Regional Devepoment Holding (MFB group)	Informatics	3 000	2002	n.a.
12 MORANDO	Gödöllő Industrial Park, LC Invest, Confident Invest	MORANDO	6 506	2008	10
13 PBG FMC	Portus Buda Group	-	-	-	-
14 Portfolion	OTP Bank	OTP I.	6 800	2010	8
		OTP Turnaround	n.a.	2012	n.a.
15 Primus Capital	4 private persons	PRIMUS III.	6 200	2010	10
16 Saker Capital	n.a.	Saker Global	n.a.	2010	n.a.
17 Széchenyi	National Development Agency (NFÜ)	Széchenyi Capital Investment	14 000	2010	10
18 V3 Partners	n.a.	-	-	-	-

Source: own collection from company websites.

3.3.5. Private Equity Presence in Hungary

While venture capital funds usually provide seed capital or early or expansion stage financing and a few of them even act as typical business angels, larger volume transactions into more mature and less risky companies such as buyouts in Hungary have been carried out mostly by foreign-based private equity funds (see Chapter 9). Although PSzÁF does not keep a record of the number and investment of private equity firms with an operational focus on Hungary, Hungarian Venture Capital and Private Equity Association (HVCA) statistics provide some guidance. While only 15 foreign-based private equity fund management companies are members of HVCA, the number of private equity firms active in Hungary is considerably more. In its 2011

yearbook, HVCA surveyed 126 foreign- and Hungary-based private equity and venture capital funds with an interest in the Hungarian corporate market, which have invested 3.7 billion US dollars (circa 3 billion euros or 3% of GDP) in Hungarian companies since 1989 (see Table 3.12). However, the value of their currently operating investments is uncertain as HVCA only provides an estimate for the value of realized exits from these investments at 900 million US dollars (circa 730 million euros) (HVCA, 2011). A conservative estimate is, therefore, that private equity funds currently manage Hungarian corporate assets worth circa 2 billion euros or 2% of GDP. Unfortunately, this is coupled with a very low combined penetration of venture and private capital: only 0.2% of all companies in Hungary have access to these types of financing, which indicates that most of private equity investment in Hungary have been realized in the form of large volume takeover transactions in petrochemicals, drug manufacturing and information technology (HVCA, 2011).

Table 3.12. Venture capital and private equity investments in Hungary by sector (1989-2010)

	Number of investments	Value of investments (million US dollars)	Share in investments	Average investment value (million US dollars)
Communications	82	718.5	19.4%	8.8
Computers	40	65.8	1.8%	1.6
Other electronics	6	7.7	0.2%	1.3
Biotechnology	6	19.6	0.5%	3.3
Medical and healthcare	35	868.9	23.4%	24.8
Energy	11	38.5	1.0%	3.5
Consumer goods	76	293.5	7.9%	3.9
Industrial goods	22	29.9	0.8%	1.4
Chemicals	8	946.9	25.5%	118.4
Industrial automation	1	0.6	0.0%	0.6
Other manufacturing	29	108.5	2.9%	3.7
Transportation	12	197.6	5.3%	16.5
Financial services	28	289.6	7.8%	10.3
Other services	36	81.1	2.2%	2.3
Agriculture	8	13	0.4%	1.6
Construction	4	1.5	0.0%	0.4
Other	12	25.1	0.7%	2.1
Total	416	3706.3	100.0%	8.9

Source: HVCA (2011).

3.3.6. Investor Protection Fund (BEVA)

The Investor Protection Fund was brought to life in 1997 by an earlier version of TPT as a capital market institute to guarantee investment transactions. Companies involved in investment activities (1) to (4) and auxiliary investment activities (a) and (b) are members of BEVA by law (§ 120, Para 120, No. 1, TPT, 2001). Currently, BEVA has 63 members: 18 credit institutions, 20 investment enterprises and commodity dealers, 24 fund managers and KELER. BEVA compensates the claims of actors operating outside the governmental sector and capital market up to the maximum amount of 20,000 euros by client and BEVA member combined. Compensation

occurs when a BEVA member is liquidated and client claims are frozen. Claims are fully compensated up to 1 million forints (circa 3,400 euros), and in 90% on the amount above 1 million forints. BEVA may borrow with state guarantee if its assets are insufficient to cover any predicted liability to pay for any realized damages.

BEVA revenues come partly from a one-off initial contribution, which is 0.5% of the registered capital of the company seeking membership. This one-off fee is between 500,000 and 3 million forints (circa 1,700-10,300 euros). The other main type of BEVA revenue is the annual contribution paid by members after the risk adjusted fee base, which is specified in the contribution bylaws. Members are expected to pay between a minimum of 500,000 forints and a maximum of 2 million forints (circa 1,700-6,900 euros or a maximum of 3‰ of the fee base) annually, whose precise amount is set by the Board of Directors (BoD). Finally, the BoD may also order BEVA members to pay extraordinary charge to cover predicted liabilities including its debt repayment. BEVA's BoD consists of 7 members appointed for 3 years each. Appointing BoD members are: MNB, KELER, BÉT, PSzÁF and member institutions (2) while one member is BEVA's Managing Director.

3.4. The Insurance Sector

Act LX of 2003 on Insurance Companies and the Insurance Business (BIT) specifies the rights and obligations of insurance companies, intermediaries and associations³². Insurance, insurance intermediation or insurance consulting activities need PSzÁF license. Apart from the insurance activity, which is the privilege of incorporated insurance companies, mutual insurance companies, associations or branches of foreign-based insurers, insurance companies may carry out insurance-related activities such as

- a) derivative transactions,
- b) brokering financial services (HPT),
- c) taking and forwarding orders (BSzT),

³² We use PSzÁF terminology here although these associations are really cooperatives, similar to those in the financial and fund sectors.

- d) mortgage lending (JHT),
- e) security lending (TPT),
- f) services for mother, daughter or affiliate companies,
- g) recruiting members into voluntary mutual insurance funds.

Insurance companies may only carry out either life or non-life insurance related activities. The exceptions from this rule are the joint operation of a life insurance unit together with a health (accident and sickness) insurance unit and reinsurance activity. Mutual insurance companies have restricted licenses: they are not allowed to provide credit, suretyship or reinsurance. Every client entering into a contract with a mutual insurance company becomes a member and pays annual membership fee. Insurance associations can be established with 10 members.

Insurance intermediation has a capital requirement of 5 million forints (circa 17,000 euros). When establishing insurance companies, owners need to prove that they have sufficient capital to set up the operational units and pay for expected liabilities (minimal security capital). For insurance companies (Plc.) and branches the minimal operational capital requirement is 100 million forints (circa 340,000 euros), for associations it is 50 million forints (circa 170,000 euros) and it is 1 million forints (circa 3,400 euros) for mutual insurance companies. Minimal security capital requirement for insurance companies (Plc.), branches and associations is 3.5 million euros for life and 2.3 million euros for non-life and 3.2 million euros for reinsurance activities. For mutual insurance companies it is 75% of the above amounts. Insurance companies are supposed to manage their assets covering technical provisions and unit-linked life insurance provisions in a transparent manner.

Incorporated and mutual insurance companies are the fourth biggest group of institutions by assets in the Hungarian financial system. Between 2003 and 2011 their assets grew at an average annual rate of 9%, now representing 6% of all assets, or 8% of GDP. Table 3.13. shows the 20 leading insurance companies out of the total 37 operating in 2010. Within total assets, assets of life insurance units represent 76%. Assets covering unit-linked life insurance provisions represent 40%

of the total assets of insurance companies. An overwhelming majority of these companies are foreign-owned, the few exceptions being CIG Pannónia, Hungarian Post and the 5 mutual insurance companies that are owned by their members. The table shows that this most important subsector of the insurance market is quite concentrated: the first 4 companies give 54% of all assets.

Table 3.13. Top 20 insurance companies in Hungary (2010)

		Total assets (million forints)	Share in total assets
1	ING Insurance	439 063	18%
2	Allianz Hungária Insurance	320 792	13%
3	Generali-Providencia Insurance	297 299	12%
4	Groupama Garancia Insurance	257 656	11%
5	AEGON Hungary General Insurance	234 918	10%
6	UNIQA Insurance	126 251	5%
7	Aviva Life Insurance	109 910	5%
8	K&H Insurance	101 148	4%
9	Hungarian Post Life Insurance	77 095	3%
10	AXA Insurance	69 768	3%
11	UNION Vienna Insurance Group	52 901	2%
12	DIMENZIÓ Insurance and Self-Aid Society	47 310	2%
13	SIGNAL Insurance	46 520	2%
14	GRAWE Life Insurance	45 238	2%
15	AHICO First American-Hungarian Insurance	45 180	2%
16	CIG Pannónia Life Insurance	41 213	2%
17	ERSTE Vienna Insurance Group	27 526	1%
18	Hungarian Post Insurance	9 098	0%
19	Traffic Insurance Society	9 020	0%
20	VICTORIA-VOLKSBANKEN Life Insurance	7 661	0%

Source: PSzÁF (2010b).

Apart from the above domestic institutions, 528 EEA-based insurance companies and about 3,000 EEA-based insurance intermediaries providing cross-border services, as well as 15-15 branches of foreign-based insurers and insurance intermediaries are registered by PSzÁF.

3.5. The Fund Sector

3.5.1. Private Pension Funds

Act LXXXII of 1997 on Private Pension and Private Pension Funds (MPT) defines the category of private pension funds. Up to 2010 it had been mandatory for new employees entering the labor market to join and stay in one of these funds, hence their name mandatory pension funds. Between 2002 and 2010, then mandatory pension fund assets showed a very dynamic annual growth rate of 29% (!) and represented almost 6% of total assets, or 12% of GDP. Since drastic modifications to MPT in 2010 and 2011 these institutions have been called “just” private pension funds as new employees may join voluntarily with no obligation to stay in the fund. In 2011 pension contributions paid by employees (8% of gross salary) were diverted from the private pension funds to the state-owned Pension Reform and Public Debt Reduction Fund and members’ pension savings were transferred to this same fund unless they signed an official statement to stay in the pension fund. Additionally, pension funds were made to pay their leaving members the so called “real return”, calculated as the difference between their accumulated pension savings and their inflation-indexed contributions. As a result, membership dropped by 97% and the total portfolio managed by these pension funds fell accordingly from 12% to less than 1% of GDP by 2011, now representing only 0.4% of all assets in the financial system. The number of private pension funds has also fallen from 18 in 2010 to 11 by June 2012.

At the time of writing this study, the future of private pension funds is uncertain. Since their role as the second (mandatory private) pillar of the pension system was terminated as joining has been made voluntary (see Chapter 9). They are already unable to finance operation from the operational fee as it was cut drastically from 4.5% to 0.9% of member payments. From recent reactions, it seems that the owners of private pension funds, among them mostly banks and insurance companies, are trying to find an elegant exit from this market without losing the savings of their still remaining clientele.

3.5.2. Voluntary Mutual Insurance Funds

Act XCVI of 1993 on Voluntary Mutual Insurance Funds (ÖPT) introduced the institution of voluntary mutual insurance funds to encourage self-reliance and self-insurance in the early years of economic transition when the state was continuously struggling with the increasing burden of social security (e.g. pension, healthcare) and other related payments. Voluntary funds are all non-profit institutions where the main decisions are made democratically by members who join or leave the funds voluntarily. They may fall into three categories, according to ÖPT: (i) complementary pension funds, (ii) health funds, or (iii) self-aid (or mutual aid) funds. Complementary pension funds may provide regular or lump-sum pension payment once the member reaches retirement age. Health funds may finance and organize preventive health programs, purchase health services, lower medical costs, replace salary in case of disability or support relatives in case of death. Self-aid funds may provide insurance against social risk events (e.g. contribute to burial costs in case of death) or lower medical costs.

Voluntary mutual insurance funds must meet strict regulations in making financial transactions. They may lend securities to other institutions for investment purposes but may only grant loans to their members on conditions defined in their own regulations. They practically cannot borrow, issue bonds or grant guarantees. They cannot keep more than 10% of one company's shares in their portfolio for more than one year, however, they can freely invest in real estate assets. Because their accounting is regularly monitored by PSzÁF, they usually subcontract professional custodian services to credit institutions, investment firms or fund managers.

As of March 2012, 55 voluntary pension funds, 32 health funds and 10 mutual aid funds operated under PSzÁF supervision. Until 2010, mandatory private pension funds accumulated wealth relatively faster than complementary pension funds (10%) and, thus, the assets of the latter group saw their share slip below 2% of all financial assets, or, 3% of GDP. Since the drastic change of legislation on private pension funds in 2010, however, this trend seems to have reversed and voluntary pension fund assets are on the rise again in both absolute and relative terms. This is helped by a continuing 20% personal tax refund after all member contributions. Separately,

health fund assets have been increasing at an annual average of 27% over the past decade to 1‰ of all assets (2‰ of GDP), while mutual aid funds have so far been unable to accumulate significant wealth. Table 3.14 shows the five big players in each of the three segments. In the market of voluntary pension and health funds the affiliates of banks and insurance companies are the leaders, and the first five players possess more than half of all assets. The market of self-aid funds is dominated by one big player (LIGA, now called Pannonia), which is providing employer-financed benefits to employees of different companies in the energy sector.

Table 3.14. Five biggest voluntary pension funds, health funds and mutual aid funds (2010)

	Assets (million forints)	Number of members	Share in market assets
Voluntary pension funds			
1 OTP Voluntary Complementary Pension Fund	133 365	237 177	15%
2 Allianz Hungária Voluntary and Private Pension Fund	109 062	225 603	13%
3 AEGON Hungary Voluntary and Private Pension Fund	102 780	203 261	12%
4 MKB Pension Fund	88 210	97 803	10%
5 Pension Fund of Electricity Companies	59 640	30 055	7%
Voluntary health funds			
1 MKB Health Fund	8 490	133 525	15%
2 OTP National Health Fund	8 430	161 428	15%
3 AXA Voluntary Health Fund	5 853	122 803	11%
4 K&H Medicina Health Fund	3 805	62 753	7%
5 TEMPO National Voluntary Complementary Health Fund	3 739	70 075	7%
Voluntary mutual aid funds			
1 LIGA Voluntary Mutual Self-Aid Fund	1 081	12 936	54%
2 Józsi Self-Aid Fund for Burial Support	293	2 957	15%
3 Életút Self-Aid Fund	286	2 608	14%
4 Prémium Voluntary Mutual Complementary Self-Aid Fund	121	1 386	6%
5 Self-Aid FundÖnsegélyező Pénztár	73	1 157	4%

Source: PSzÁF (2010b).

3.5.3 Pension Guarantee Fund

The Pension Guarantee Fund (PGA) is OBA's equivalent institution in the fund sector and its legal status is specified in MPT. It secures the members of mandatory private pension funds against financial fraud, imprudent practices, lack of supervision and related damages. PGA compensates mandatory private pension fund members if (1)

their claims are frozen at the time of the transfer of savings to another fund, (2) the value of their savings is below the so called return guaranteed sum, (3) the reserves of their fund are insufficient to cover pension payments (§ 82, Para 89, No. 1, MPT, 1997).

PGA's borrowing is backed by state guarantee. Its revenue comes mainly from guarantee fee payments by the private pension funds which are its members by law. A pension fund is obliged to pay a maximum guarantee fee of 0.4% of its total membership payments. In case PGA's funds fall below 0.1% of the total asset value of all the pension funds, it may also require extra payment. If PGA's funds rise above 1.5% of total assets it suspends guarantee fee payments. PGA's main decision making body is the Board of Directors with its 7 members appointed for 3-year terms. 4 of the members are appointed on the recommendation of the President of PSzÁF. The Board's work is monitored by a 3-member Supervisory Board whose members are also appointed for 3 years on the recommendation of the President of PSzÁF. PGA is supervised by PSzÁF and its activities are also monitored by the State Audit Office (ÁSz).

3.6. Other Important Institutions of the Hungarian Financial System

3.6.1. Hungarian State Treasury (MÁK)

Hungarian State Treasury (MÁK) was set up as a budget institution in 1996 with the purpose of executing the budget of the government, providing other budget institutions with free financial and investment services (payment transactions, clearing of accounts, issuance of electronic money, basic investment services and depository and custody of compensation coupons) and managing government debt. Today, MÁK is the central institution of the so called treasury circle³³, acting as the account holder, treasurer and liquidity manager for these institutions. MÁK controls the so called Single Treasury Account, the main account of the government, kept with MNB, ensuring that internal transfers between budget institutions leave the balance of the treasury circle unchanged. It also records the guarantees granted by

³³ Central budget and its institutions, social security funds and separate state-owned funds.

the state, manages the central payroll calculation of public servants, disburses central appropriations to other institutions such as local government or local health institutions and administers state subsidies to households (family and child benefits, housing subsidies, energy price subsidies) through its country directorates.

3.6.2. Government Debt Management Agency (ÁKK)

ÁKK was founded in 1995 by the Ministry of Finance but was integrated into MÁK in 1996 as an independent unit responsible for government debt management and the relating back-office work. Later in 1996 ÁKK was made responsible for coordinating the retail sale of government securities in MÁK's branch network. In 1997 ÁKK began managing Hungary's foreign currency debt and in 1999 ÁKK took over from MNB the task of issuing foreign currency debt securities and raising loans in international markets in the name of the government. In 2001, Government Debt Management Agency Private Limited Company (ÁKK) was established from MÁK as a separate state-owned corporation to finance and manage the government debt and the deficit of the central government and manage the freely available funds of the government. In 2004 ÁKK was authorized to carry out derivative transactions (IRS and CCIR swaps) in international markets as part of foreign currency debt management. Later, in 2011, MÁK was reinstated as the main provider of financial services for the budget circle and ÁKK was left with the more narrow tasks of (1) preparing the annual financing plan of the central government in line with the budget and the expected annual interest expenses and (2) carrying out the necessary transactions to raise the funds needed to finance government expenditures. For this later purpose, ÁKK auctions government bonds, issues foreign exchange bonds or borrows from the money market. ÁKK also helps MÁK to manage the Single Treasury Account (§ 195, Para 75, ÁHT, 2011).

ÁKK is authorized to provide investment services related to the organization of security offerings, security account management and custody, proprietary trading in the secondary government bond market, security lending, repo and reverse repo

transactions, prompt, forward, hedge, swap and derivative transactions. Its ownership rights are exercised by the Ministry of National Economy.

3.6.3. State Audit Office of Hungary (ÁSz)

As stipulated by the Constitution and Act LXVI of 2011 on the State Audit Office of Hungary, ÁSz regularly audits and evaluates the operation of public finances. Financial audits cover social security and separated state funds, local governments and minority self-governments, regional development councils of the counties, economic chambers, public foundations, non-profit organizations, pension funds, credit institutions, institutions of higher education, political parties, their foundations and churches. Audited institutions include the Office of the Hungarian National Assembly, the Hungarian State Holding Company, the National Tax and Customs Administration, the National Bank of Hungary, the National Council for Communications and Information Technology, the National Media and Infocommunications Authority, the Public Service Public Foundation as well as at the Hungarian Academy of Sciences. The modification of legislation on ÁSz and the election of its President and Vice President for 12-year terms require two-thirds majority in Parliament.

3.6.4. Hungarian Post (MP)

State-owned Hungarian Post (MP) acts as a retail arm of the state in the distribution of short-maturity government papers. MP sells two types of Treasury Saving Bills with maturities of 1 and 2 years. These securities can only be purchased by private individuals of Hungarian residence.

3.7. Money Market

3.7.1. Currency Markets³⁴

Similar to stock markets and housing prices, CESEE currencies were initially hardly affected by the global economic and financial crisis. Against the background of strongly appreciating (possibly overshooting) currencies, negative global investor sentiment, perceptions of an approaching end of the policy rate cycle and in some cases adverse country-specific factors, however, all free-floating CESEE currencies came under intensified market pressure from September 2008, before recovering since March 2009 (except for the Romanian lei). Exchange rate pressures prompted many central banks to intervene, either verbally (e.g. the Czech Republic, Poland, Romania, Hungary) and/or through direct foreign exchange market interventions (e.g. Romania). Also CESEE countries with fixed or quasi-fixed exchange rate regimes felt downward pressures. In Latvia and Croatia central banks intervened on the OTC, spot and derivatives markets. Moreover, the vulnerability of the currency swap market increased significantly with the escalation of the sovereign debt crisis and the strengthening of the Swiss franc.

Since mid-2001, the Hungarian central bank operated a mixed framework that combined an inflation target with a unilateral peg of the forint to the euro, with a fluctuation band of +/-15%. On 26 February 2008, the exchange rate floatation band was abolished and a free-floating exchange rate regime was adopted. The move aimed at helping the central bank to better control inflation by removing possible conflicts between maintaining the exchange rate band and the inflation target, thereby more firmly anchoring inflation expectations (see more in Chapter 12).

Following a period of appreciation that culminated in the currency reaching the strong edge of the fluctuation band in January 2003, a subsequent weakening of the forint took place in 2004 and the forint continued to appreciate until March 2005. However, between August 2005 and August 2006 the forint/euro exchange rate

³⁴ Sources: Mák & Páles (2009), Pales et al. (2011), Moreno & Villar (2010), older: Gereben & Kiss (2006), Saxena & Villar (2008), Csávás & Erhart (2005).

weakened by over 12%, in response to growing concerns among investors about the development of Hungarian fundamentals, notably the fiscal situation. From a low point in June 2006, the forint gradually strengthened against the euro, as a result of improved perception of Hungarian fundamentals following the strong commitment to fiscal consolidation as well as a resumption of the risk appetite of investors. The strengthening path came to a halt and then reversed in mid-2007. Notwithstanding positive surprises on the fiscal side, the financial market turbulences and increased risk aversion of investors led to some weakening of the exchange rate in August and November, which only partly reversed. The forint significantly depreciated in January 2008, largely due to increased risk aversion vis-à-vis emerging markets combined with a weaker economic outlook and higher inflation in Hungary. However, the central bank's increase of the main policy rate as well as some improvement in sentiment vis-à-vis Hungary following better trade data led to a sharp appreciation in March 2008. The exchange rate peaked in July 2008 before depreciating substantially in the subsequent three months, as the Hungarian economy turned out to be particularly vulnerable to the global financial market turmoil.

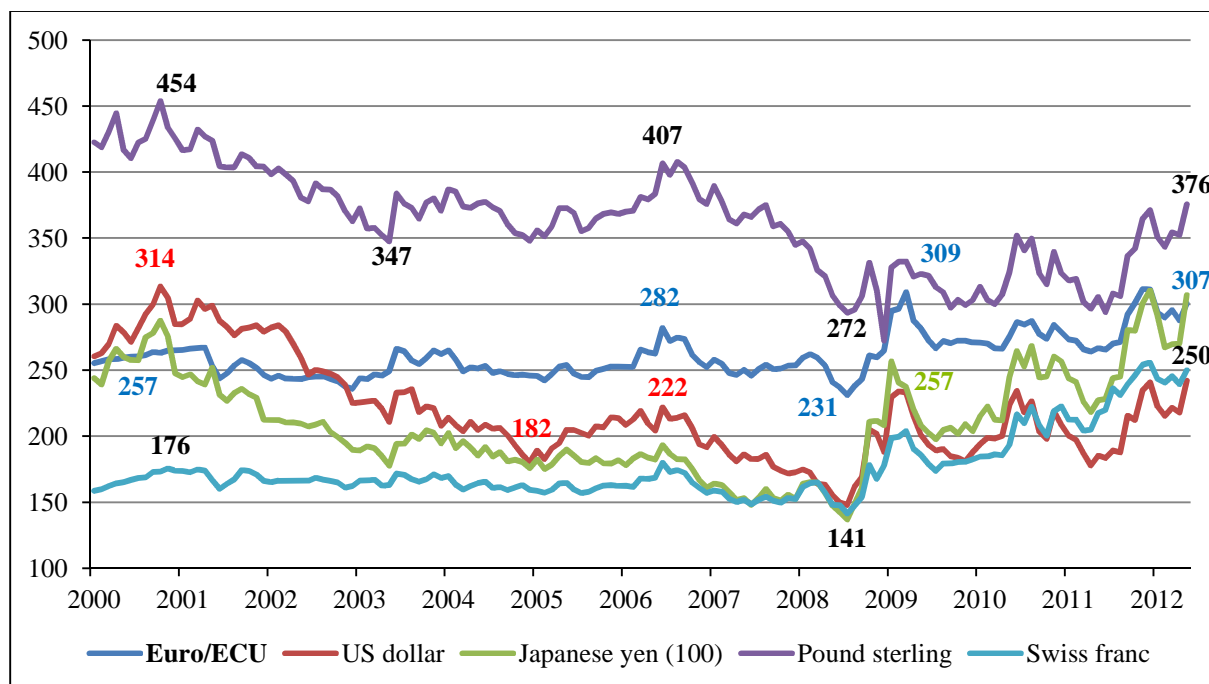
The global financial turmoil triggered by the Lehman fallout had a significant impact on the Hungarian currency in late 2008. Forint fell 6% against the euro over the course of one day (October 10th 2008) and by 11% over the course of two weeks (between October 9th and October 22nd 2008) in the first days of the crisis. But it did not stop with that: forint depreciated vis-à-vis the euro by an overall 27%(!!) between October 9th 2008 and March 6th 2009. Unsurprisingly, 2008 brought with it the peak of the domestic OTC FX market in terms of turnover, with foreign investors being the most active players in the most actively traded euro-forint pair (see Figures 3.9 and 3.10). In line with the general improvement of the global financial market situation, the forint started to recover in early March 2009 and followed an appreciating trend until end of July 2009.

The forint exchange rate against the euro has exhibited high volatility in recent years. After having enjoyed a period of relative stability between August 2009 and April 2010 in the context of the EU-IMF balance of payments assistance program, the

forint depreciated sharply in May 2010 and remained weaker throughout the summer reflecting increased uncertainty about the future course of economic policy following parliamentary elections and the formation of a new government in spring 2010. The forint exchange rate against the euro followed a mild appreciating trend from September 2010 until April 2011 and then broadly stabilized for another three months, as the government proclaimed a strong commitment to public debt reduction while the monetary policy stance was also tightened somewhat in late 2010 and early 2011. Subsequently, mounting financial market tensions in weaker euro area economies started to negatively affect local FX markets in central and Eastern Europe. The forint suffered the largest losses, weakening by some 12% against the euro between July and December 2011, also due to some controversial domestic economic policy measures, such as the possibility to repay FX mortgage loans at historical exchange rates. It recovered somewhat in early 2012 amid a pick-up in global risk appetite accentuated by expectations that an agreement on precautionary balance of payments assistance by the EU and the IMF would be reached soon. During the two years before this assessment, the forint depreciated against the euro by 6.5% (see Figures 3.7 and 3.8).

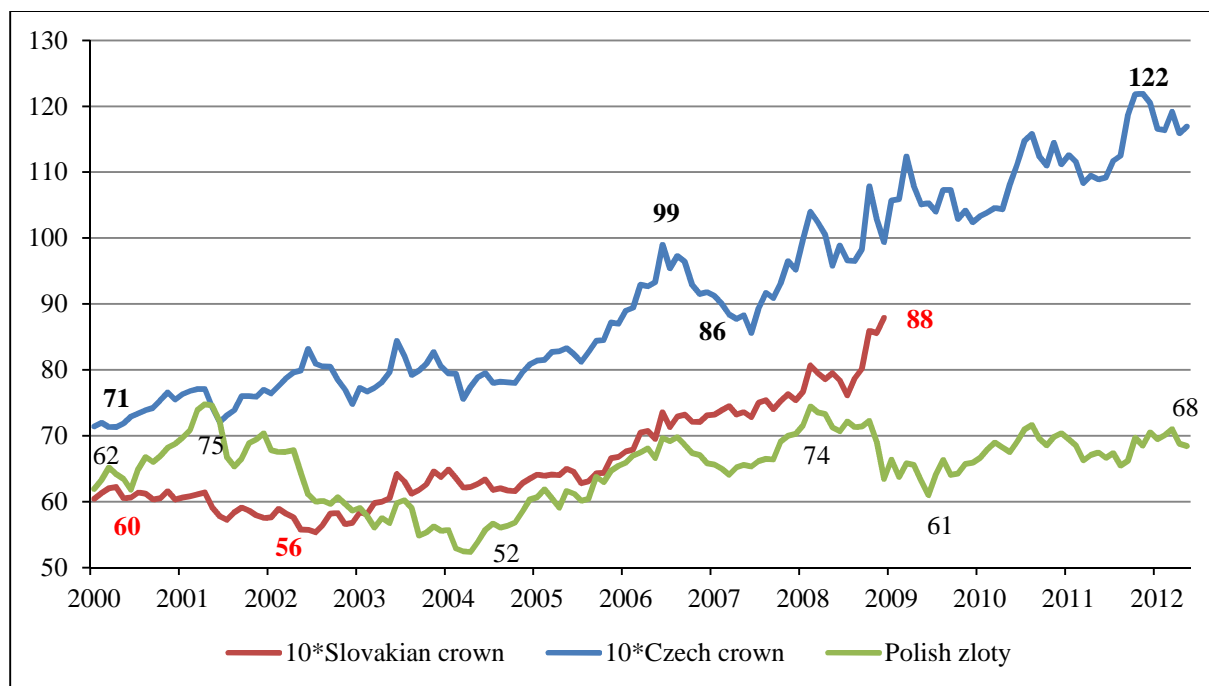
The forint-Swiss franc exchange rate has mostly driven by the Swiss franc-euro cross exchange rate. The forint-euro exchange rate was relatively stable, while the forint exchange rate vis-à-vis the dollar and the Swiss franc became more volatile after 2009. As regards the exchange rate vis-à-vis the Swiss franc, the problems stemming from increased volatility were compounded by the strengthening of the Swiss franc. As investors' risk appetite declined during the more turbulent recent periods, the CHF appreciated not only vis-à-vis the forint but also against several developed currencies. This implies that financial markets may see an unusually pronounced appreciation of the Swiss franc as a safe-haven currency, should a more lasting wave of risk aversion materialize.

Figure 3.7. Central exchange rates at the end of the month (EUR, USD, JPY, GBP, CHF, all measured in forint)



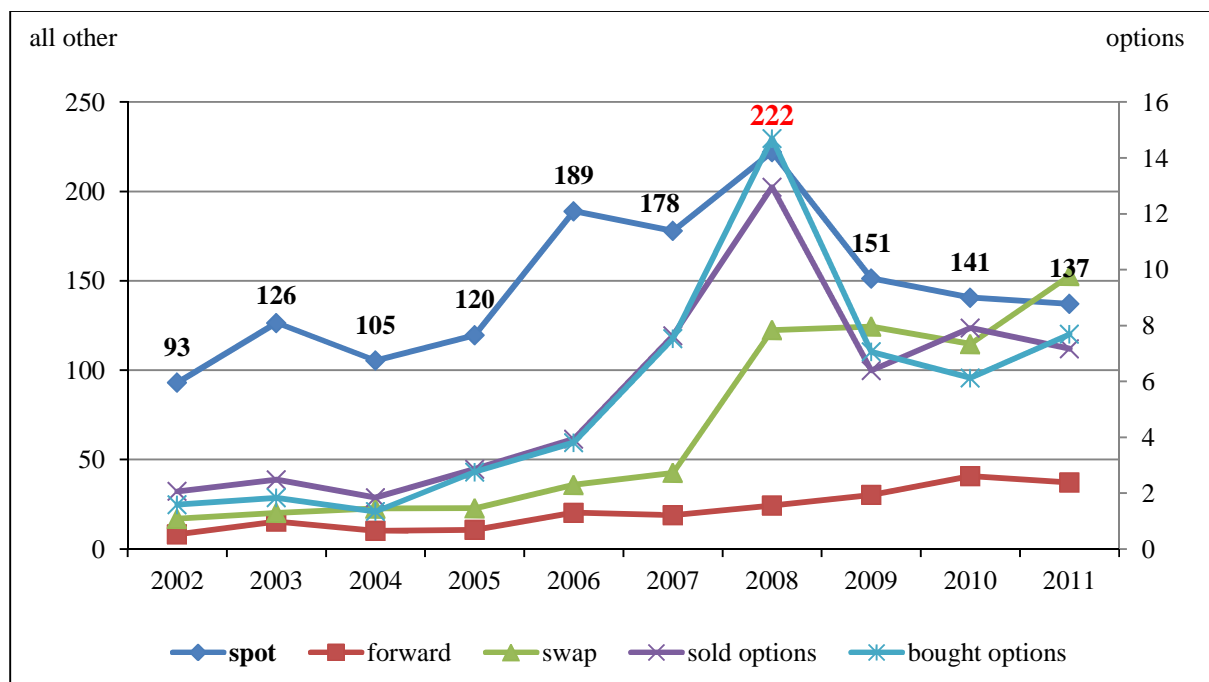
Source: MNB.

Figure 3.8. Central exchange rates at the end of the month (all measured in forint)



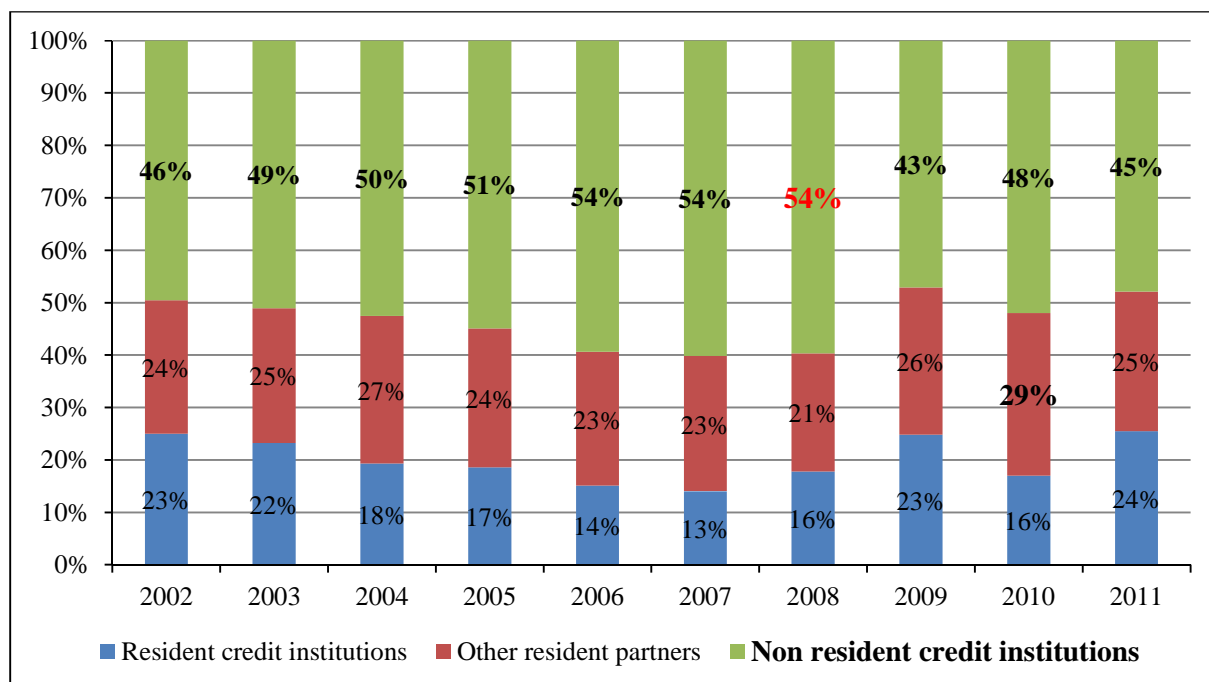
Source: MNB.

Figure 3.9. HUFEUR average daily turnover on the Hungarian OTC FX market (billion forints)



Source: own calculations from MNB data.

Figure 3.10. HUFEUR transactions by credit institution types (percentage of total transactions)



Source: own calculations from MNB data.

3.7.2. *Interbank Market*³⁵

According to turnover data for the euro money market, unsecured debt transactions constituted the most significant segment of the euro area up to 2000. However, since 2001 the repo market has taken the lead. Transaction volumes in the FX swap market are far lower than in the other two markets. By contrast, in the Hungarian money market, where trading volumes have been rising (albeit at a slowing pace), FX swap transactions are dominant: their volume is twice that of unsecured debt transactions. The repo market in turn is dwarfed by the two other segments in terms of the volume of transactions conducted, only giving 1-2% of total transaction volume. The currently much wider bid-ask spreads in all three Hungarian markets are expected to shrink after the adoption of the euro.

The gradual rise in turnover in the Hungarian money market up to 2008 is due mainly to foreign participants' vigorous activity. Most transactions mature in less than one month in both the Hungarian and euro area money markets, and transactions with one-day maturity account for 80%–90% of total unsecured deals. Whereas the share of non-resident counterparties in the three segments of the euro money market is around two-thirds, they account for nearly 90% of the Hungarian FX swap market. Activity in the Hungarian money markets is concentrated to a much higher degree than in the euro markets: the number of participants in the domestic repo market is particularly low.

Money and debt markets, as well as risk premium as reflected by CDS spreads, remained relatively stable until September 2008 in the CESEE region, but were strongly affected by the crisis afterwards due to waning investor confidence and rising financing and default risks in some countries. In most CESEE countries money and debt markets improved again in the course of 2009, although the levels prior to September 2008 were not reached again by the end of 2009. Money market rate spreads increased strongly in the second half of 2008, with Romania and Latvia being the most affected although at different points in time. These spreads remained

³⁵ Sources: Gereben (2000), Balogh & Gábrriel (2003), Lublóy (2005).

broadly stable throughout the region in 2009. Notable improvements in money market conditions were seen, however, in Croatia and Latvia.

Although turnover in the unsecured segment of the Hungarian interbank market has increased since 2009 (see Figure 3.11), we cannot yet talk about a lasting recovery. Conditions in the overnight market remain worse than before the crisis. Turnover is still lower than the levels seen before 2008 and several participants are probably not trading in reaction to mounting pressure from their parent bank, favoring overnight central bank facilities instead. Due to the hectic conditions on the swap market and the segmentation witnessed in the euro area, as well, the passive behavior of the predominantly foreign owned banking sector is not expected to improve in the near future.

3.7.2.1. BUBOR

Initiated by Hungarian Forex Society³⁶ (MFT) and MNB in 1996, the Budapest Interbank Offered Rate has been the average interest rate which the commercial banks are willing to lend to one other at with maturities going from 1 week to 1 year. The rates for the respective maturities are fixed every day at 10:30 by MNB, based on the quotes of 15 leading banks. BUBOR has become the primarily adopted and accepted base interest rate of Hungarian forint loans among banks and, usually increased by some margin, between banks and their clients. As the sole official interbank forint fixing, it served as a good basis for the interest rate future deals, as well.

3.7.2.2. HUFONIA Swap Index

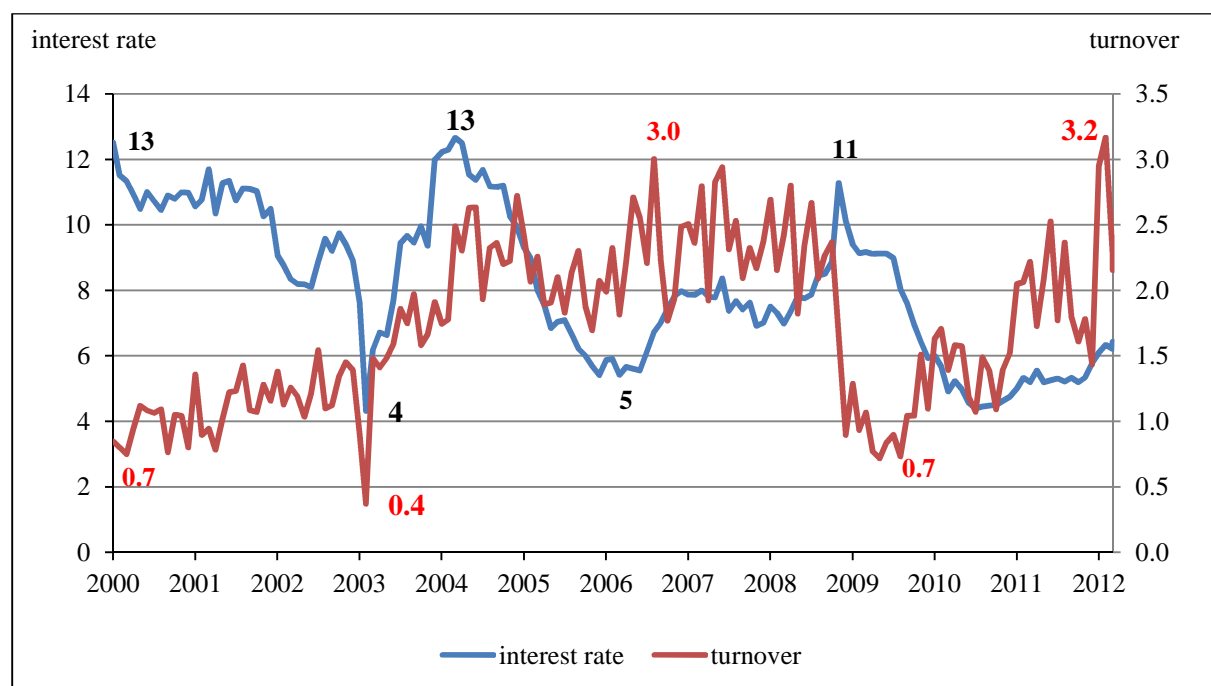
The National Bank of Hungary's new interbank rate HUFONIA (Hungarian Forint Overnight Index Average) will give a better market guidance than the existing official reference rate BUBOR as it is computed from actual transactions, while BUBOR is computed from quotes.

3.7.2.3. BIRS

³⁶ MFT is the professional organization of foreign currency and money market dealers working in domestic banks.

The evolution of the Forint derivative market and the interest rate related products made it necessary to introduce – similarly to BUBOR fixing – an over-the-year interest rate fixing. Answering the initiative of the market, the MFT established the Budapest Interest Rate Swap.

Figure 3.11. Monthly average interest rates and turnover of unsecured forint interbank lending transactions (percent and trillion forints)



Source: MNB.

3.8. Capital Market³⁷

3.8.1. Fixed Income Market³⁸

Similarly to most developed countries, Hungary employs a primary dealer system for the more efficient issuing of domestic government securities (forint-denominated, issued in Hungary) and for better liquidity in their secondary market. Primary dealers (currently 11 Hungarian banks) have exclusive rights to participate in government security auctions, and also have a priority or exclusive rights in other transactions of ÁKK (such as repurchase agreements). In return for these privileges, primary dealers are obliged to perform continuous secondary market two-way quotations in the government security market and regularly report their government security trading volume in aggregate form to ÁKK. One of the most important objectives of establishing the primary dealer system was to ensure the functioning of a liquid and transparent secondary market for investors by the primary dealers' active market participation and their obligation to quote two-way prices. But similarly to other countries which employ a primary dealer system, primary dealers in Hungary also play a central role in secondary markets. Besides primary dealers, numerous foreign banks also perform active (continuous) quotation in the forint-denominated government securities market. These are generally continental or London-based banks with subsidiaries in Hungary.

Based on reports by primary dealers, the Hungarian secondary market has an average daily turnover of 150 billion forints (or 0.5% of GDP). The B2C segment – where clients are generally banks not quoting actively and Hungarian investment and pension funds – accounts for half of the turnover. Transactions concluded between primary dealers make up 20 per cent of the trade (i.e. interdealer, B2B trade between Hungarian actors). The remaining 30 per cent is concluded with foreign actors, for which no dealer-client distribution is available. Primary dealer

³⁷ Sources: Köke-Schröder (2002), Balogh-Kóczán (2009), older: Barysch et al. (1997), BIS (2002) and BIS (2007).

³⁸ Sources for capital markets: Köke-Schröder (2002); debt: Ilyés-Lakatos (2009), older: Barysch et al. (1997), BIS (2002), BIS (2007); local government debt: Gál (2011), Aczél-Homolya (2011), Homolya-Szigel (2008); government debt: ÁKK (2011), Balogh-Kóczán (2009), Anderson et al. (2010), older: Buzas (2006), Del Valle Borraez (1998).

reports do not contain trade carried out by foreign actors without Hungarian involvement (off-shore trade). Consequently, data should be compared with the secondary market clearing volume provided by KELER. These contain all transactions concluded between actors with different custodians, and, therefore, contain off-shore transactions in which the two parties keep their Hungarian government bonds at different custodians. At the same time, the ÁKK's data is more complete from other perspectives, as they contain all transactions in which at least one of the parties is a primary dealer, even if both parties have the same custodian. Based on this, we can state that the difference between the trading volume calculated based on KELER's data and primary dealer reports gives a lower estimate of non-primary dealer secondary market government bond turnover – its size is indicated by deducting the turnover between investors with the same custodian.

3.8.1.2. Impact of the Crisis

Asset prices in the Central, Eastern and Southeastern European (CESEE) region were rather resilient to the global economic and financial crisis until September 2008. Thereafter, however, financial asset and – in many CESEE countries – real estate prices were severely hit, although developments have diverged considerably within the region. Signs of stabilization and recovery in these markets have been observed since March 2009.

In late 2008 CESEE local currency government bond spreads increased throughout the region and became more volatile. In some countries, even severe bond market tensions emerged, with authorities stepping in to ease market tensions. Unlike other financial market segments, which improved considerably in the course of 2009, local currency government bond yield spreads remained at elevated levels in some CESEE countries, notably Latvia and Lithuania. A marked widening of sovereign Eurobond spreads from around September 2008 was common to all CESEE countries, but the subsequent development of Eurobond spreads varied significantly across the region.

Real estate prices in most CESEE countries also rose rapidly in the years preceding 2008. House price growth was supported by various factors, like the fast rise in

disposable income, increased demand for housing by foreign investors and the enhanced availability and affordability of mortgages. These developments appear to have reinforced each other and there is empirical evidence suggesting that housing loan growth played an important role in house price dynamics. In some countries, such as Hungary, housing subsidies and/or favorable tax treatment of housing loans have also contributed to stronger real estate demand and higher house prices.

House prices started to decelerate in the Baltic countries in 2007 and fell in 2009 in all fixed exchange rate countries (Baltic states, Bulgaria, Croatia, Ukraine). Other countries, including Hungary, followed in 2010. The end of the house price boom appears to have considerable repercussions. On the financial side, the demand (and most likely also the supply) for new mortgages has fallen considerably, and in most countries an increasing share of the existing mortgages are becoming problem loans. On the real economy side, falling demand for new housing implies falling demand in the construction sector, which in recent years was an important driver of growth in many CESEE countries, including Hungary. These developments are hurting the market of mortgage bonds.

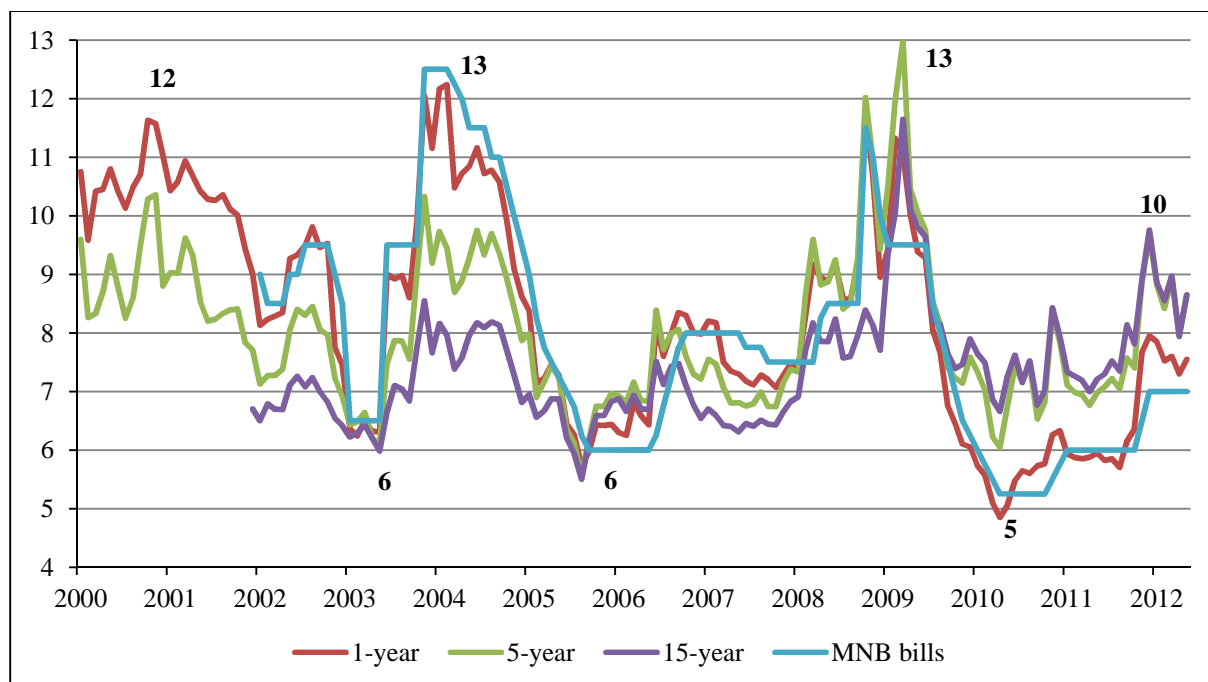
Figures 3.18 to 3.25 show that Hungarian bonds markets fared the crisis according to this regional pattern, although the markets for mortgage and municipal bonds appear to have been less affected than the market for government securities. Government bond and bill prices nosedived in 2008-2009 with yields soaring to unseen levels in 2009, mainly caused by a capital flight triggered by foreign investors. Flight to quality – switch from government securities to MNB bills – and to shorter maturity papers was also observed. In the market for other bonds, the impact of the crisis was less severe, although the surge in the volume of mortgage bonds and municipality bond prior to the crisis came to a sudden stop.

Developments since then have been mixed. Liquidity conditions on the forint government securities market are currently stable. The forint government securities holdings of non-residents have increased continuously in recent months. The current value of over 4,000 billion forints (or 14% of GDP), increased with MNB bills,

significantly exceeds the level seen prior to the crisis in 2008. While non-residents were traditionally active in the government bond segment, since April, they have substantially increased their discount treasury bill holdings, as well. Turnover also surpasses the long-term pre-crisis level. However, this coincided with a renewed rise in bond yields. It was probably a reflection of the heightened risks surrounding the sustainability of public finances in light of Hungary's unwilling cooperation with its main creditors, the IMF and the EU, in formulating its economic policy. The yields on longer maturity papers continue to reflect these uncertainties in 2012, although this is offset somewhat by the favorable effect of the higher global risk appetite. The structure of the market has also changed significantly. As pension funds left the bond market in 2011, foreign investors became the largest holder of Hungarian bonds and bills and their perceptions of risk will increasingly determine the market sentiment.

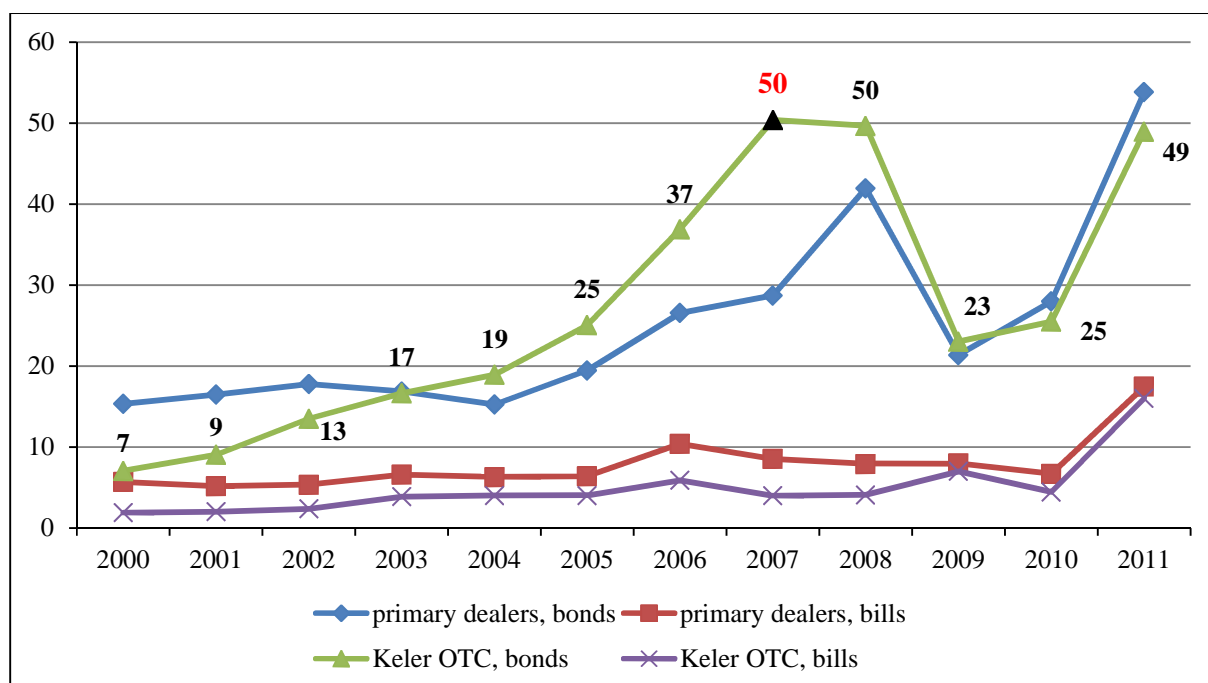
Municipal bonds are expected to decrease along with the gradual repayment of outstanding debt and the ban on issuing new debt and the market for mortgage bonds also seems to be looking towards further setback in the medium term as the ongoing recession keeps construction activity at a low level. Economic activity in the Hungarian housing market has been restrained since 2011. While the number of housing market transactions stagnated, housing prices continued to decline, albeit at a slower pace, and the number of newly built homes reached a historic low in 2011. As regards residential property, both the pre-crisis surge and the post-crisis drop in prices can be considered moderate in international comparison. This is primarily due to the fact that no real estate price bubble had developed in Hungary prior to the crisis. At the same time, significant risks built up in housing prices in relation to the accumulating stock of residential properties awaiting collateral enforcement on the back of the foreclosure and eviction moratorium, which will continue to have a negative impact on the dynamics of new mortgage bond issues.

Figure 3.18. Benchmark yields monthly on government debt securities and MNB bills (percent)



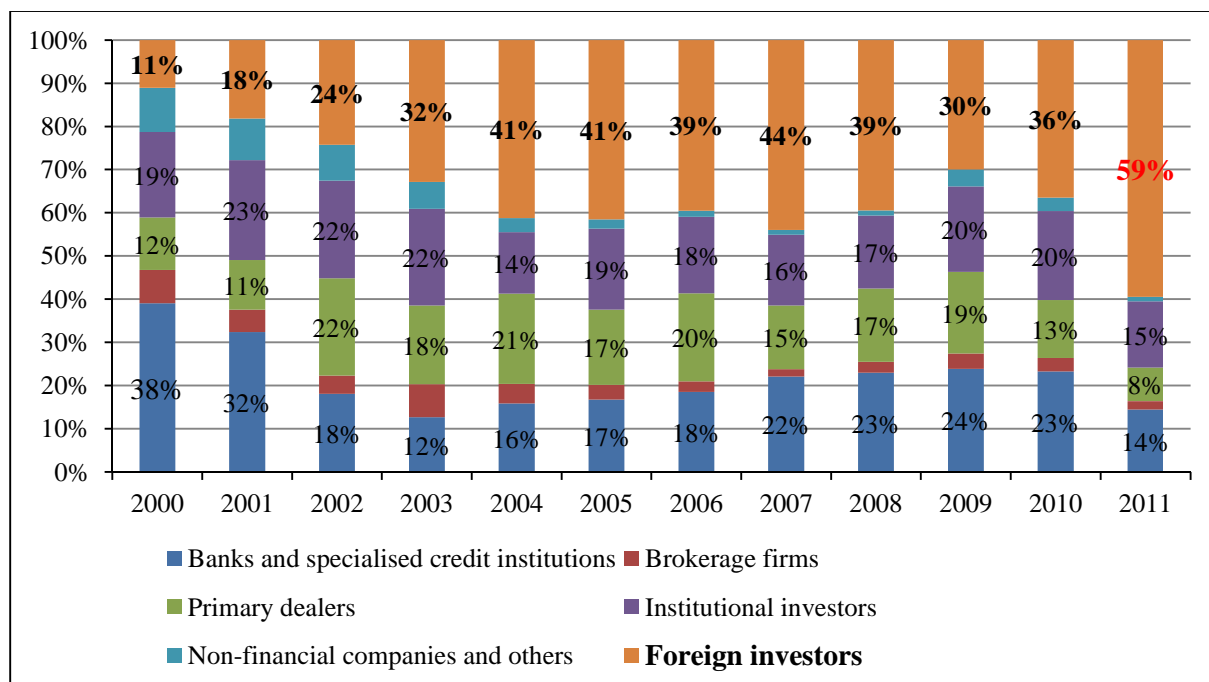
Source: MNB.

Figure 3.19. Government securities turnover (trillion forints)



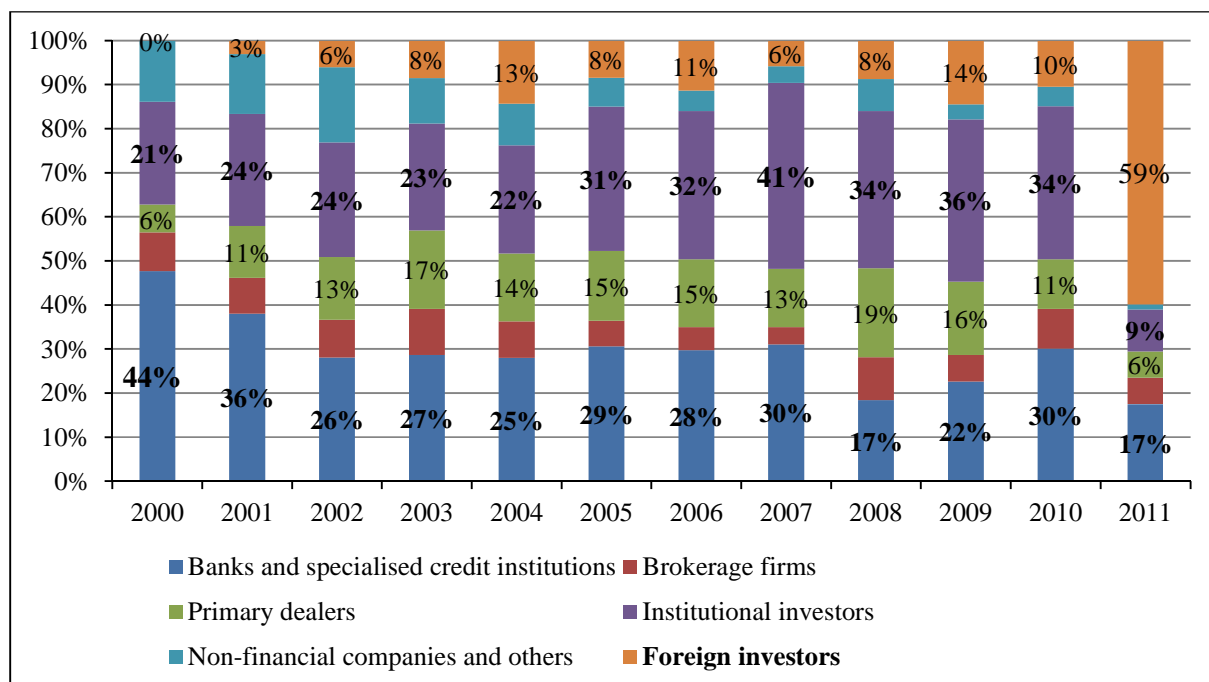
Source: own calculations from ÁKK data.

Figure 3.20. Breakdown of secondary bond market turnover by investor groups
(percentage of total turnover)



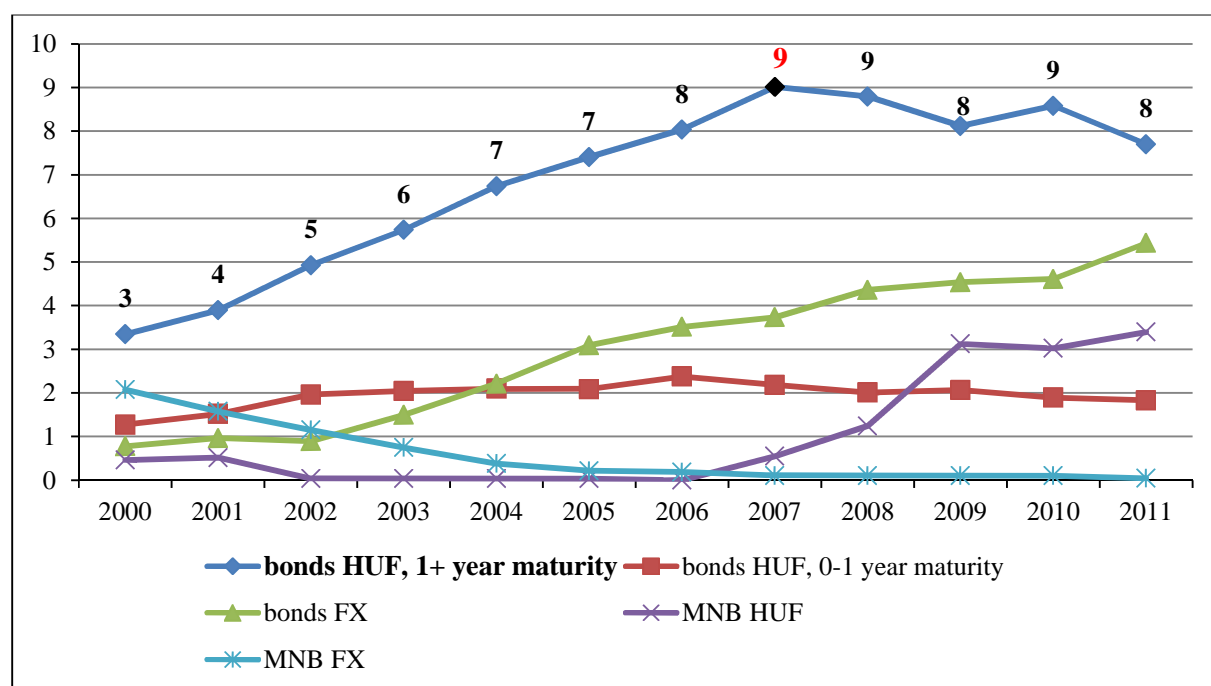
Source: own calculations from ÁKK data.

Figure 3.21. Breakdown of secondary bill market turnover by investor groups
(percentage of total turnover)



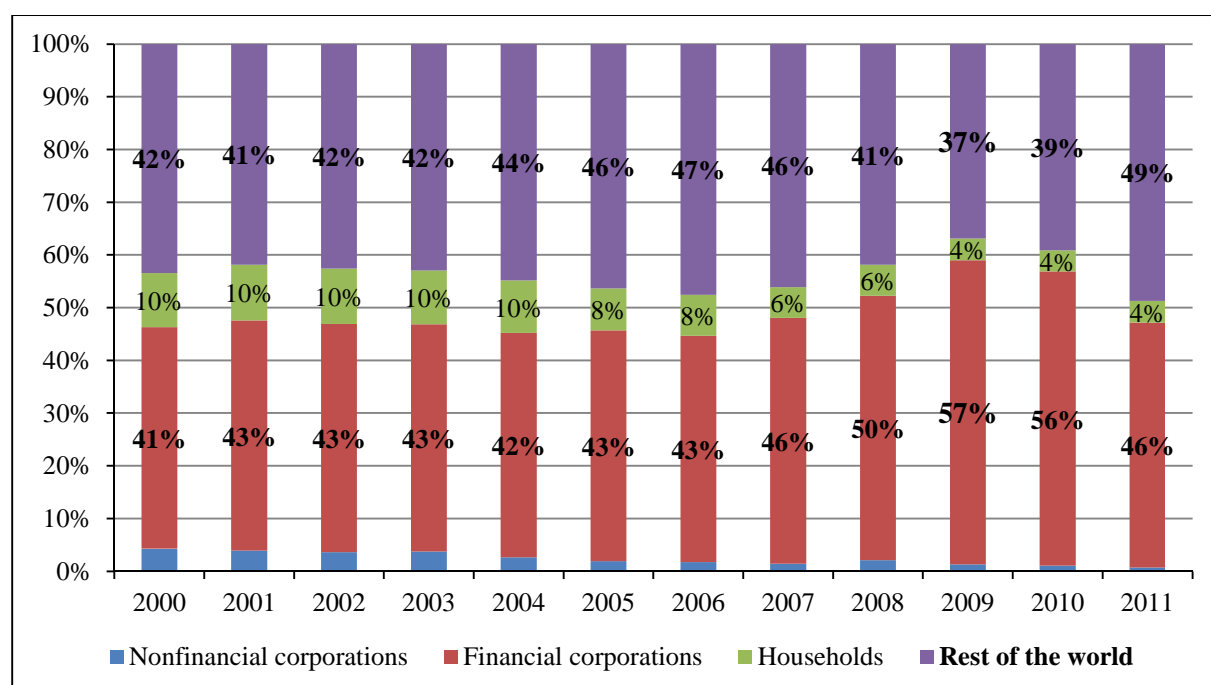
Source: own calculations from ÁKK data.

Figure 3.22. Government bonds and MNB bills closing positions (trillion forints)



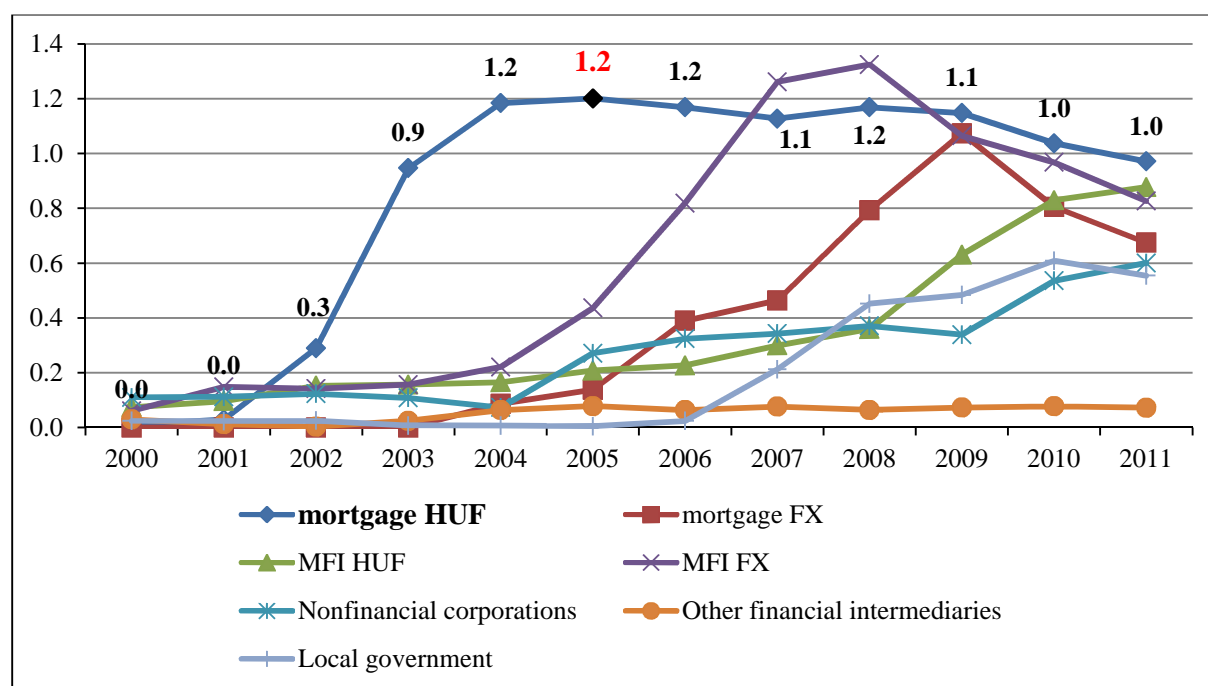
Source: MNB.

Figure 3.23. Government bonds and MNB bills closing positions by holders (percentage of total positions)



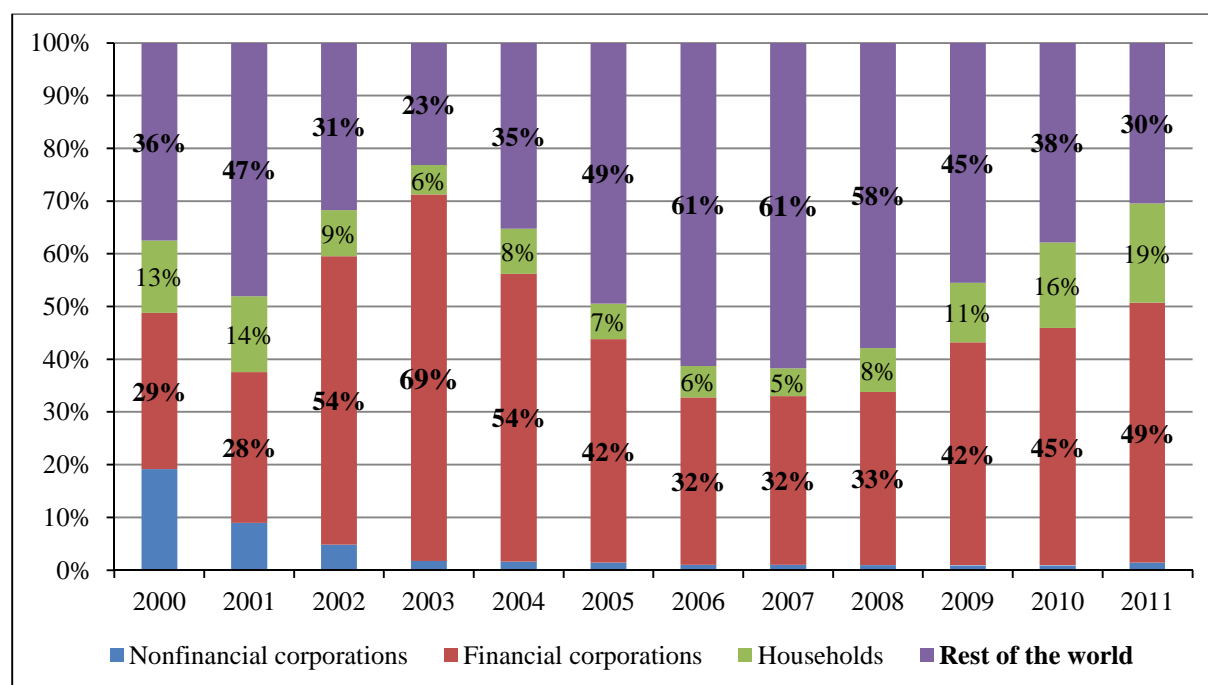
Source: own calculations from MNB data.

Figure 3.24. Other bonds closing positions (trillion forints)



Source: MNB.

Figure 3.25. Other bonds closing positions by holders (percentage of total positions)



Source: own calculations from MNB data.

3.8.2. Equities and Other Exchange-Traded Instruments

BÉT's market structure consists of four sections where each section represents a separate market with different trading rules. The following types of financial instruments are traded in the different sections: securities, which represent ownership right (cash market), debt securities (cash market), futures and options (derivatives market), commodities (cash and derivatives market).

3.8.2.1. Equities³⁹

Securities, which represent ownership right (equities, investment fund shares) are traded in the equities section. The BUX index is the official index of blue-chip shares listed on the Budapest Stock Exchange, BUMIX equity index of the mid- and small-cap companies. Besides these instruments, structured products (certificates, ETFs) and special securities (compensation notes) are represented in this section. The compensation note is a security representing a claim to the state at nominal value. Holding compensation notes entitles the bearer to the following: purchase of assets, shares, and business stakes offered for sale within the framework of the privatization of state property; acquisition of the ownership of agricultural land; purchase of residential property owned by local municipalities.

3.8.2.2 Bonds

Debt securities, such as government debt securities (treasury bills and government bonds), corporate bonds and mortgage bonds, are represented in the debt securities section. The turnover of these securities on BÉT is the fraction of their turnover in the previously discussed OTC market. Mortgage bonds, which are real-estate mortgage backed debt securities, have been available on the Exchange since 2001. Since the millennium the surging demand in the mortgage market accelerated, increasing the capitalization of exchange-traded mortgage bonds, although their turnover has never been particularly high (see Figures 3.30-3.31).

3.8.2.3 Derivatives

³⁹ Source: Kaszuba (2010).

The continuously widening product range offered through BÉT consists of futures contracts based on the following instruments: equity indices, individual stocks, currencies (foreign exchange) and interest rates (see Figure 3.32). Similarly to the futures market, the options market offered through the BSE consists of options contracts based on the following underlying instruments: equity indices, individual stocks, currency (foreign exchange).

3.8.2.3.1. Grain

As a result of the BÉT's merger the commodity exchange (BÁT) in November 2005, there is also commodity trading on BÉT, principally with grain products (see Figure 3.33). Contrary to other sections spot and derivative commodity instruments are traded in one single section. BÉT's commodity futures market offers standardized futures contracts on corn in the ears type of products and industrial oil-seeds (corn, wheat, sunflower-seed, barley). American type options are based on the most liquid futures contracts (wheat, sunflower-seed, corn).

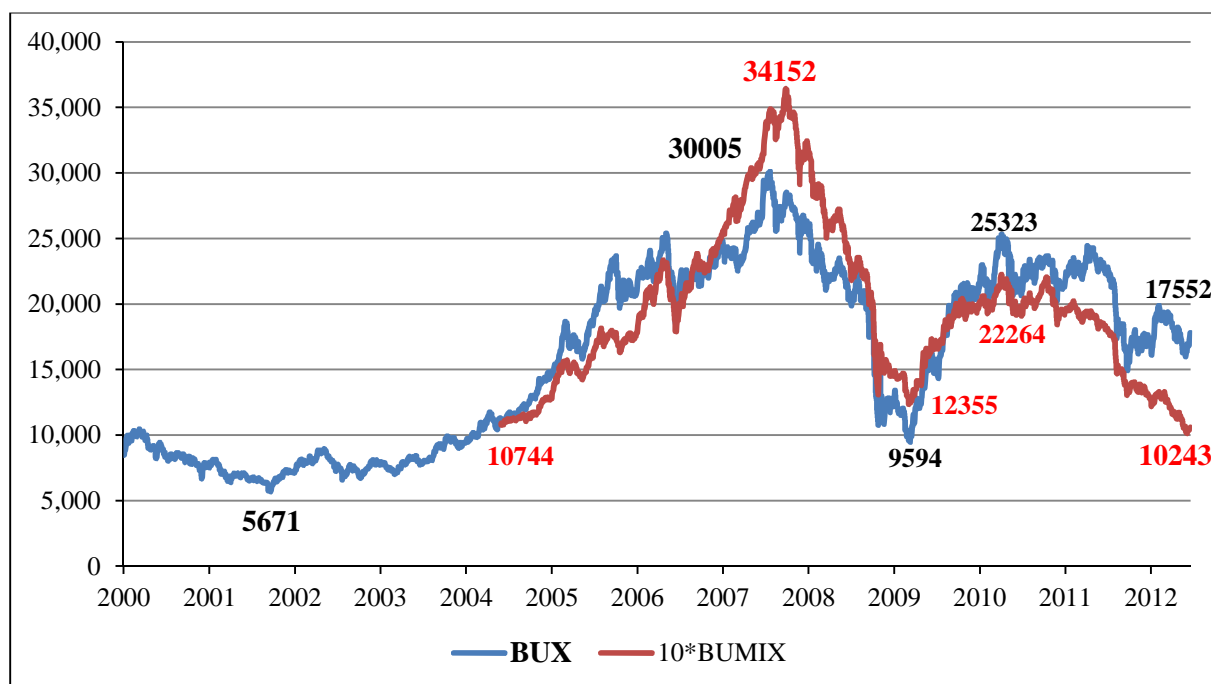
3.8.2.4. Impact of the Crisis

The downward correction in CESEE equity prices caused by the crisis was particularly pronounced in the Baltic and SEE countries. The cross-country differences can to a large extent be explained by country-specific political, economic and social aspects (e.g. protests against austerity measures), all impacting (foreign) investor sentiment. In many countries the stock market plunges are also to be seen in the context of long-lasting stock market rallies before the outbreak of the financial crisis. In fact, until September 2008 the CESEE region outperformed mature stock markets in the US and Europe as well as other emerging market regions. Only Latin America performed somewhat better during this pre-crisis period.

In Hungary, the impact of the crisis in the stock market has been quite severe, as shown in Figures 3.26-3.29. BUX, the leading index of the Hungarian Stock Exchange began sliding down on October 6th, 2008 and lost a total of 49% of its value until March 17, 2009, as worried foreign investors hurried to pull out their investments

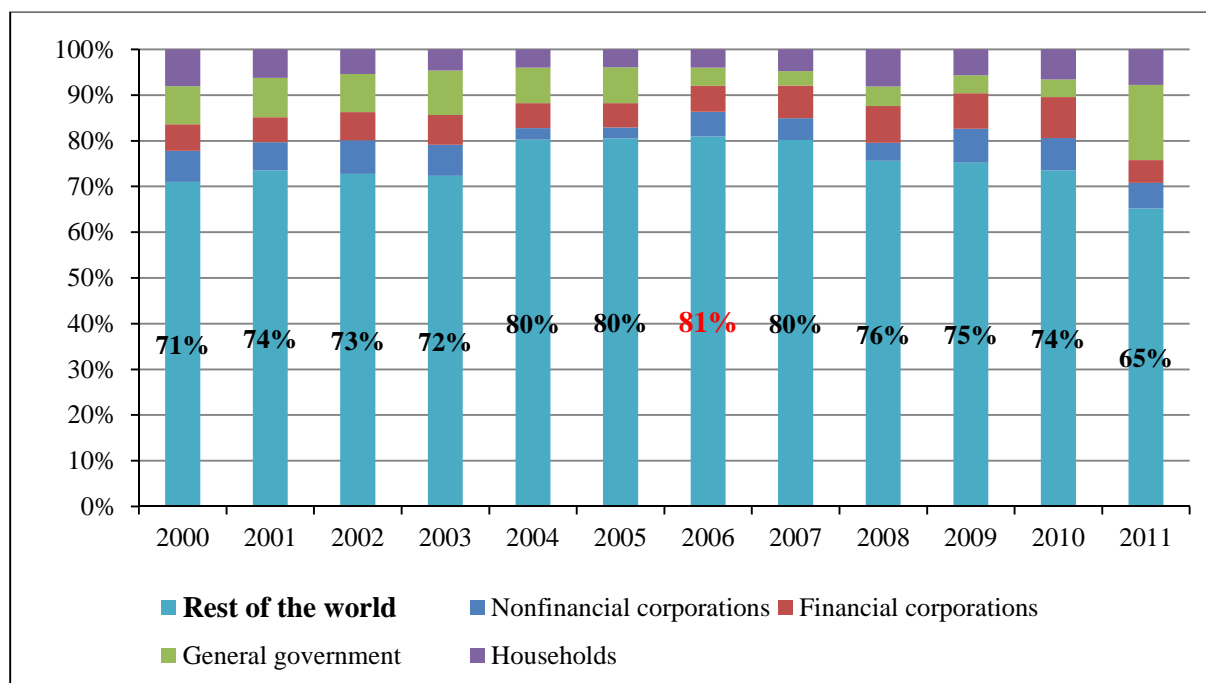
from the Hungarian Stock Exchange and stopped trading in Budapest. Market capitalization of listed companies fell from 31,528 million euros in 2007 to only 13,326 in 2009. Although BUX and, thus, the market capitalization of leading companies in the BUX index has recovered somewhat since its low in 2009, equity trade and turnover both in the spot and in the derivative section has been falling since 2007 (with the exception of 2010). The turnover of innovative products such as turbo certificates is on the rise but their volume is dwarfed by that generated by category A shares.

Figure 3.26. Daily BUX and BUMIX stock index values



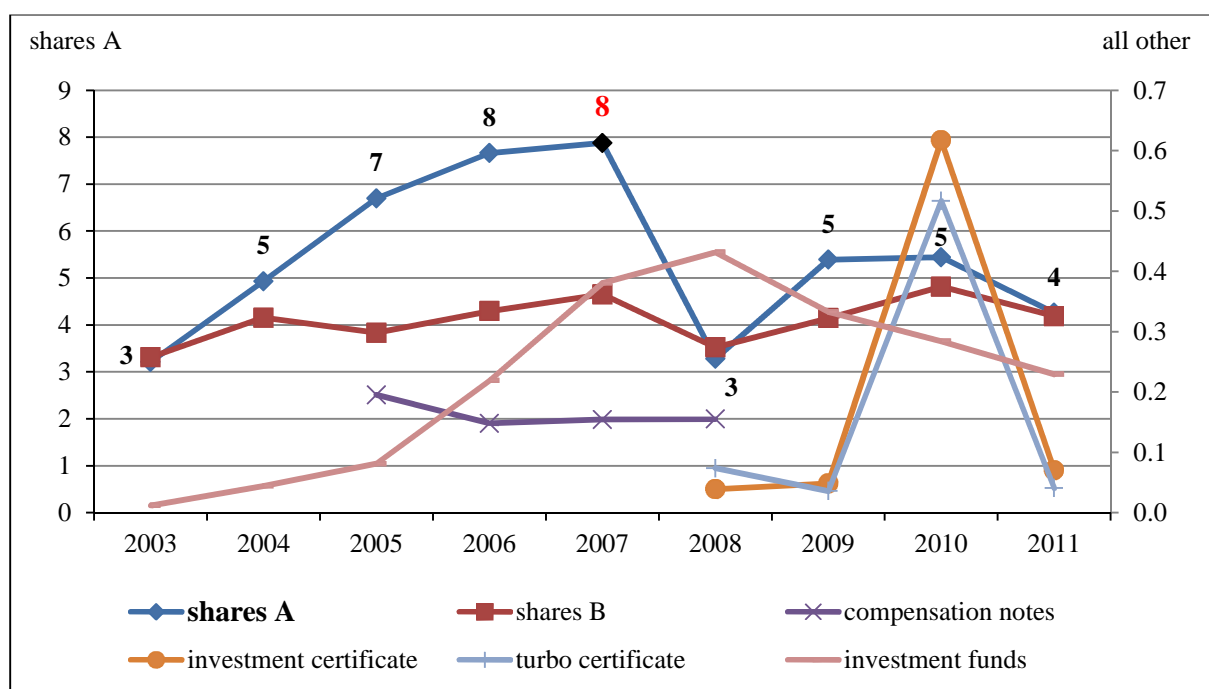
Source: BÉT.

Figure 3.27. Quoted shares by holders (percentage of total positions)



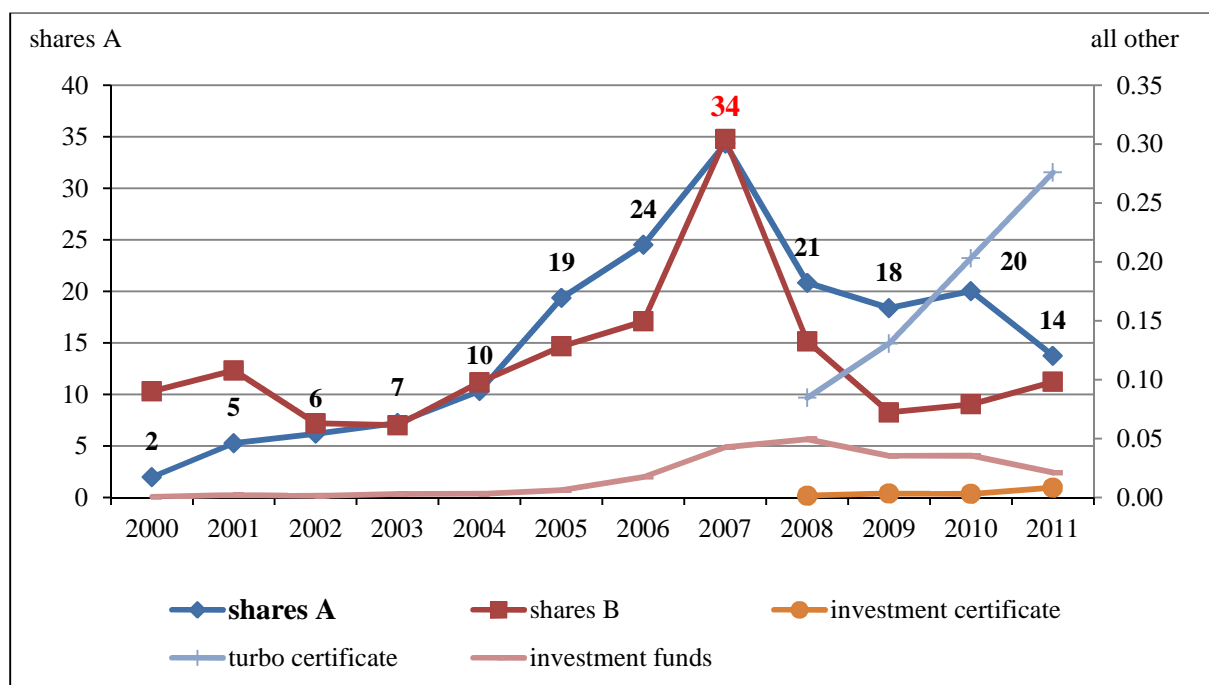
Source: own calculations from MNB data.

Figure 3.28. Equities section market capitalization (trillion forints)



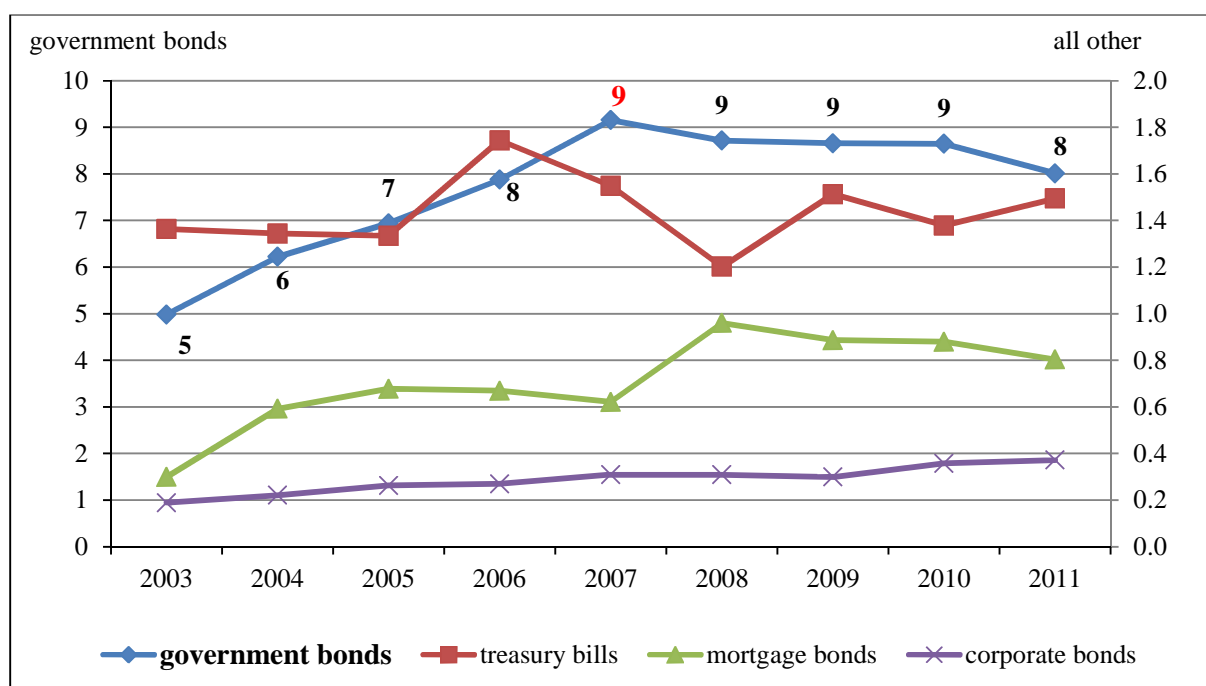
Source: BÉT.

Figure 3.29. Equities section turnover (billion euros)



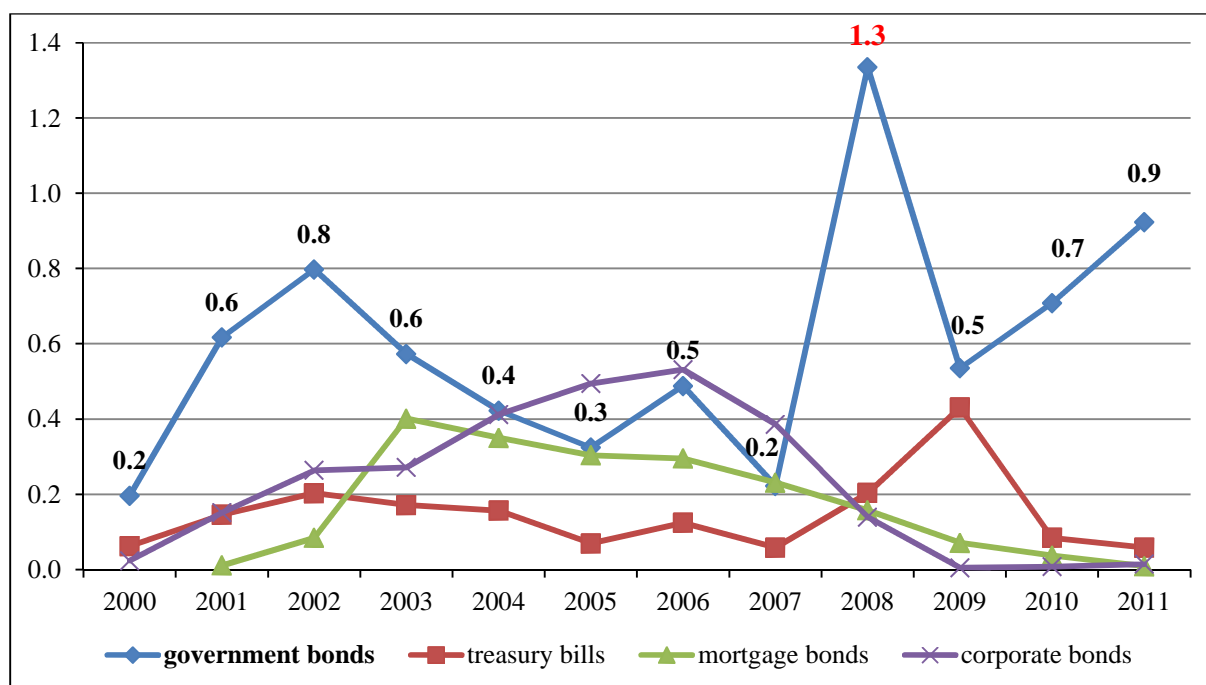
Source: BÉT.

Figure 3.30. Debt securities section market capitalization (trillion forints)



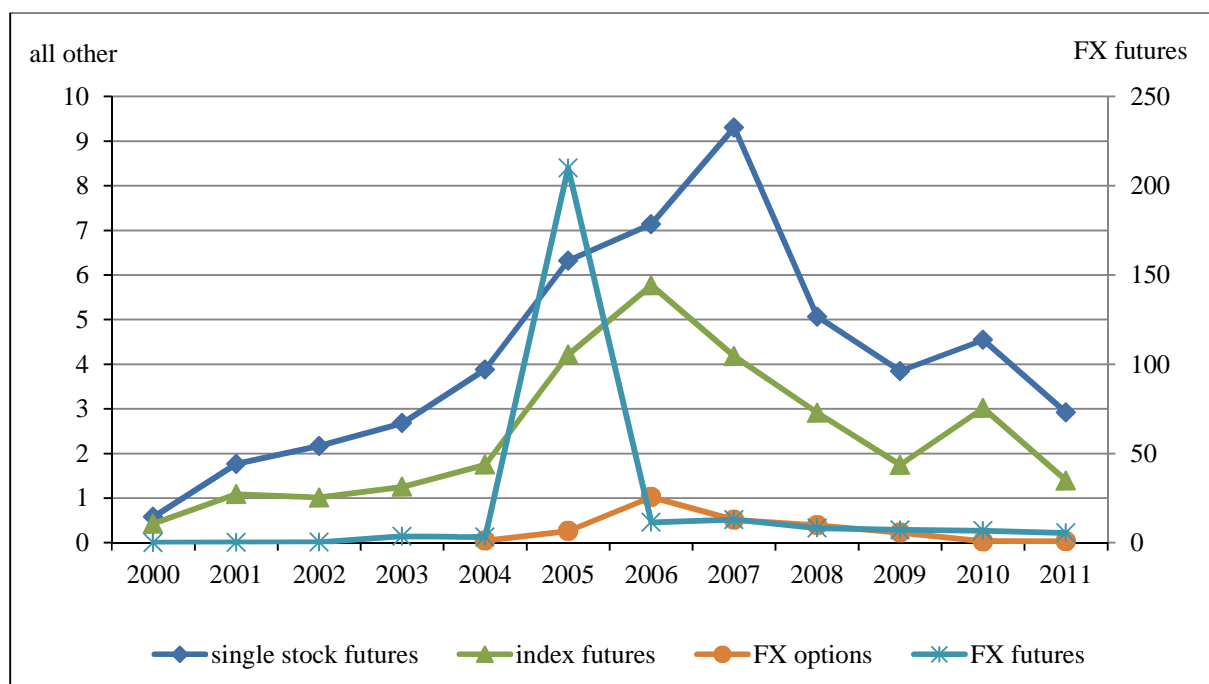
Source: BÉT.

Figure 3.31. Debt securities section turnover (billion euros)



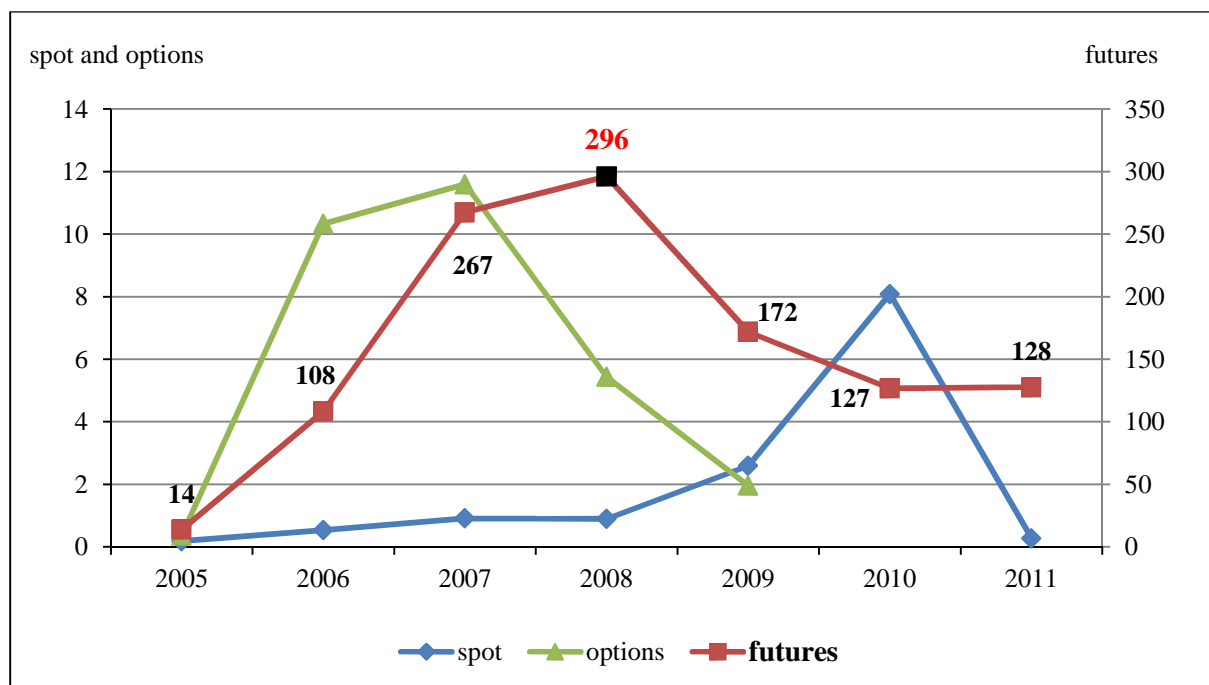
Source: BÉT.

Figure 3.32. Derivatives section turnover (billion euros)



Source: BÉT.

Figure 3.33. Grain markets turnover (million euros)



Source: BÉT.

4. Competition in the Hungarian Banking Market

Up to the financial crisis in 2008 the competition in the banking system was an intensively researched area in the Hungarian literature of finance owing to the fact that competition, besides its competition policy importance, is closely connected with the effectiveness of monetary policy. After the financial crisis the emphasis shifted from the competition to the stability of the bank system. In the following, we will demonstrate that in some segments the Hungarian banking market exhibited a rather low level of competition in the pre-crisis period, which was supported by both indicators of profitability and model calculations based on measures of interest rate pass-through or more complex models of bank behavior. As will be seen, the low level of competition, which particularly characterized household loans and deposits, can be traced back to structural reasons, to the low level of financial culture of households and, in part, to regulatory reasons. The new regulation, effective from 2010, might change the situation somewhat – especially in the market of housing loans – but this is impossible to judge yet from the data available.

4.1. Concentration in the Hungarian Banking Market

The concentration of the Hungarian banking market – measured by the Hirschmann-Herfindahl index⁴⁰ (HHI) for the total assets of banks and for most of the submarkets – has been decreasing gradually for the last two decades. At the beginning of the 1990s the relatively early – compared to other post-socialist countries in the region – privatization of the banking system resulted in a highly concentrated banking market.⁴¹ Owing to the comparatively easy entrance conditions, the number of banks increased – mainly in the form of subsidiary banks – so, despite of the bank fusions from the second half of the 1990s (Lentner et al, 2005), the concentration – as measured either by HHI or by the three/five firm concentration ratio (C3/C5) indicator – began to decrease (up to 2004, see Figure 4.1 and 4.2). Now the

⁴⁰ The sum of the squared market shares of the individual market players measured in basis point. Its maximum value is 10,000 ($=100^2$), when one producer has monopoly in the market. Its value above 1,800 is usually considered as indicating monopolistic competition.

⁴¹ After the establishment of the two-tier bank system in 1987, the market share of the five largest banks was 90%.

concentration of the Hungarian bank sector – relative to similar-size European countries – is average.

The indices in the above figures are calculated according to the total assets of the credit institutions, and, as Várhegyi (2010a) and Öcsi-Somogyi-Várhegyi (2008) emphasize, certain segments of the whole financial market have remained rather concentrated. For example, in the case of household deposits the index exceeded 2500 around the end of the 1990s, and in 2006 it was still at around a relatively high level of 1500. In the case of forint-based housing loans HHI reached 3300 and in the market for hire purchase loans it approached the value of 4000 in 2006⁴². (See Figure 4.3).

As the privatization of the centralized bank system has preserved the dominance of OTP Bank, it is worth investigating the C1 indicator of the Hungarian banking system (see Figure 4.4). As can be seen, the market share of the OTP has not changed over the last decade. As far as household deposits and household loans are concerned, OTP's market share approached even 40% and 50%, respectively, in 2006, and with respect to overall deposits its share was in the vicinity of 30% (see Figure 4.5).⁴³

As the market share of the leading bank is also an important indicator of competition⁴⁴, the fusions between 2005 and 2010, in some measure, increased competition, too, by eroding the market leader's position. Nevertheless, as Öcsi-Somogyi-Várhegyi (2008) point out, because the state interest subsidy was linked to the issue of mortgage bonds, the establishment of collateral banks somewhat halted the steady decrease of the HHI of household loans. As a result of the peculiar state interest subsidy system, OTB bank, owing to its own mortgage bank (OTP JZB), succeeded in increasing its market share in the mortgage loan market and eliminating the advantageous effect of consolidation. (see Várhegyi, 2010b and Öcsi-Somogyi-Várhegyi, 2008).

⁴² As we will see later, the establishment of mortgage banks somewhat broke the steady decrease of the HHI of the household loans.

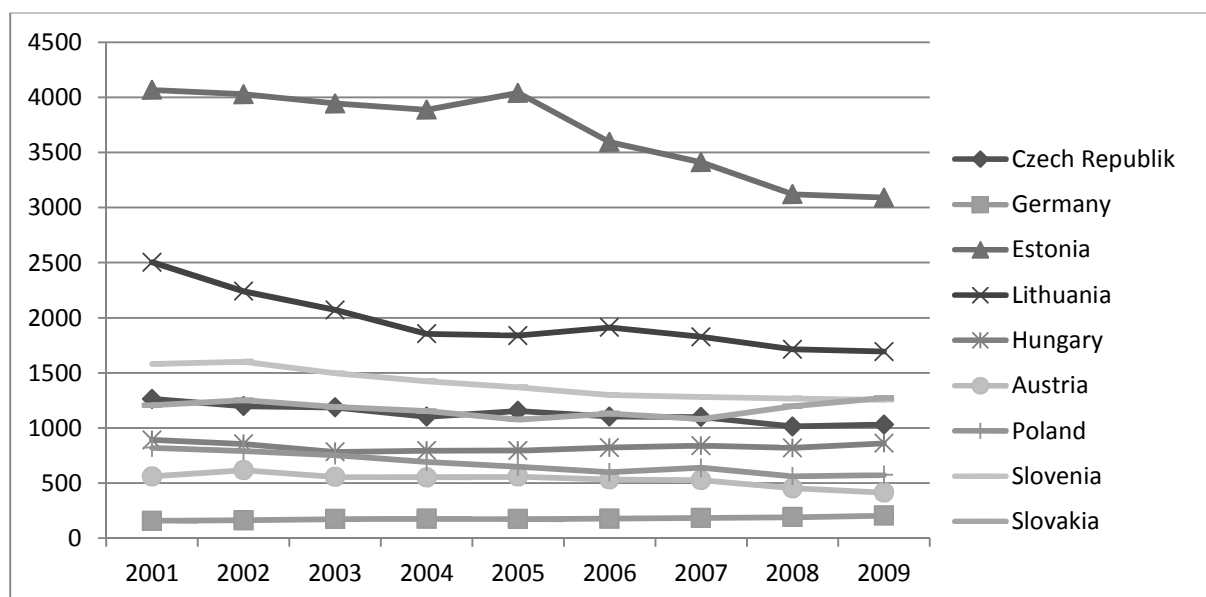
⁴³ The market share of OTP in the deposit market was 76.7% in 1993 (see Várhegyi, 1995).

⁴⁴ Molyneaux (1999) regards the distance between the leader and the second bank more important than the degree of concentration of the whole market.

The birth of mortgage banks was rendered possible by the Act XXX of 1997, in which the Hungarian mortgage market was modeled after the German one (see Király-Nagy, 2008). The role of mortgage banks began to strengthen only from 2001 owing to the Government Decree on preferential housing loans published in 2001. Among the mortgage banks OTP Mortgage Bank and FHB earned prominent share in the market, with the third biggest mortgage bank's share being negligible. The growth of these mortgage banks essentially halted in 2003. The reasons were the cutback in the state interest subsidies in 2003 and the sudden increase in domestic interest rates in the same year.⁴⁵

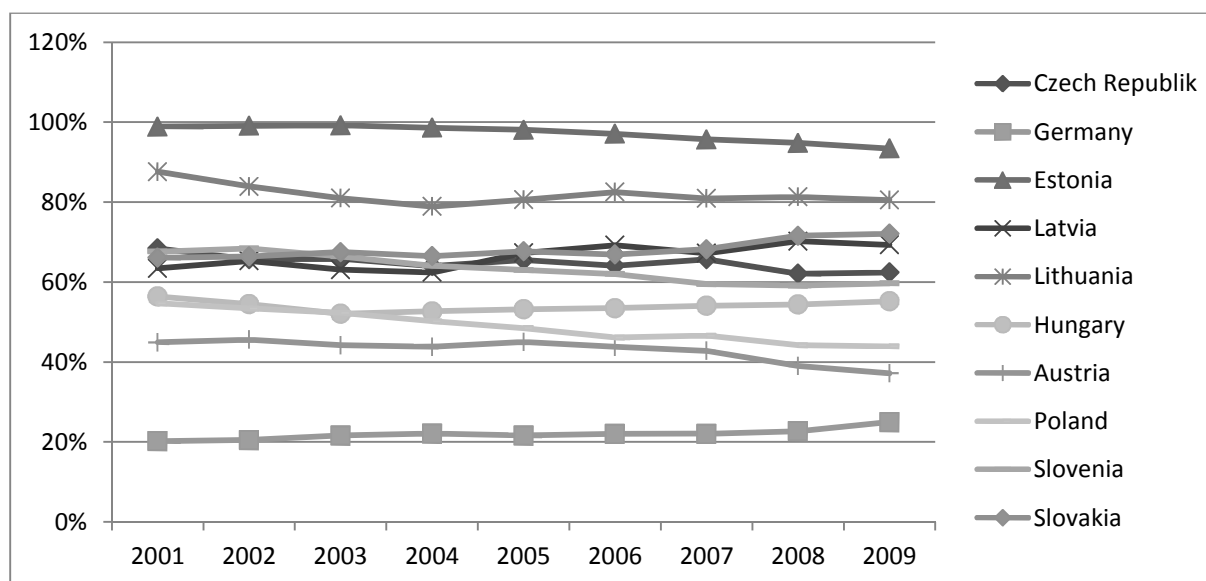
⁴⁵ This latter reason was the result of the sharp rise in the country's risk premium. As Király-Nagy (2008) point out, the rate belonging to the five-year maturity on the yield curve climbed from a moderate level of 6% to 10 %.

Figure 4.1. HHI index for credit institution sectors (total assets)



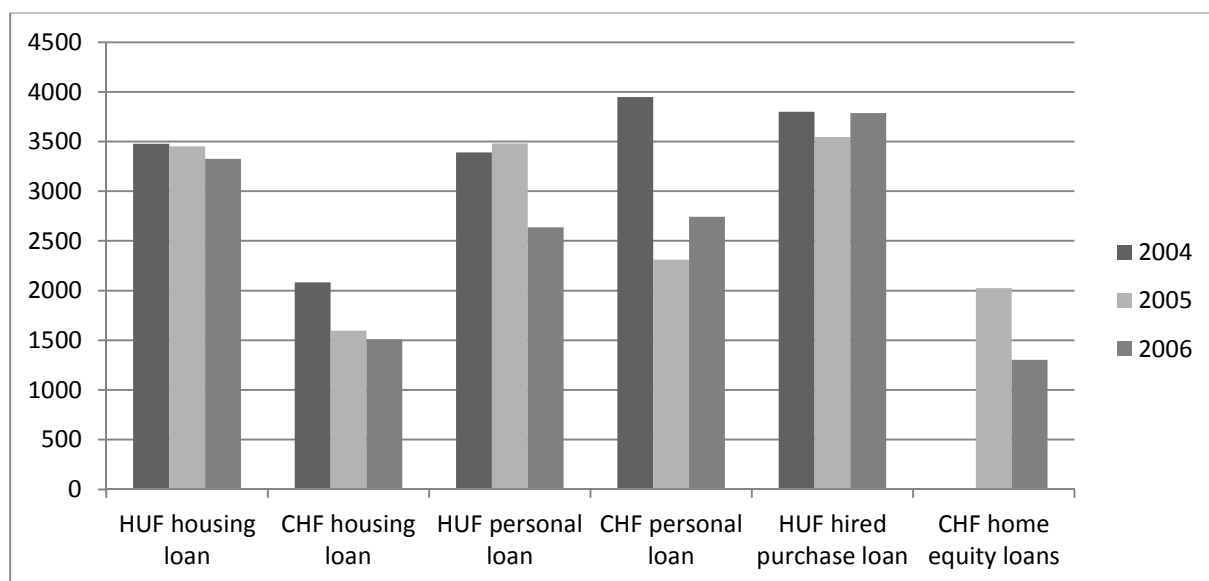
Source: ECB.

Figure 4.2. Share of the 5 largest credit institutions (total assets)



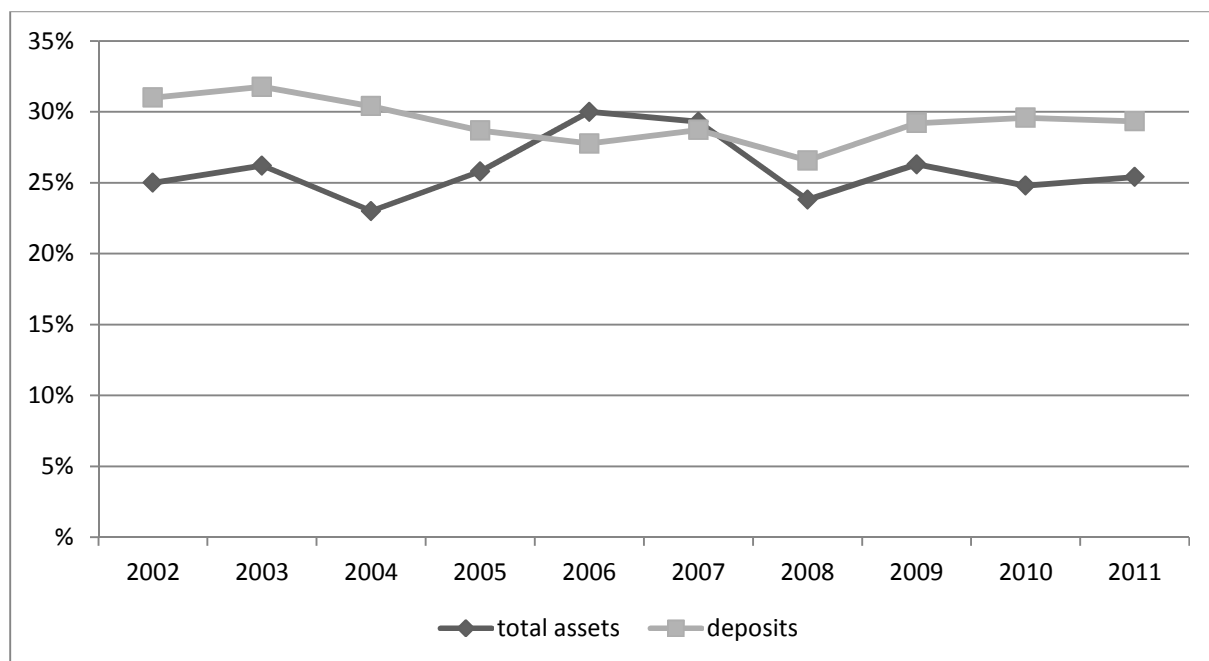
Source: ECB.

Figure 4.3. HHI index for household loan markets



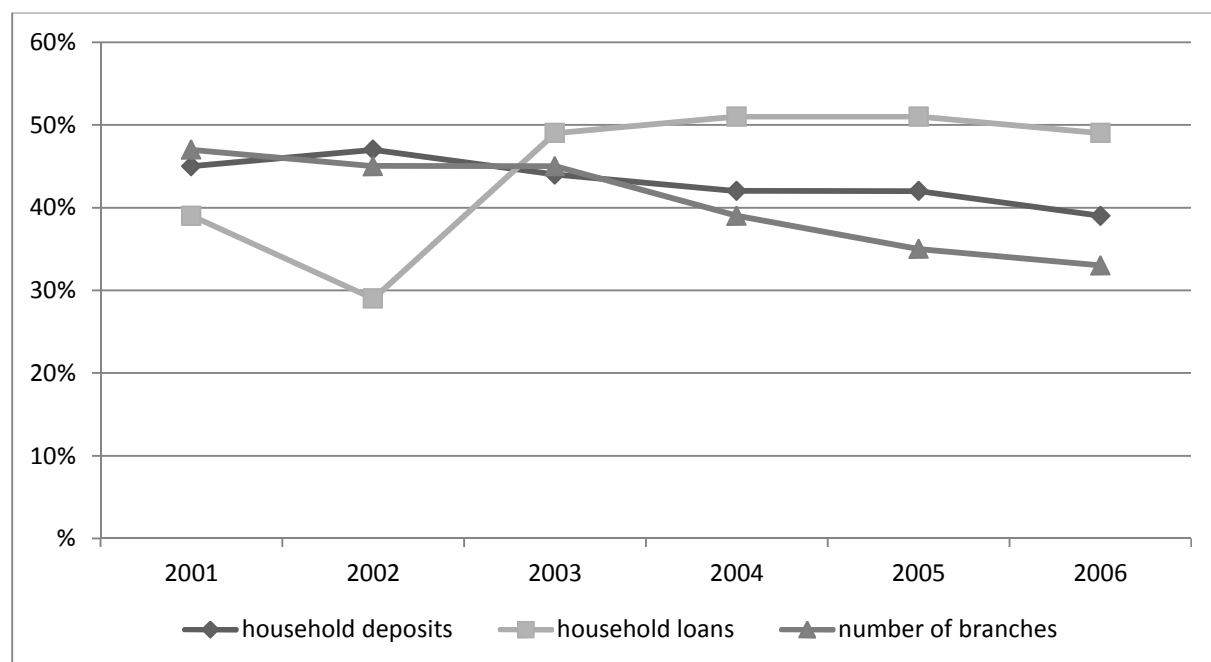
Source: MNB (2007).

Figure 4.4. C1 indicators of the Hungarian Banking sector



Source: OTP's annual reports.

Figure 4.5. C1 index for submarkets of the Hungarian banking sector



Source: Öcsi-Somogyi-Várhegyi (2008).

4.2. Competition in the Hungarian Banking Market

The high level of concentration in the household-related markets (deposits, housing loans) itself, still does not necessarily mean lack of competition⁴⁶. However, the high level of interest rate margin⁴⁷ (see Figure 4.6 and 4.7), and even more the above-EU-average profitability of Hungarian banks are (see Öcsi-Somogyi-Várhegyi, 2008) already the distinguishing signs of low level competition.⁴⁸

In the last decades several articles have been published which investigate the competitive behavior of banks empirically in a non-structural approach. Some of this research were based on the investigation of interest rate pass-through and some on the so-called ‘new empirical industrial organization’ approach, which usually uses various alternative versions of the Panzar-Rosse and the Bresnahan models.

Some of the first related articles (see Világi, 1996, Árvai 1998, Horváth-Krekó-Naszódi, 2004) investigated the interest rate pass-through from market rates and policy rates to various types of lending and deposit rates. Horváth-Krekó-Naszódi (2004) point out that, although the pass-through had improved between the mid-1990s and the beginning of the 2000s, the interest rate pass-through is not complete in the long run, and is rather sluggish in the short run, with deposit rates or lending rates for households reacting much less than lending rates for the corporate sector. Although these articles investigated the behavior of banks from the point of view of

⁴⁶ According to the conventional approach of the theory of competition, the so called *Structure-Conduct-Performance hypothesis*, there is a close relationship between the grade of concentration and the oligopolistic income of banks or competition. (A relatively recent empirical study underpinning this hypothesis is Tregenna 2009.) Other studies do not reinforce that concentration necessarily results in monopolistic profit (see Scholtens, 2000 and Bikker-Haaf, 2001), and there are alternative theories (*effective market structure* and *contestability hypotheses*) that permit competition in the case of concentrated market structures. Claessens—Laeven (2003), in their study based on *H*-statistics, found, that there is a positive correlation between concentration and the grade of competition, underpinning the statement that from the point of view of competition, contestability is a more important factor than the actual presence of foreign banks or bank concentration, suggesting that a more contestable bank system faces greater competition.

⁴⁷ The reason for the high margins – as Móri-Nagy (2004) remarks – may be higher inflation, higher credit risk, the higher proportion of customer loans in the asset structure of the banks, which also means additional risk, and the lack of scale efficiency arising from the small size of the market, the latter being a common feature of the, relatively to the EU average, underdeveloped banking system. However, Hungarian interest margins were higher than those of other East European countries even in real terms, (see Figure 4.7) therefore it cannot be explained either by the underdeveloped banking system or the relatively high inflation rate.

⁴⁸ According to Molnár-Holló (2011), efficiency indicators are superior measures of competition to concentration, as there are many other sources of competition than the number of players.

the transmission mechanism of monetary policy, they raise the question of competition, and suggest that, compared to developed countries, the slow pass-through in Hungary, to some extent, may be attributed to the low level of competition.

Várhegyi (2004), Móri-Nagy (2004) and Öcsi-Somogyi-Várhegyi (2008) use various types of the Panzar-Rosse model. These results confirm that in some submarkets banks use a kind of oligopoly pricing which is in harmony with the above-mentioned features of the banking market. According to empirical estimations, based on H -statistics, in some markets, mainly in the market of current account loans, trade loans, personal loans and demand deposits, the grade of competition is extremely low.

The Panzar-Rosse model tries to measure competition by means of H -statistics which sums the elasticities of the bank's earnings with respect to the various input prices, that is

$$H = \sum (\partial IR / \partial F P_i) (F P_i / IR),$$

where IR denotes the bank's interest earnings and $F P_i$ denotes the price of the i^{th} input factor. The H -statistics of a bank is a number smaller than 1 and shows the extent to which a change in input prices is reflected in bank revenues. Number 1 represents the perfect competition and a number around 0 means a collusive market structure or monopoly and the numbers between the two extreme values pertain to monopolistic competition. The main advantage of this approach is that instead of using aggregate data concerning the whole bank sector, it makes use of bank-level data taking the specialties of the particular bank's products and cost structure into account.

One of the first studies including the H -statistics of Hungarian banks is Claessens-Laeven (2003) which was based on the observation of 4479 banks in 50 different countries. The following table shows some of their findings concerning the H -statistics of a number of countries referring to data registered between 1994 and 2001. According to the data, the H -statistics of the Hungarian banking system was

0.75 which suggests that monopolistic competition is the best description of the competition in the Hungarian banking sector with relatively strong competition.

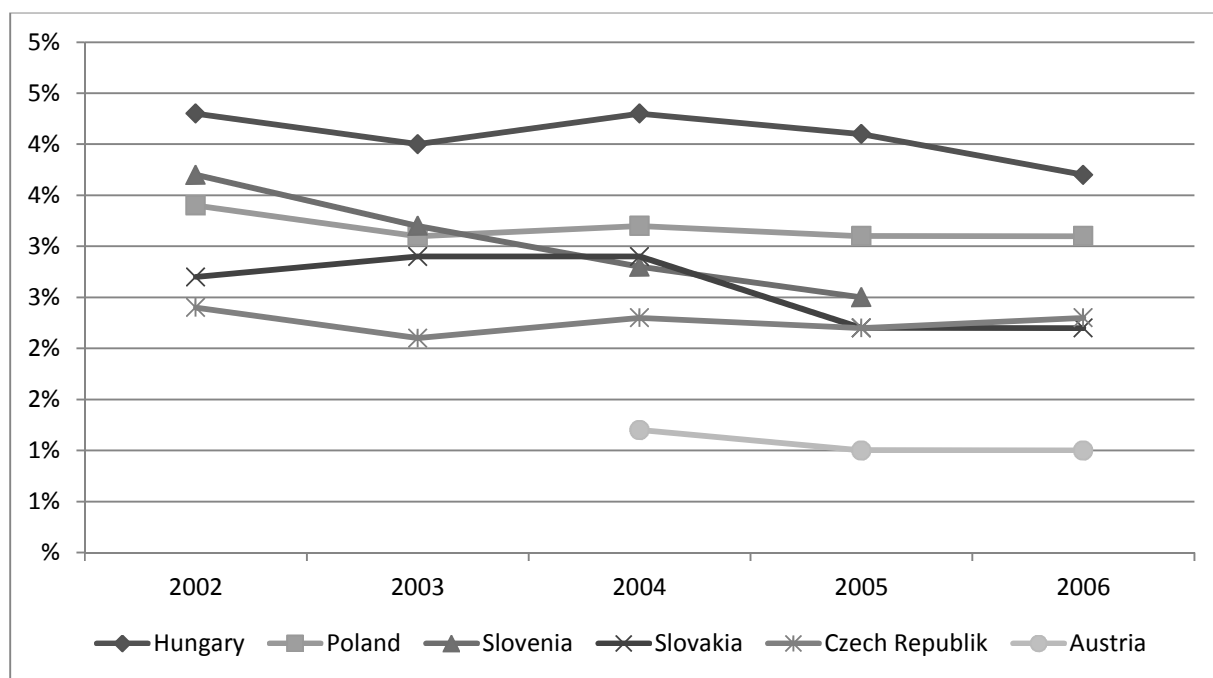
Várhegyi (2004) applied the Bikker-Haaf (2001) specification of the Panzar-Rosse model to measure the Hungarian loan market which she regarded as homogenous. She used the annual data of 18 banks using a panel system containing altogether 140 observations. The share of the banks investigated in total was about 80% of the total market according to their balance-sheet total and none of the banks' share left out of the sample reached 2%. She found that there was monopolistic competition in this special market between H values of 0.56-0.67 which fitted the average of the EU countries, and the competition in this market increased during the period of 1995-2002.

Várhegyi (2004) and Mórén-Nagy (2004) use an extended form of the Panzar-Rosse model, the Bresnahan (1982) model to measure competition in the Hungarian banking market (see also Coccoresse, 2002). The Bresnahan model is a type of the so-called *conjectural variation oligopoly model*, which can take the collusive behavior of banks into account.

Mórén-Nagy (2004) measured the competition in the loan market and the deposit market separately for the period between December 1996 and September 2003, by measuring the conjectural variation parameters λ of the banks. Although, the EU deposit market was near complete competition (see Bikker, 2003), as for the Hungarian banking market, they found that in the Bresnahan model the competition in the loan and the deposit markets was between perfect competition and the Cournot equilibrium, but the competition of the consumer credit market fell between the Cournot equilibrium and perfect collusion. The low level of competition in the consumer credit market was reinforced in other empirical investigations. For example in Czinege-Dávid-Szalai (2004) the authors pointed out that the measure of market competition and the market power of the banks must have played a role in the extremely high interest margin in the consumer credit market (11.7% in the year of 2003 as compared to 5.1% in the same year in EU).

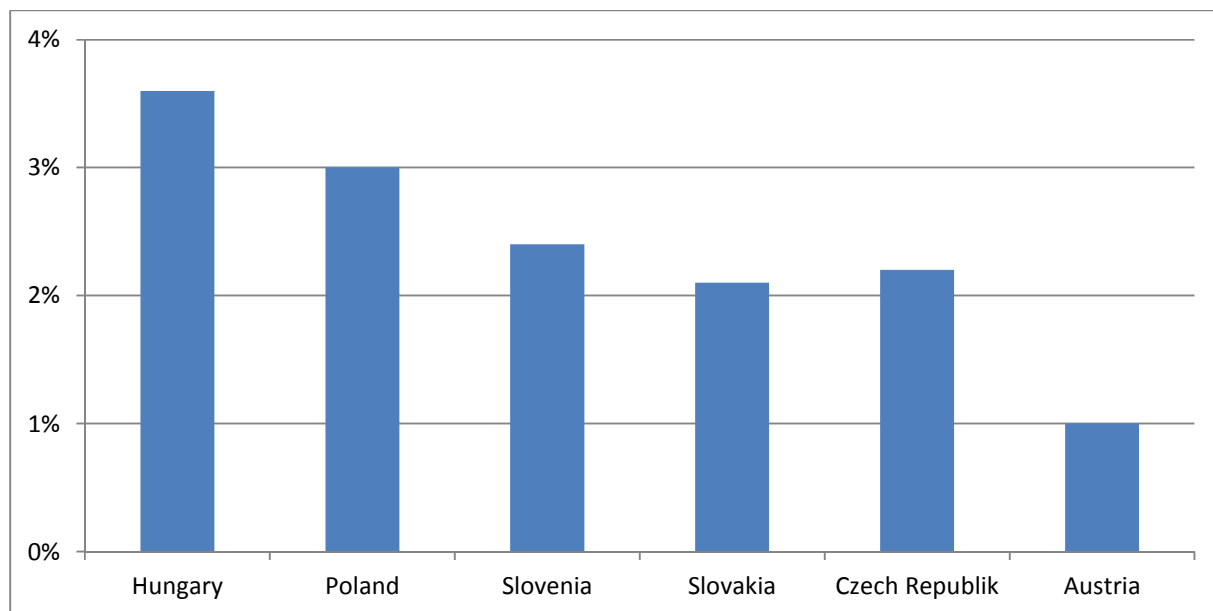
Molnár-Nagy-Horváth (2007) used the *discrete-choice framework* (for early applications to bank systems see Dick, 2008 and Nakane et al, 2006) to analyze the degree of competition in the Hungarian household credit and deposit markets. They estimated how much the banks' mark-up in the case of Bertrand price competition and in the case of perfect collusion would be and compared them to the observed mark-ups for the period of January 2003-December 2005. In this framework, if the observed mark-up is located between the mark-ups of the Bertrand competition and the perfect collusion, the degree of competition may be regarded to be low. In contrast to this, if the observed price falls below the hypothetical Bertrand point, the degree of competition is high. They calculated the observed and implied mark-ups for each month of the sample period and found that the degree of competition was low in the markets of personal loans, purchase loans and demand deposits and only the market for long-term deposits could be regarded as competitive.

Figure 4.6. Interest rate margins in Central European countries



Source: Öcsi-Somogyi-Várhegyi (2008).

Figure 4.7. Real margins in selected countries in 2005



Source: Öcsi-Somogyi-Várhegyi (2008).

Table 4.1. H-statistics of banking systems around the world

Country	H-statistic	Standard error	Number of banks	Number of observations
Costa Rica	0.92	0.05	30	111
Netherlands	0.86	0.06	44	227
Luxembourg	0.82	0.04	76	277
Australia	0.80	0.11	26	126
Poland	0.77	0.06	40	138
Greece	0.76	0.07	21	95
<i>Hungary</i>	<i>0.75</i>	<i>0.07</i>	<i>26</i>	<i>112</i>
Argentina	0.73	0.06	105	278
Belgium	0.73	0.05	76	371
Czech Republic	0.73	0.14	25	90
France	0.69	0.02	355	1,926
Canada	0.67	0.07	49	224
Portugal	0.67	0.06	37	213
Austria	0.66	0.04	160	760
Latvia	0.66	0.14	24	85
Italy	0.60	0.03	472	2,508
Germany	0.58	0.02	2,226	13,015
Croatia	0.56	0.09	45	196
Russia	0.54	0.07	106	232
Denmark	0.50	0.05	100	646
Japan	0.47	0.17	44	100

Source: Claessens-Laeven (2003).

4.3. Non-Price Competition

An important deficiency of the above-detailed model calculations is that they can measure only the price competition in the banking sector. However, as Várhegyi (2008) remarks (see also Király-Nagy, 2008), there are other forms of competition, such as *cost-based* and *risk-based competitions*. At the end of the 1990s, the competition in the corporate loan market – owing to the presence of foreign owned banks in this segment – was increasingly strengthening. In this situation the foreign owned banks turned to the household loan market, which was stimulated by the government's subsidizing of housing loans, a practice that reached its climax in 2002, and they engaged in a strong cost-based competition by increasing their marketing expenditure, opening new offices, installing new ATMs, increasing their employees and expanding the range of banking products and services. Local banks did not take part in this competition but they succeed in preserving their position in the household market owing to their branch network and by utilizing their acquaintance with local clients.

In 2003 the situation in the Hungarian loan market fundamentally changed as a consequence of the decrease in state interest subsidies and the increase in interest rates. In this situation banks tried to maintain their income by acquiring new clients. This goal – as price-competition was not the main characteristic of the bank sector – was achieved by taking on increasingly greater credit risk. Risk-based competition manifested in the increase in loan to value (LTV), the ratio of installments to income and the duration of loans, in the relaxation of conditions in the loan approval process, in the preferential installments at the beginning of the life of the loans and in the appearance and the spread of foreign currency loans⁴⁹.

As a result of risk-based competition, banks were willing to offer increasingly riskier products to increasingly riskier clients (see Király-Nagy, 2009). Up to 2011 there had been neither a positive debtors' list⁵⁰ nor any debtor scoring system in Hungary, so

⁴⁹ Foreign currency loans appeared first among the short-term car loans in 2001, and later, in the summer of 2001, when foreign currency transactions became possible between residents under the Foreign Exchange Act.

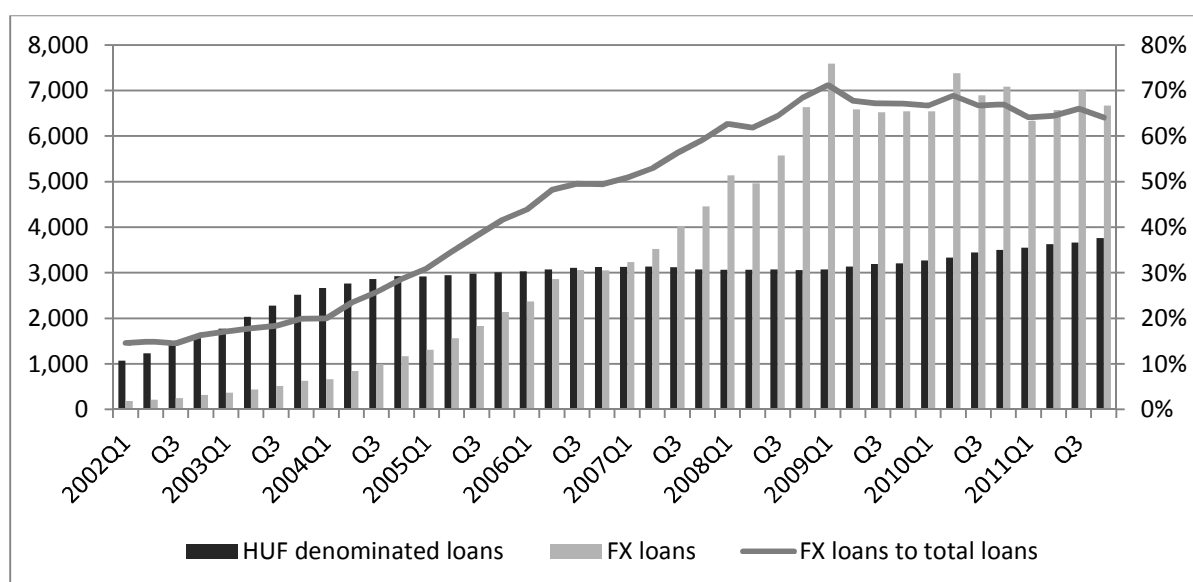
⁵⁰ It was Act CXXII of 2011, which made possible the creation of the positive debtors' list.

we can measure the increase in credit risk only by the spread of risky products. Figure 4.8 shows the ratio of foreign currency loans within the different types of household loans.

As seen, another manifestation of risk-based competition was the continual increase of LTV. Figure 4.9 shows the decomposition of the new housing loans according to their LTV. According to the chart, LTV gradually increased until the third quarter of 2008, and it began to decrease only in the last quarter of 2008, as the carry-over effect of the financial crisis.

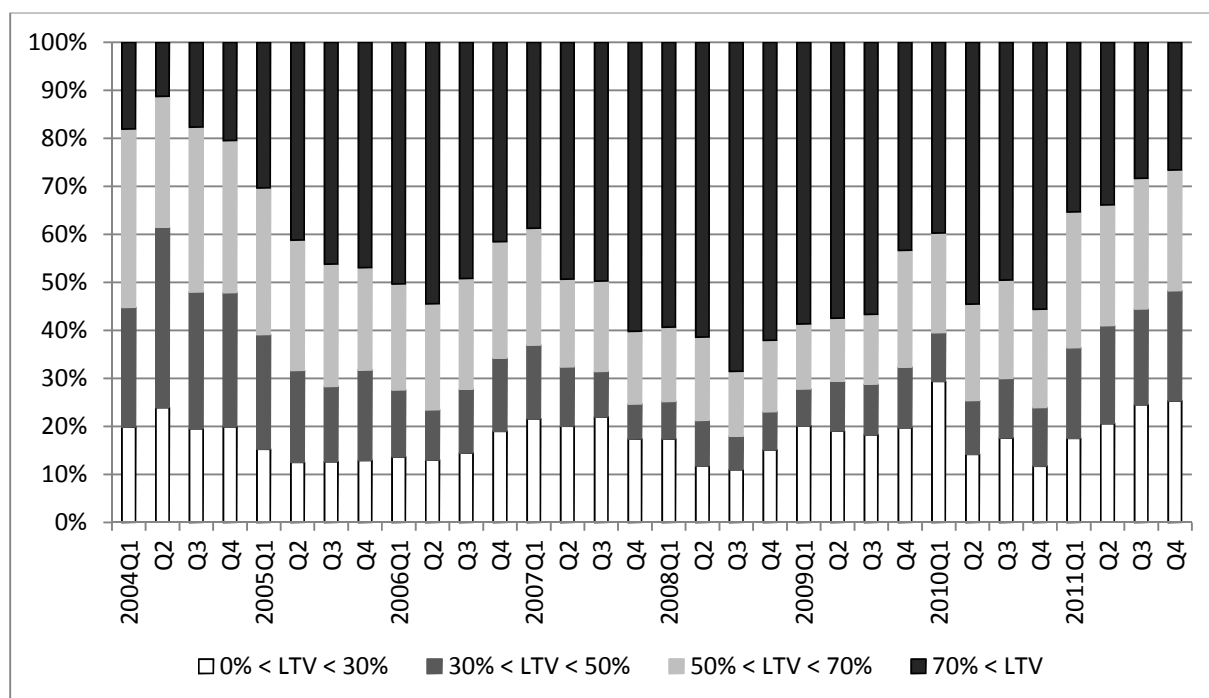
Another characteristic of risk-based competition has been the propagation of loan marketing through agents. Figure 4.10 shows the ratio of agent marketed loans with respect to the various types of loans. Because most of the agent employed by banks are independent of banks and market a number of bank products (see Figure 4.11), the propagation of loan marketing through agents enhance competition. On the other hand, as MNB (2008) notes, loans intermediated by agents are more risky. Figure 4.21 shows the ratio of loans overdue more than 90 days and the number of new contracts made through agent disbursement and branch disbursement.

Figure 4.8. The denomination structure of household loans



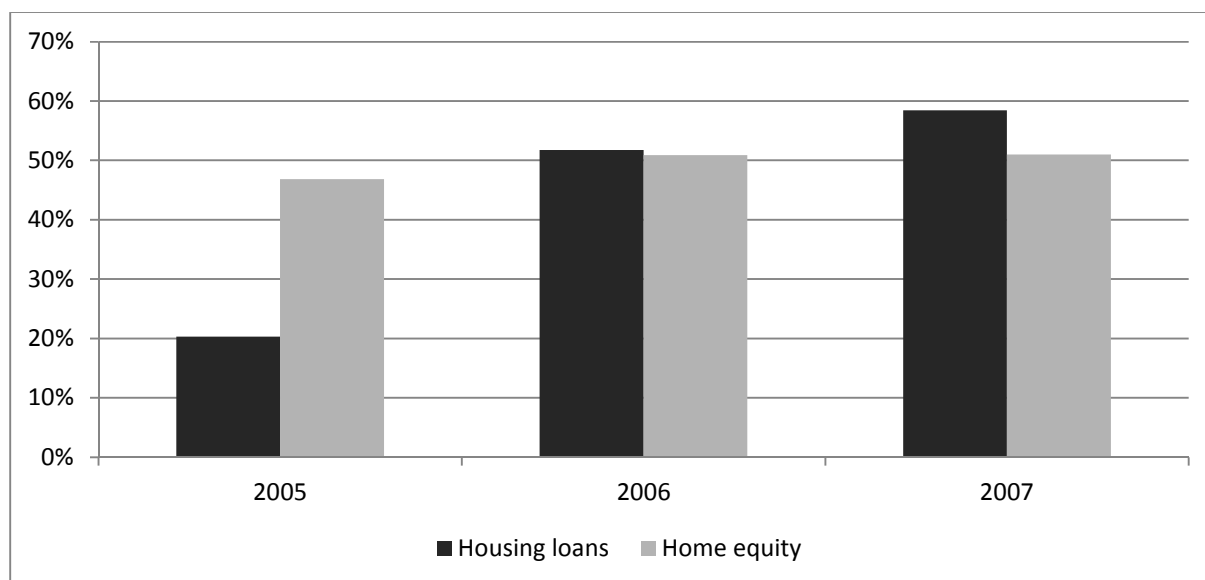
Source: MNB (2012a).

Figure 4.9. The distribution of new housing loans by LTV



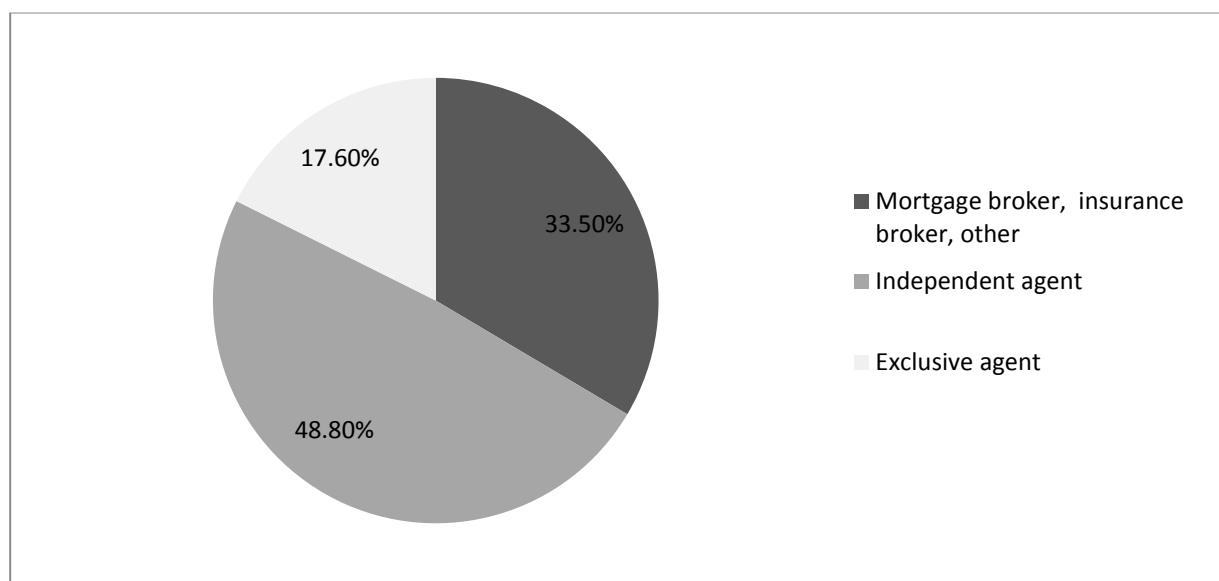
Source: MNB (2012a).

Figure 4.10. Proportion of selling agent related new contracts within the mortgage loans, by the number of contracts



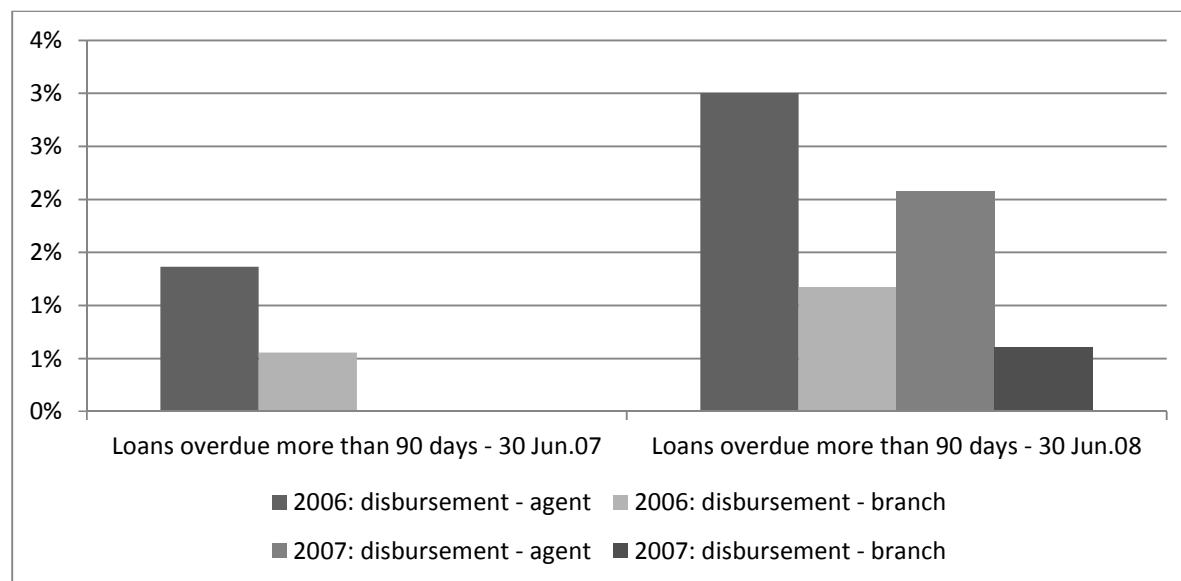
Source: MNB (2008).

Figure 4.11. Agent related contracts by the type of the agent



Source: MNB (2008).

Figure 4.12. Loans overdue more than 90 days, by vintage and number of new contracts



Source: MNB (2008).

4.4. Non-Structural Reasons for Lack of Competition

A number of studies draw attention to the underdevelopment of the financial culture of Hungarian households. The level of financial culture does not only affect financial stability – through the households' propensity to bear risks –, it also has an effect on the level of competition in the banking market (see MNB, 2010 and Molnár-Holló, 2011). One of the key elements of financial culture is how conscious households are in deciding on their savings. More specifically, there are two areas of interest here: (1) the extent to which households are familiar with the various saving alternatives to bank deposits, (2) how sensitive household are to the prices of financial services. Figure 4.13 shows that Hungarian households, as compared to those in developed countries, invest a relatively small part of their financial wealth in financial funds, securities and insurance reserves, which is commonly regarded as a sign of low level of financial culture, and an important symptom of a low level of substitution between bank deposits and funds, which decreases the competition in these markets.

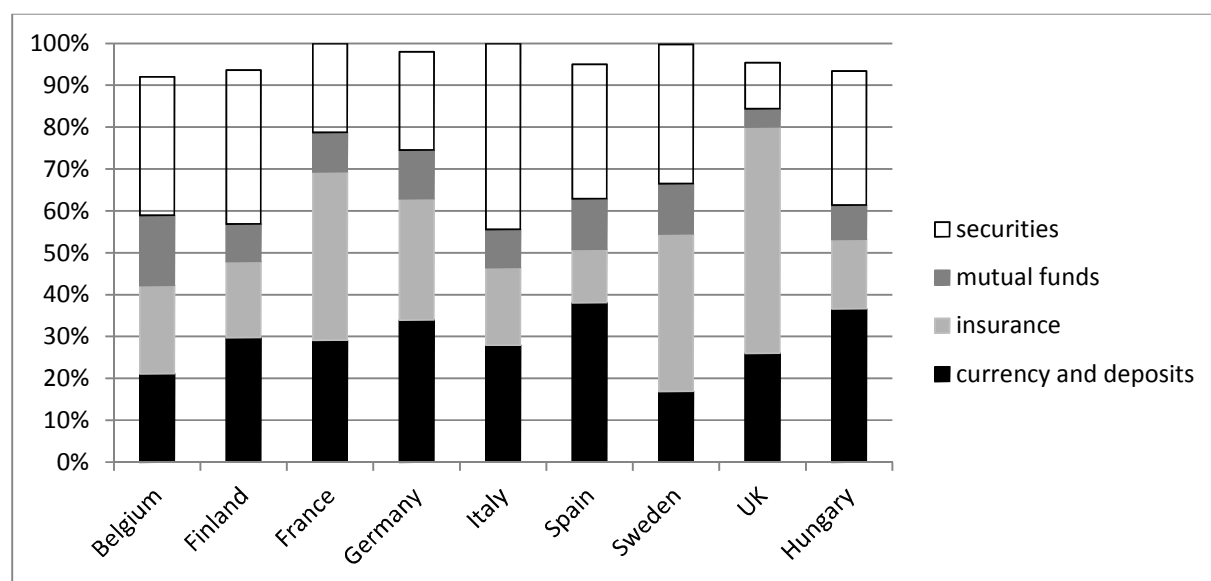
MNB (2010) also points out that the lack of price competition in the household banking segment can be attributed, in part, to regulatory reasons. In Hungary, contrary to a number of other emerging countries – for example Lithuania, Poland and Latvia – the interest rates have so far not been fixed or tied to reference interest rates, thus allowing banks to change interest rates unilaterally during the repayment term of a loan. This pricing practice resulted in extremely high interest rate margins in Hungary as compared to other CEE countries (see Figure 5.13 and 5.14 in Chapter 5), which can be explained by neither the increase of the CDS premium nor the increase of the FX swap costs. MNB (2010) and MNB (2011) draw attention to the fact that, owing to the non-transparent pricing practice of banks, loans are incomparable, and loan refinancing becomes impossible as households do not shoulder the high cost of loan refinancing in exchange for uncertain gains.

It also impedes loan refinancing and therefore weakens competition that – according to the rules – prepayment of mortgage loans is more expensive when the debtor

finances the prepayment by means of another bank's loan. This regulation, as MNB (2011) emphasizes, weakens competition, as this excess cost is not justifiable by higher operational outlays and therefore makes the replacement of loans unnecessarily expensive. Similarly, the wide and also unilaterally modifiable foreign exchange margins do not only enhance non-transparency but also make replacement expensive, because – as debtors' loan accounts are managed in forint – the debtor, when refinancing the foreign exchange loan by another foreign exchange loan, must pay the margin twice.

MNB (2010) and MNB (2011) also mention another competition limiting rule regarding the refinancing of Swiss franc denominated loans. According to a 2010 amendment of the Government Decree 361 of 2009, the replacement of Swiss franc loans is possible only under 45-percent LTV ratio limit, while the replacement of loans denominated in forint or euro is possible independently of their LTV ratio. This rule made the replacement of most of the Swiss franc denominated loans impossible by another Swiss franc loan, as, in 2010, 85 per cent of the existing loans denominated in Swiss franc had LTV of more than 45 percent (see MNB, 2010).

Figure 4.13. Composition of households' wealth in some countries and in Hungary in 2006



Source: Ynesta (2008).

4.5. The Effect of the Crisis and Subsequent Arrangements on Competition

Although the banking system in Hungary did not spread the toxic securities as in USA and in the United Kingdom, the outbreak of the crisis touched severely the Hungarian economy causing serious financing problems mainly in the government budget. Although the crisis caused some liquidity problems in the bank system, too, it did not necessitate serious bank rescue operation as in some EU members. It is worth mentioning, that while in the whole of the EU, the measure of the undertakings related to the banks sector amounted to 31% of its GDP, in Hungary, the measure of the total undertakings was only 7.1% of its GDP (see Várhegyi, 2010) and the balance-sheet total of the bank sector decreased only by 0.5 percent.

Among arrangements creating liquidity, the decrease of the required reserve ratio may be considered as the most competition neutral measure, because the range of resources under reserve requirement was determined in a competition neutral way earlier.

As for the effective bank rescue subsidies, they are usually considered to be restrictive of competition. Effective subsidy was given only to FHB, in the form of capital increase of 30 billion forints. Besides this, an amendment of the state budget law made it possible for the state to directly lend to domestic banks or to buy MNB bonds and to lend it to the banks. Those banks, however, which intended to make use of this possibility had to pledge to provide corporate credits at a certain level. Within the framework of this subsidy scheme OTP received 1.4 billion euros and FHB borrowed 400 million euros. Because the legislation was aimed at domestic credit institutions exclusively, this also had some competition distorting effect.

One of the most contested measures of the Hungarian government during the crisis was the extraordinary bank levy, which had significant competition distorting effects. Pursuant to this legislation, the tax base is the balance sheet total of the credit institutions determined on the basis of the 2009 year-end figures, and this tax obligation must be complied with by loss-making credit institutions, as well. Because OTP group's pre-tax income amounted to two-thirds of the total pre-tax

income of the banking sector, the bank levy improved further the relative income position of OTP. As Várhegyi (2011) underlined, the tax burden of OTP group amounted to 20% of its total pre-tax income in 2009, while the tax paid by K&H, one of its main competitors, amounted to half of its income. Moreover, CIB bank and Raiffeisen Bank, two other important competitors of OTP paid twice their 2009 year income as an extraordinary bank levy.

Another competition distorting effect of the Act VC of 2010 originated from the fact, that the tax rate was determined as 0.15% of the tax base under 50 billion forints and 0.5% of the tax base above 50 billion. Because most of the banks have total assets well above the 50 billion threshold, the act favored the mainly domestic owned small banks and cooperatives. (See more in Chapter 6.)

Beside the competition distorting measures and regulation deficiencies, it should be noted that, owing to the crisis, some change occurred in the regulation that definitely strengthened competition in the long run. One of these measures is the regulation relating to the transparent pricing of mortgages, effective from April 2012, that obligates banks to tie loan interest rates to some reference interest rate, or else to fix the interest rates for at least three years, which will undoubtedly improve the transparency and the comparability of mortgage loans. From the point of view of competition, another important act was the Central Credit Information System Act which will create a complete credit registry system, which was long overdue, and the continual postponement of which was in the interest of OTP in the first place.

In sum, the crisis did not change the structure of the Hungarian banking market essentially. As Várhegyi (2010b) points out, speaking of the eight largest banks, it can be said that in the credit market only Erste Bank, CIB Bank and MKB, and in the deposit market only UniCredit Bank were able to increase their position in line with the loss of market share of OTP and K&H between the end of 2007 and 2009. But none of these changes exceeded 2% (see Table 4.2). Changes in the regulations following the onset of the crisis, however, may bring about essential changes in the relative market forces in the long run.

Table 4.2. Change of position of the largest eight domestic bank during the crisis

	balance-sheet total			credit			deposit		
	2007	2009	change	2007	2009	change	2007	2009	change
OTP Core*	24.9	25.7	0.8	22.9	21.8	-1.0	29.3	28.1	-1.3
MKB	13.3	13.7	0.4	14.1	15.4	1.3	11.8	11.4	-0.5
K&H	13.1	13.6	0.5	12.8	10.6	-2.2	12.9	13.5	0.5
Erste	10.9	12.3	1.7	10.9	13.0	2.0	8.3	9.2	0.9
CIB	13.8	12.2	-1.6	15.0	16.6	1.6	12.6	12.6	0.0
Raiffeisen	11.2	10.5	-0.7	11.9	10.8	-1.1	11.8	10.6	-1.2
UniCredit	8.4	7.7	-0.7	7.7	7.3	-0.4	7.1	8.9	1.8
Budapest Bank	4.4	4.0	-0.4	4.7	4.5	-0.2	6.2	5.2	-0.3
The eight largest banks	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0

*According to the consolidated report of the OTP Bank, OTP Mortgage Bank, OTP Building Saving Bank and OTP Factoring.

Source: Várhegyi (2010b).

5. Profitability of the Hungarian Banking Sector

5.1. The Decade of the 1990s

The Hungarian banking sector in the 1990s can be characterized by increasing but incomplete competition and huge losses caused by the inherited bad outstanding debt structure. As Várhegyi (1995) points out, the shrinking of the bank earnings began in 1991 and it continued in the following years. In 1990 all the 33 credit institutions were profitable, but in 1991 four banks became loss-making and the total combined earnings of the sector reached zero. In 1992 nine of the banks generated losses a total loss of 12 billion forints and the whole sector made a modest profit of 2 billion forints. However, in 1993 the total loss of the bank sector totaled 153 billion forints⁵¹, the bulk of which accrued to a few majority state-owned large banks⁵² that owned the largest part of the bad loans of Hungarian companies, while 5 banks (each of them wholly or partly foreign owned banks) were able to increase their income beyond the inflation rate. It should be noted, however, that the loss in that year was largely due to the increase of risk provisioning which was not recognized as proper expenses by Hungarian tax rules before 1991. From 1994 on, following the process of debtor and bank consolidation, the Hungarian banking system was profitable with the exception of the year of 1998 (see Figure 5.1 and 5.2). In this year the Postabank, Reálbank and MFB together made a loss of 177 billion forints, which was equal to 31% of the total capital of entire banking system in that year. This loss, however, had been accumulated in previous years, but then the banks had been hiding it and did not generate sufficient loan loss provision. Foreign banks, which obviously were not involved in the funding of the risky companies, and which had access to relatively cheap foreign sources, as well as domestic retail banks mostly earned significant profits during this period.

5.2. The Period of 2000-2007

⁵¹ Shareholders' equity of the banking sector was 147 billion forints (4 % of GDP) at this time.

⁵² In 1992 about 60% and in 1993 about 80% of the total loss of the bank sector was created by MHB, K&H and BB.

The period of 2000-2007 brought highly prosperous years for Hungarian banks. Over these years economic growth was relatively fast, with both households and corporates posing a high level of demand for financing.

The boom in the lending activity of the banking sector – in the period of 2002-2005 – was stimulated by the government's mortgage loan interest subsidy system⁵³. Because the state interest subsidy was linked to the issuance of mortgage bonds, the main beneficiary of the interest subsidy system were mortgage banks, and especially OTB Bank which, through its newly established mortgage bank, succeeded in raising its market share significantly in the housing loan market in 2003.

Between 2000 and 2007 total bank assets increased dynamically and the extensive lending activity resulted in remarkably improving profitability in the banking sector. In the most prosperous years the profitability of the banking sector measured by Return on equity (ROE) and Return on assets (ROA) was 26% and near 2.5%, respectively (see Figure 5.1 and 5.2⁵⁴).

From the end of 2003, as a consequence of the increase of market interest rates and tightening of the terms of the state subsidy scheme, state subsidized loans were replaced by housing loans denominated in foreign currency. Around this time an increasingly intensive risk-based competition started among banks, which was reflected by the increasing loan to value ratio and the relaxation of other conditions of lending (see Chapter 4). Owing to the steady foreign exchange rates and the liquidity of the international financial markets the demand for Swiss franc and euro based loans increased dynamically which maintained high the profitability of the bank sector in spite of the tightening domestic funds. The decline in profitability in the second half of 2005 was due in part to the losses stemming from the

⁵³ According to MNB (2003), the profit realized on state-subsidized household loans accounted for about 10-13% of the banking sector's total net profit in the first half of the year of 2003. Before June 2003, banks could earn an interest margin of 7-9% on these subsidized loans.

⁵⁴ The chart ignores the figures of the state owned MFB. Taking account of the 142 billion forint loss of MFB in 2002, the ROE and ROA of the whole banking sector would have been negative this year. MFB is a state owned bank, to which the strict prudential regulations of credit institutions did not apply before 2003.

deterioration of the banking system's credit portfolio and the drop in the trading income owing to the declining central bank base rate.

Although the profitability of the banking sector, measured by ROA and ROE, gradually decreased along with the phasing out of governmental subsidies, its respective values of above 20% and 1.78 % in 2007, at the beginning of the first wave of the financial crisis, were still relatively high compared to those of the euro-zone's banks⁵⁵, but were modest compared to those of the CEE countries. The causes of the sharp decline in the profitability were the unfavorable international environment which increased the cost of funds, the persistently low rate of growth which cut back the demand for loans and the increasingly fierce cost based competition which reduced the interest rate spread.

As mentioned in Chapter 4, the low level of competition, especially in the household segment, also contributed to the high profitability of the banking sector (see for example MNB, 2003, Horváth-Krekó-Naszódi, 2005, Móré-Nagy, 2004, Várhegyi, 2003, and Várhegyi, 2010). Namely, the high and frequently changing level of the interest rate (especially after 2004, see Chapter 12) helped banks realize extra profit as deposit interest rates responded inelastically to money market changes. The lack of an adequate debtor information system also contributed to the extremely high interest margin and profitability in the retail segment of the banking system. As MNB (2003) points out, although the quality of the loan portfolio and the ratio of the loss in value is not much better in the corporate segment than it is in the retail segment (the latter is 2% and 2.2%, respectively in the case of the corporate loans and household loans), the risk margin of the latter is essentially higher. Its value was 1.3 per cent in the case of the corporate loans and 13.7 per cent in the case of consumer loans and 6.7 per cent in the case of mortgage loans. For large banks, possessing significant market power, the low interest rates on current account and demand deposits also yielded high profit through rigid pricing (see MNB, 2003). The high

⁵⁵ Average ROE and ROA of large banks in the EMU were 11.5% and 0.94%, respectively, at the end of 2007.

profitability due to the lack of competition is reflected in the fee income and the interest margin⁵⁶ of the banking sector (see Figures 5.7, 5.13 and 5.15).

In the last decade, the commission income and interest income were the largest and the most stable sources of income (see Figure 5.7). It should also be noted, that the interest income as a proportion of total assets consistently was within the range of 2.5 per cent to 4 per cent which is fairly high in an international comparison (see Figure 5.15) and was the highest in the European Union in 2006 (see MNB, 2007).

It is worth mentioning, that the evolution of the profitability of credit institutions can be explained essentially by three elements of the income. As the chart below shows, the movement of before-tax income of the whole credit institution sector is astonishingly similar to the evolution of the sum of the result of trading income and the change of loss in value and risk provisioning. Its outstanding high value in 2011 was due mainly to the early repayment scheme, which caused a total of 150 billion forint loss to the bank system.⁵⁷

5.2.1. Cost Efficiency of the Banking System

At the beginning of the 2000s, domestic banks were characterized by a relative low cost efficiency as compared to the cost efficiency of foreign owned banks (see MNB, 2004 and Banai-Király-Nagy, 2010), but the cost efficiency of domestic banks increased gradually in the period in line with the deepening of financial intermediation (see Chapter 2). The ratio of operation costs to total assets was above 4% in 1998 (see MNB, 2005) while in 2011 it was half of its original value (see Figure 5.3).

The relative high operation costs of the pre-crisis period was due to the development of the IT infrastructure at the beginning of the 2000s and the strong cost based competition, which was peculiar to the household segment of the banking sector in the period of 2000 to 2007. While staff reduction⁵⁸ following the onset of the crisis

⁵⁶ Under the term interest margin, we mean the ratio of net interest income to total assets.

⁵⁷ The early repayment scheme and the bank levy caused about 330 billion forint loss to the whole credit institutional sector, which is more than 12 per cent of its total equity.

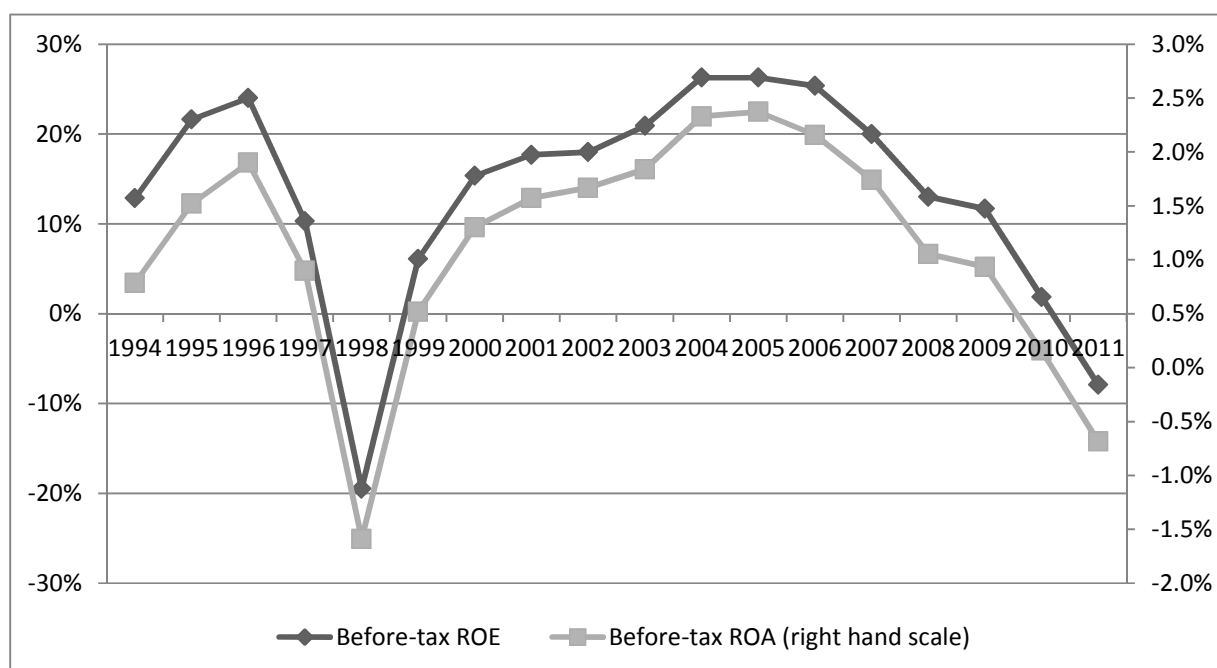
⁵⁸ Between 2008 and 2010 the staff in the bank sector decreased by 10 per cent.

contributed to the decreasing tendency of the ratio of operation costs, their level is still high in an international comparison (see Figure 5.4) as the spectacular profitability of the bank sector in the first half of the 2000s did not prompt banks to improve efficiency. There seems to be a turnaround in that respect. Figure 5.5 shows that the before tax income per worker in the banking sector has been decreasing since 2006. However, Figure 5.6 suggests that total assets per worker in the banking sector have been steadily increasing over the last decade, which is a sign of improving efficiency.

As MNB's reports on stability (MNB, 2000-2012) point out, one of the reasons of the relatively weak cost efficiency of the Hungarian banking sector, besides the low level of competition, is that the cost efficiency of banks operating in a relatively small or less deep market tends to be lower (systemic scale economies).⁵⁹ MNB (2008) also point it out, that the steady diminishing in operation costs to total assets ratio was largely due to the persistent and sharp increase of the loan portfolio and the deepening of the financial intermediation in the pre-crisis period which surpassed the effect of the increasing costs.

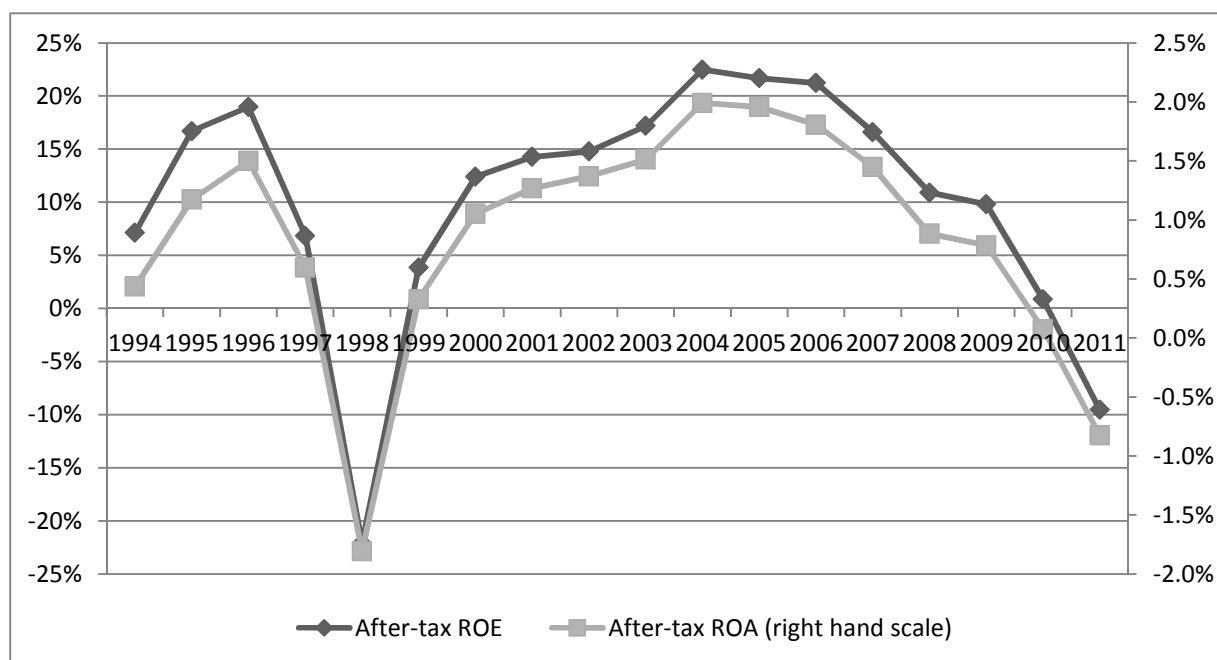
⁵⁹ Empirical investigations based on cross-country samples underpin the fact that there is a positive correlation between the cost effectiveness and the depth of financial intermediation. One of the reason for this phenomenon is that in a deeper market the competition is more fierce, which prompts banks to decrease their costs. According to other explanations, the principle of scale economies applies not only to the level of an individual bank but to the whole system (systemic scale economies). See for example Bossone-Lee (2004) and Demirgüç-Asli-Huizinga (1998).

Figure 5.1. Before-tax ROE and ROA for the Hungarian credit institution system



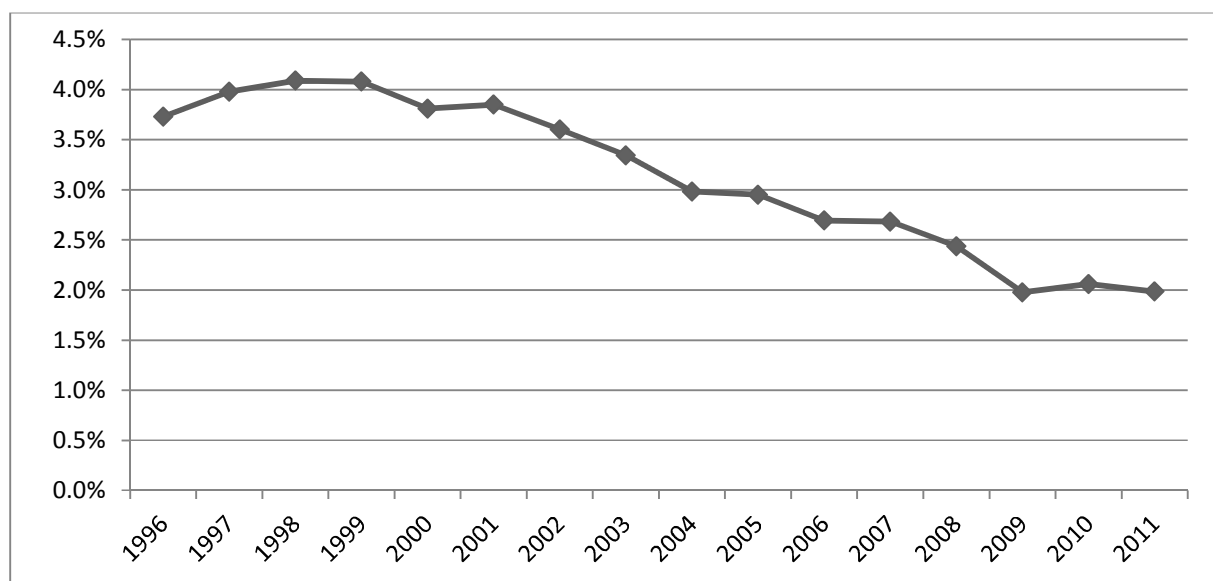
Source: MNB.

Figure 5.2. After-tax ROE and ROA for the Hungarian credit institution system



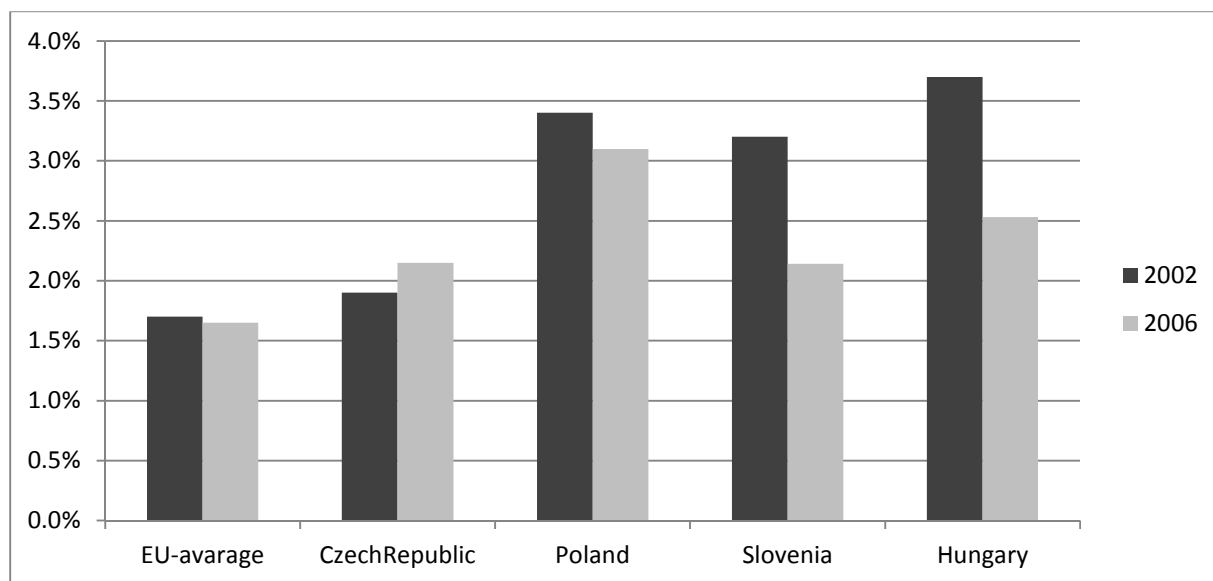
Source: PSzÁF.

Figure 5.3. Ratio of operating costs to total assets



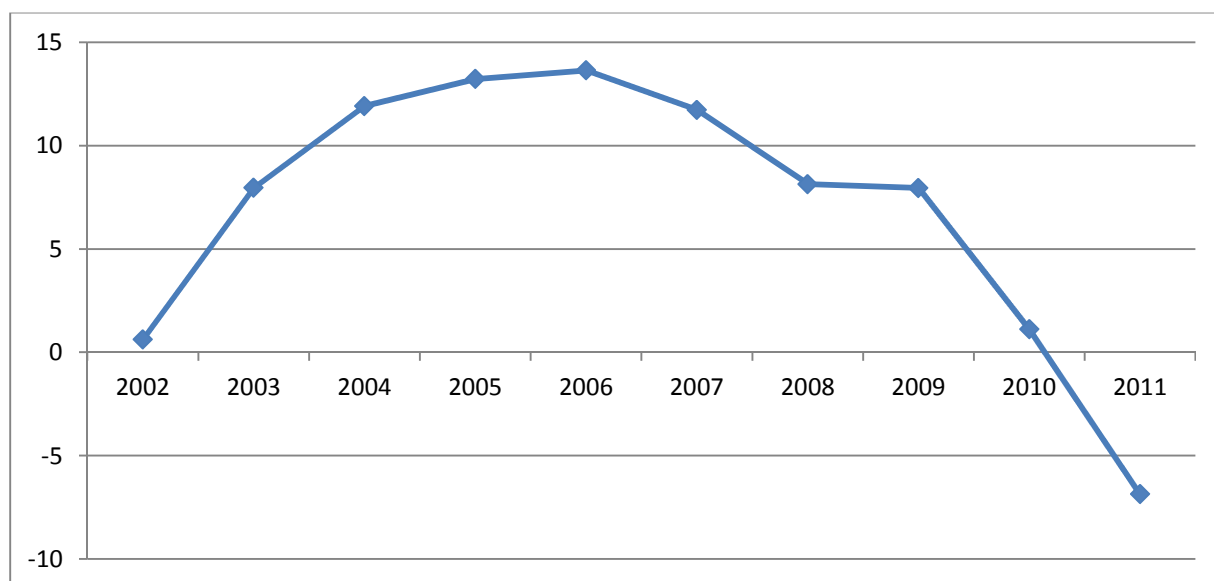
Source: PSzÁF.

Figure 5.4. Ratio of operating costs to total assets in selected countries



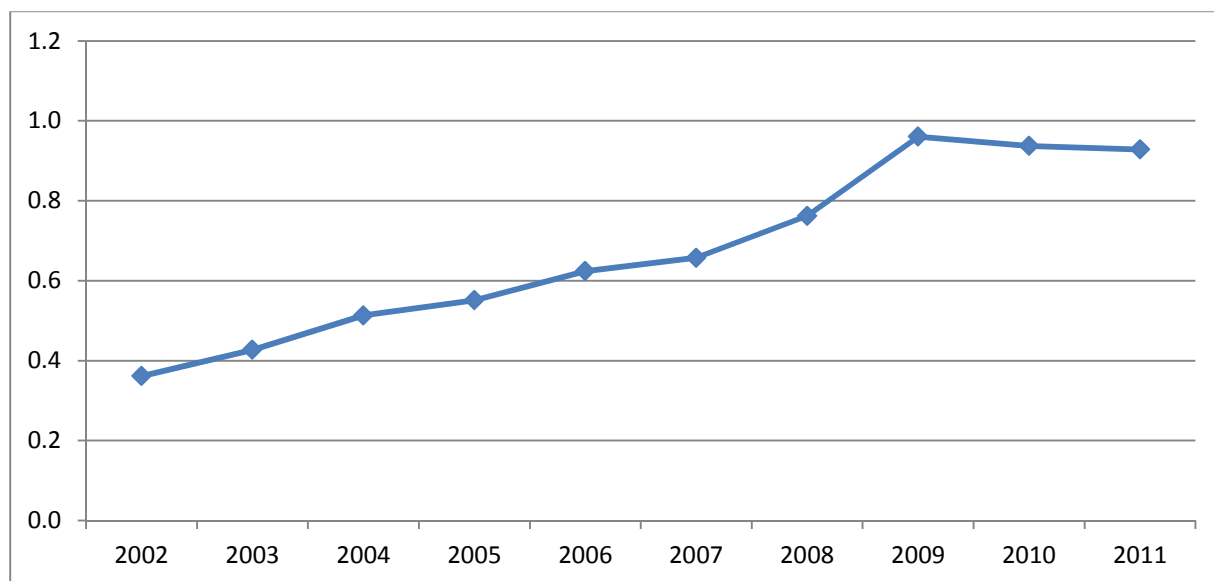
Source: MNB (2004) and MNB (2008).

Figure 5.5. Before-tax income per worker in the bank sector (million forints)



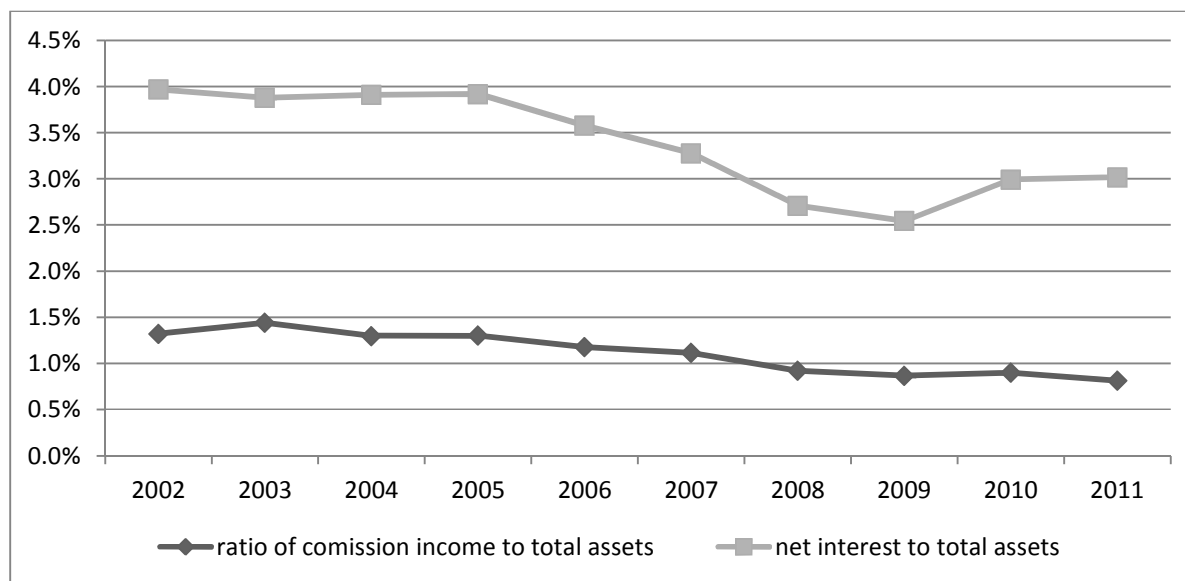
Source: PSzÁF.

Figure 5.6. Total assets per worker in the bank sector (million forints)



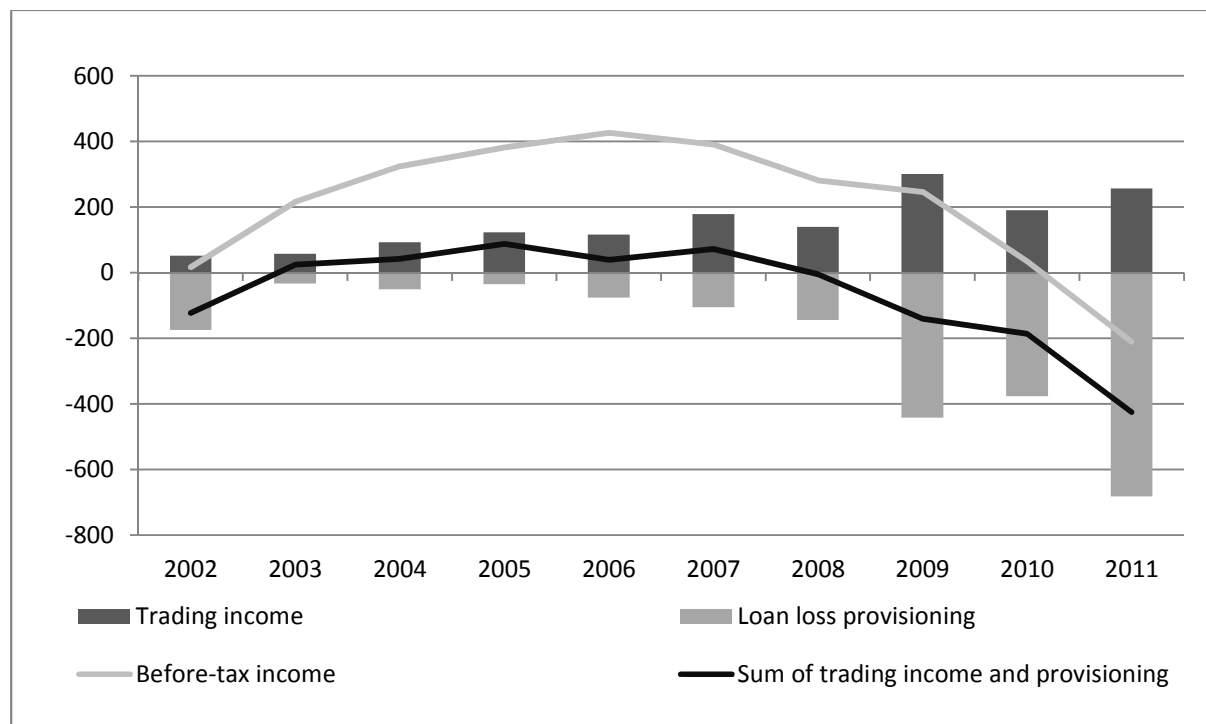
Source: PSzÁF.

Figure 5.7. Ratio of commission income and net interest to balance-sheet total in the banking sector (including specialized credit institutions)



Source: PSzÁF.

Figure 5.8. Some components of the income of the credit institution sector including specialized credit institutions (billion forints)



Source: PSzÁF.

5.3. Comparison of the Profitability of Sectors of Hungarian Financial System

As mentioned, before the financial crisis, the Hungarian banking system had been characterized by oligopolistic pricing (see Horváth-Krekó-Naszódi, 2005, Molnár-Nagy, 2004, Várhegyi, 2003, Várhegyi, 2010 and Chapter 4). The low level of competition was advantageous mainly to large banks, which were able to draw profit from rigid pricing, and the pre-tax ROE of this sector approached even the value of 30 per cent. However, the profitability of small and middle sized banks was also comparatively high (see Figures 5.9-5.12), but their pre-tax ROE, with the exception of the years from 2004 to 2006, was well below 20 per cent.

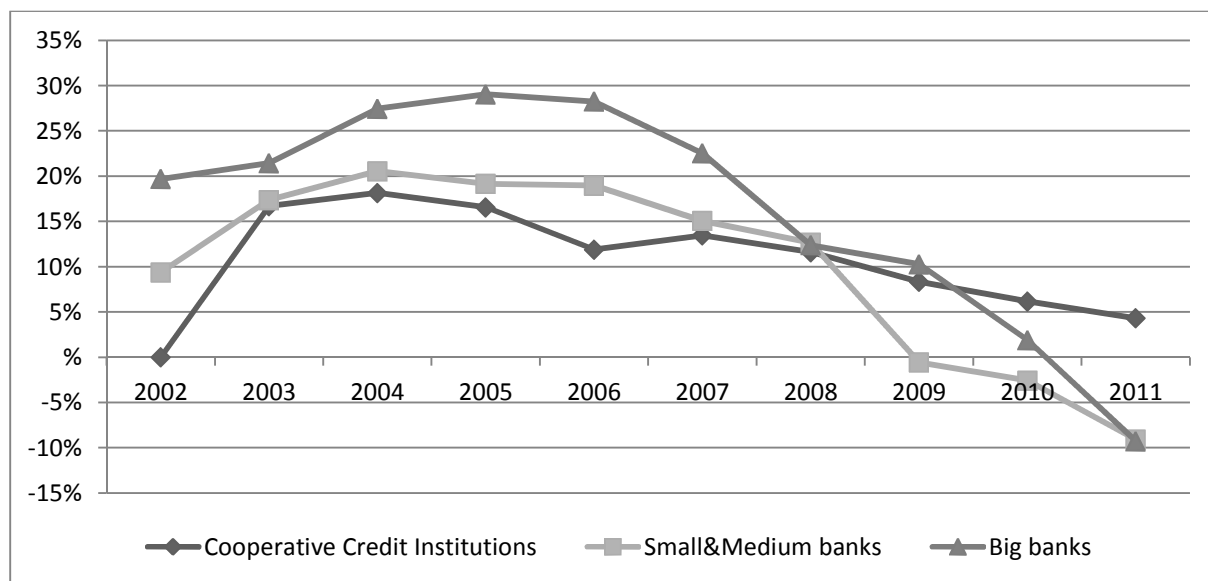
As Figures 5.9 to 5.12 show, the profitability of cooperative credit institutions in most of the years fell short of that of the small and middle sized banks. One of the reasons of the relatively low profitability of savings cooperatives was that they were unable to take advantage of the facilities of the subsidy scheme, because they were not included amongst the counterparties of the mortgage banks. On the other hand, they could not take part in the boom of foreign currency loans either, because the scope of their activity does not include the provision of foreign currency denominated loans. One of the causes of the relative high profitability of cooperative credit institutions in the last three years is that having a low level of foreign currency denominated loans in their portfolio their loan loss provisioning was lower.⁶⁰

Significant asymmetries in profitability can also be observed between domestic and foreign owned banks. After the privatization of the banking system (see Chapter 1) foreign banks firstly appeared in the corporate segment which required much less initial investment. As a result of this and owing to their already existing branch network and their inherited customers, Hungarian banks had a significant competitive advantage at the beginning of the 2000s, which made it possible for them to charge higher fees and to achieve higher interest margins on loans and deposits due to the low price sensitivity of Hungarian households. At the same time, owing to the asymmetric information between foreign and Hungarian banks the quality of the

⁶⁰ Another reason for their higher profitability is that their total assets do not reach the level of 50 billion forints, so their bank levy rate was lower than that of the large and the small & medium sized banks.

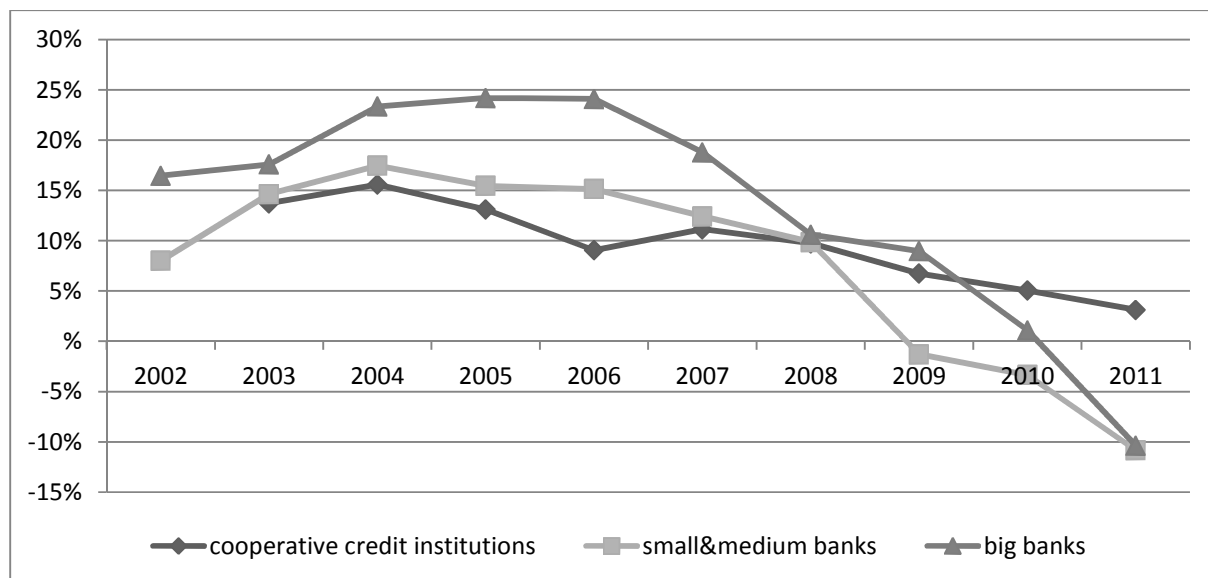
loan portfolio of the latter group of banks was better, which also contributed to the profitability differences between the two groups of banks. As Banai-Király-Nagy (2010) noticed, in the last decade, the ROE and the ROA of the Hungarian banks were almost twice as high as those of foreign owned banks working in Hungary in the same period. At the end of the 1990s the competition in the corporate loan market strengthened, therefore, foreign banks started a strong cost-based competition in the household market by increasing their marketing outlays and the number of branches at the beginning of the 2000s. Nevertheless, Hungarian banks were able to preserve their competitive advantage up to this time.

Figure 5.9. Before-tax ROE for the sectors of Hungarian bank system without specialized credit institutions



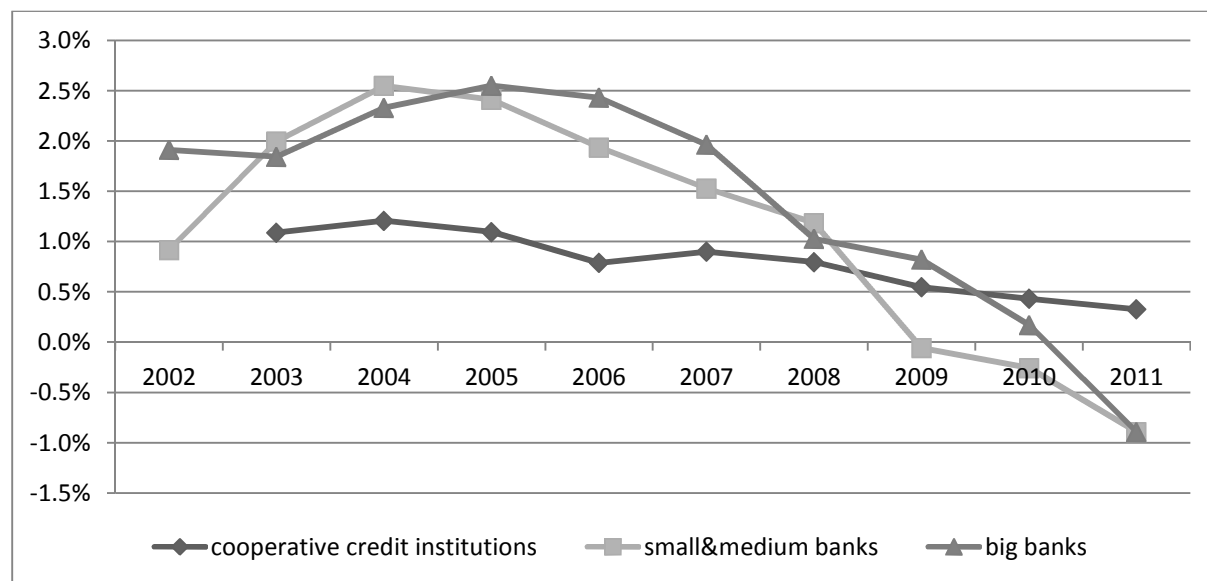
Source: PSzÁF.

Figure 5.10. After-tax ROE for the sectors of Hungarian bank system without specialized credit institutions



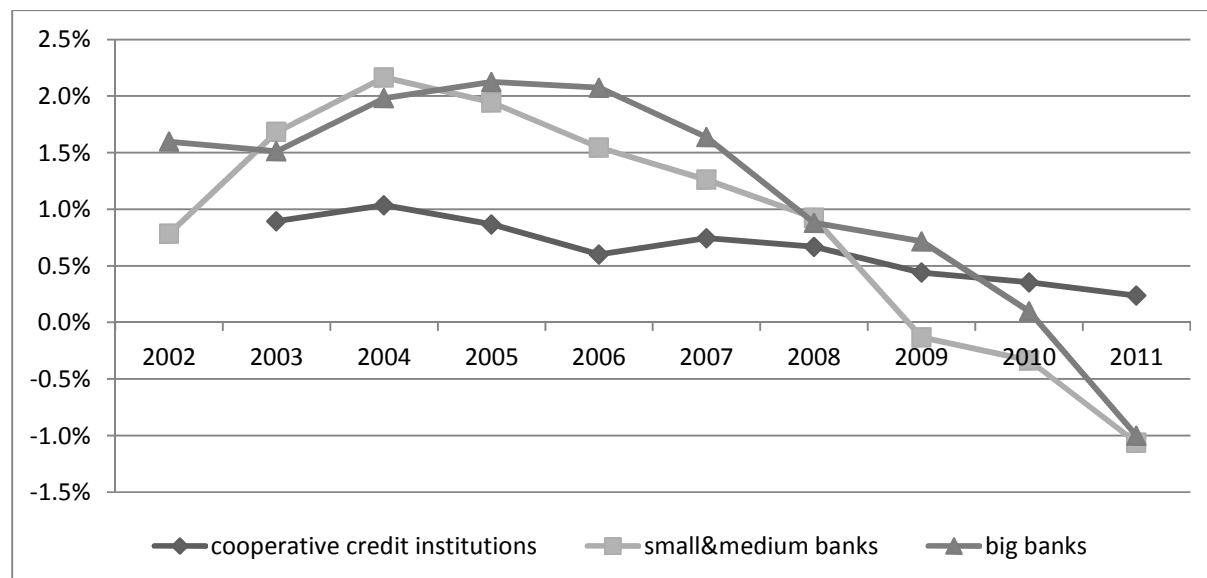
Source: PSzÁF.

Figure 5.11. Before-tax ROA for the sectors of Hungarian bank system without specialized credit institutions



Source: PSzÁF.

Figure 5.12. After-tax ROA for the sectors of Hungarian bank system without specialized credit institutions



Source: PSzÁF.

5.4. The Profitability of the Banking Sector During and After the Crisis

The market turbulence caused by the financial crisis had only an indirect effect on the profitability of the Hungarian banking sector, as the banking sector essentially was not exposed to toxic assets⁶¹ due in part to conservative asset management policies and to the relative high profitability of lending in the pre-crisis period ensured by the governmental subsidies and, later, the Swiss franc based lending. The most important adverse effect of the crisis was the drying up of the funds in the international financial markets including swap markets for Swiss franc and the sudden increase of the country risk factor causing additional costs and setting back the profitability of the Hungarian banking sector.

Until 2004, Hungarian banks were able to finance their lending through their deposits, from that time on, however, due to the expanded demand for loans, they had to rely on foreign capital. Owing to the steady forint exchange rate and the cheap foreign source of funds, foreign currency denominated lending was highly profitable for banks. From the autumn of 2007, however, long term foreign loans were no longer available or became more expensive for domestic banks, so it was cheaper for them to finance their loans by currency swaps and using their forint liquidity. In this stage of the crisis the profitability of the banking sector measured by the index of before-tax ROE decreased to 20% in 2007 and to 13% in 2008⁶² (see Figure 5.1). The situation was exacerbated by the fact, that in the second phase of the crisis, the persistently strong Swiss franc and the drying up of the swap market caused additional funding costs to the banking system, which essentially brought an end to the risk based competition of the previous years. Another consequence of the strong Swiss franc was that the position of the households with foreign currency based loans⁶³ deteriorated, which resulted in enormous losses in the banking sector from 2009 on. The before-tax ROE of the banking sector fell to 11.6% in 2009 and to 1.9%

⁶¹The total exposure of the Hungarian banking sector to Lehman Brothers and AIG was about 20-25 billion forints (1.3 per cent of the capital of the whole banking sector).

⁶²It was a total of 48% decrease compared to its value in 2006.

⁶³ The credit stock of households increased by 300%, but their deposits increased only by 40% between 2004 and 2008. As for the whole private sector, the increase of the credit stock and the deposits were 200% and 50%, respectively, during the same period.

in 2010 (see Figure 5.1). As a result of these developments and the governmental regulation, the formerly highly profitable Swiss franc based lending essentially stopped in 2010. In 2010 and 2011, besides the increasing founding cost and nonperforming loans, which manifested in the increase of loan loss provisioning⁶⁴ (see Figure 5.8 and 5.13), the extraordinary bank levy also reduced the profitability of the banking system, and the profit of the entire banking system incurred a significant loss (256 billion forints) in 2011.

Although trading income also dropped slightly at beginning of the crisis, it seems stable and increasing (see Figure 5.13).

Although the crisis caused considerable losses to the banking sector, owing to the financial difficulties related to the crisis, only three banks needed governmental support: the Hungarian Development Bank (MFB), OTP Bank and FHB.⁶⁵

However, as Várhegyi (2010b) and MNB (2012a) pointed out, there was a high asymmetry in profitability within the banking sector. Although the before tax income of the banking system (without specialized credit institutions) decreased between 2008 and 2009, OTP Bank managed to increase its before-tax income.⁶⁶ In 2009, despite of the fact that its market share was 26 per cent (see Chapter 4), about two thirds of the total profit of the banking sector was earned by OTP group. Even in 2011, close to three quarters of the total profit of the banking system was achieved by three banks, including OTP.

Beside profits, losses were also fairly concentrated. As MNB (2012a) pointed out, in 2011 about 70 per cent of the gross loss of the whole banking sector accumulated in three banks altogether, in spite of the fact that the number of the loss-making banks

⁶⁴ As the Hungarian Banking Association (Magyar Bankszövetség, 2012) pointed out, in the period of 2005-2011, loan loss provisioning of the banking system increased exponentially with the rise of the country's CDS premium.

⁶⁵ The government provided these three banks with loans of 170 billion, 400 billion and 120 billion forints, respectively, and FHB was provided with an additional capital injection of 30 billion forints. It should be noted, however, that in the case of FHB and OTP, the main aims of the loans was not to rescue these banks, but to enable them to raise their loan loss provisioning for households and corporations to mitigate the adverse effects of the crisis on their portfolio.

⁶⁶ In that year OTP Core increased its market share from 23.8% to 26.3%, according to its total assets (see Chapter 4).

were 19 and the market share by total assets of banks in the red was 43 per cent at the end of that year (see Figure 5.14).

Although the profitability of the banks dropped sharply following the outbreak of the crisis, the interest margin of the banking sector remained high, and even it increased slightly (see Figures 5.7 and 5.13) and is rather high in an international comparison (see Figure 5.15).

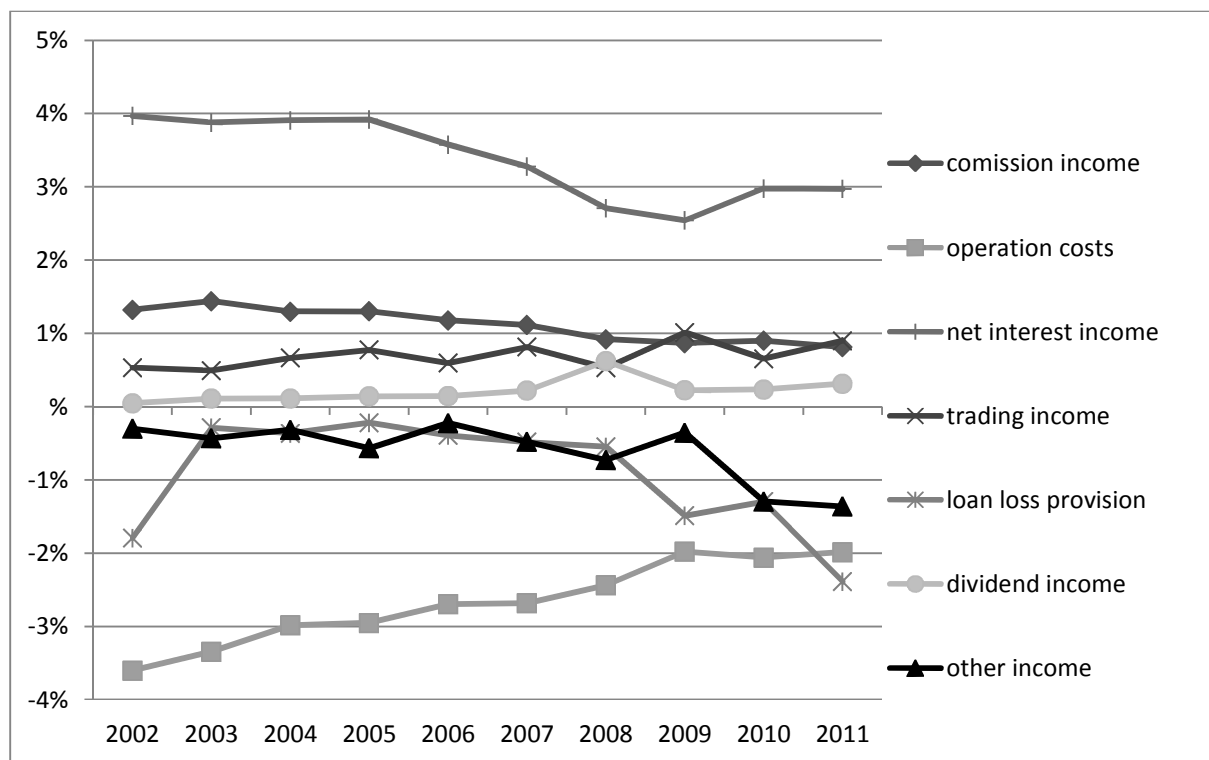
As MNB's reports on financial stability in recent years suggested (see MNB, 2010-2011), the extremely high interest margins in the Hungarian banking sector can be considered as a market failure caused by non-transparent pricing. As MNB (2010) and MNB (2011) remark, inadequate regulation made it possible for banks to pass through the increasing risk and funding costs due to the weakening of the forint exchange rate to costumers. This pricing practice resulted in extremely high interest spreads as compared to other CEE countries, which can be explained by neither the increase of the CDS premium nor the increase of the FX swap costs (see Figures 5.15 and 5.16).

The loss of the Hungarian banking sector registered in 2011 is attributable in part to the extraordinary bank levy introduced in 2010⁶⁷ and the early repayment of foreign currency denominated mortgage loans at a fixed preferential exchange rate. The total loss of the bank sector caused by the extraordinary bank levy and the early repayment scheme was estimated to be about 330 billion forints by MNB at the beginning of 2012. Ignoring the impact of these one-off factors, the Hungarian banking system would have been no longer loss making, but its profitability would have been fairly modest by international standards. Making the adjustment for these effects, the ROE and the ROA for the Hungarian banking sector would have been 4.2 per cent and 0.4 per cent, respectively, in 2011 (see MNB, 2012), which is still well below the pre-crisis level and is still low in an international comparison (see Figure 5.17).

⁶⁷ Act No XC of 2010.

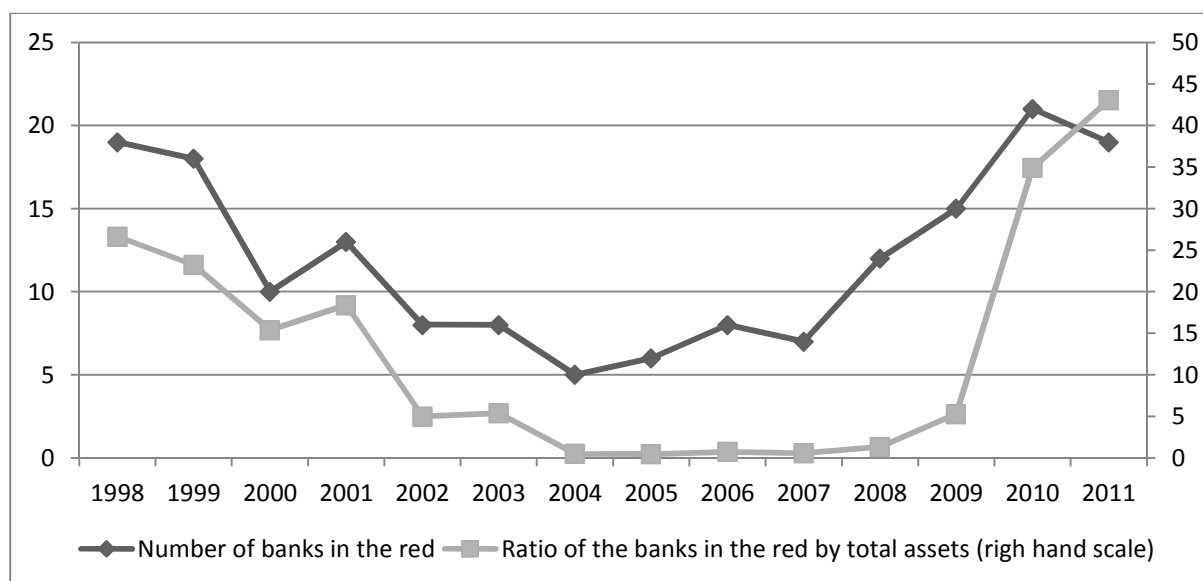
Taking into account that the extremely low profitability of the Hungarian banking sector in recent years can be attributable to a large extent to such one-off effects, the future profitability perspectives of the Hungarian banking system are promising.

Figure 5.13. Profit components of the banking sector separately including specialized credit institutions (as a proportion of total assets)



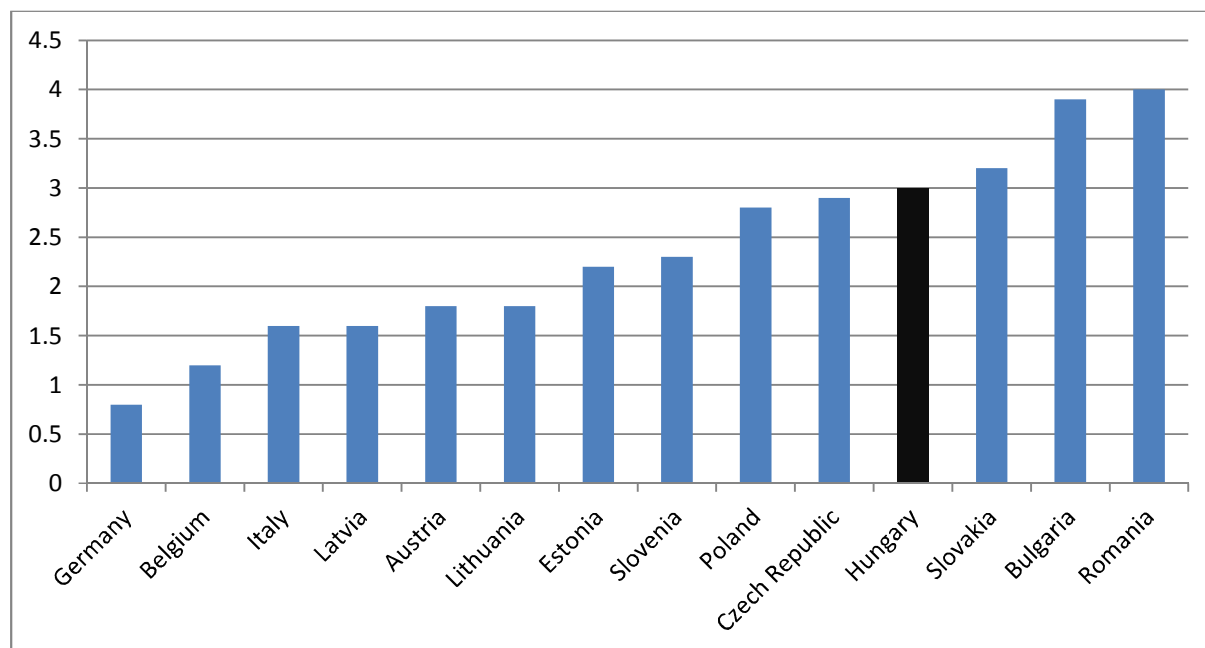
Source: PSzÁF.

Figure 5.14. Number and market share (%) of banks and branches in the red on the basis of pre-tax loss



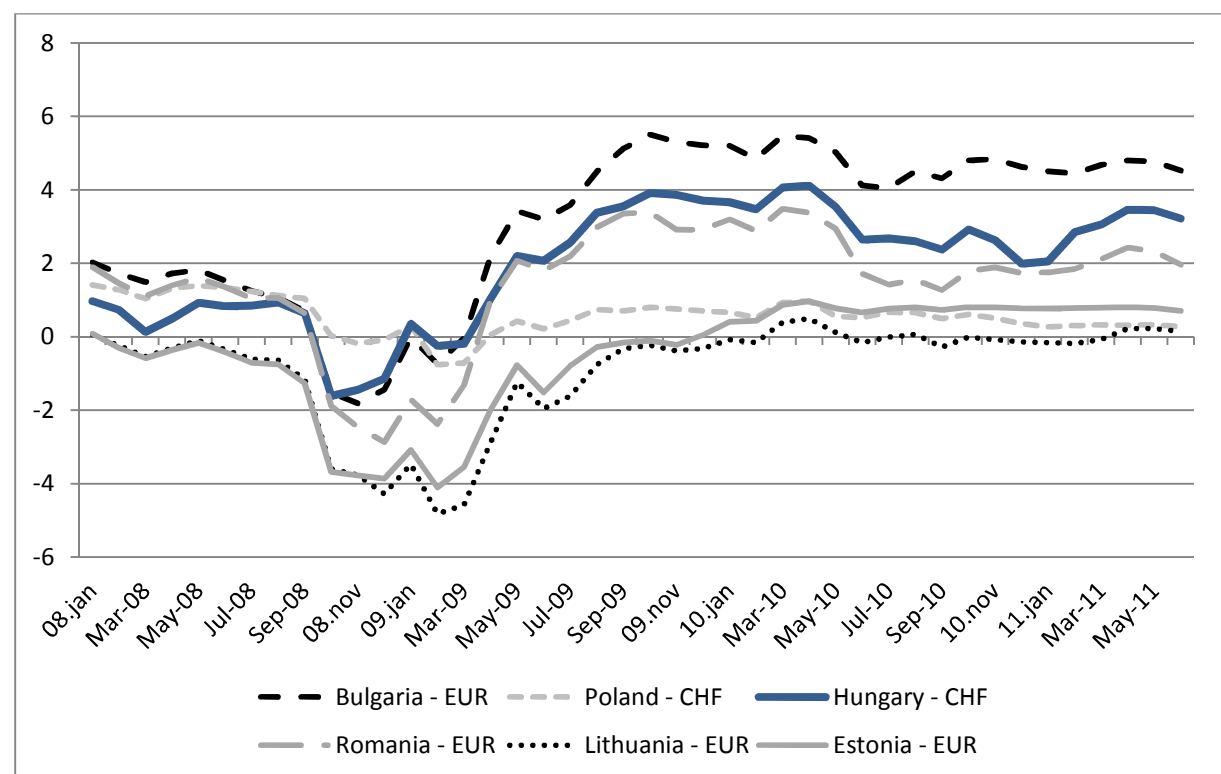
Source: MNB (2012b).

Figure 5.15. Net interest margin of selected countries in 2011 (Net interest/balance-sheet total, %)



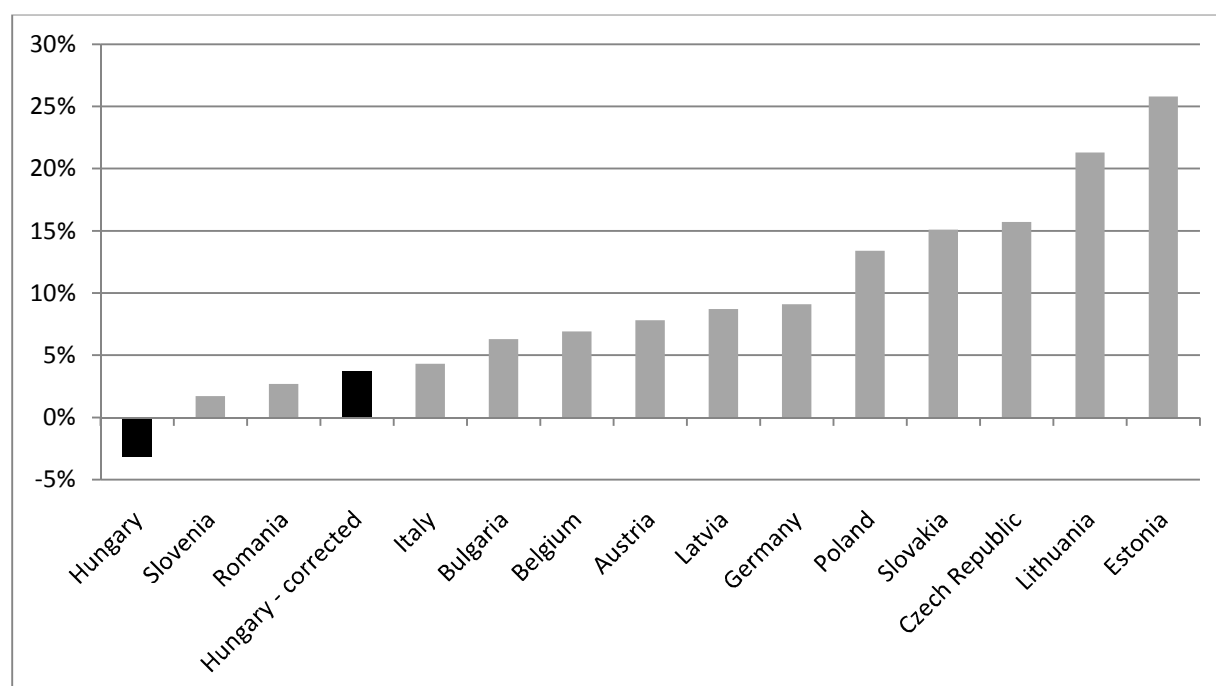
Source: MNB (2012b).

Figure 5.16. Interest margins of FX loans in CEE countries (%)



Source: MNB (2010).

Figure 5.17. After-tax ROE for banking sectors in 2011



Source: MNB (2012b).

5.5. Comparison of the Financial and Non-Financial Sectors

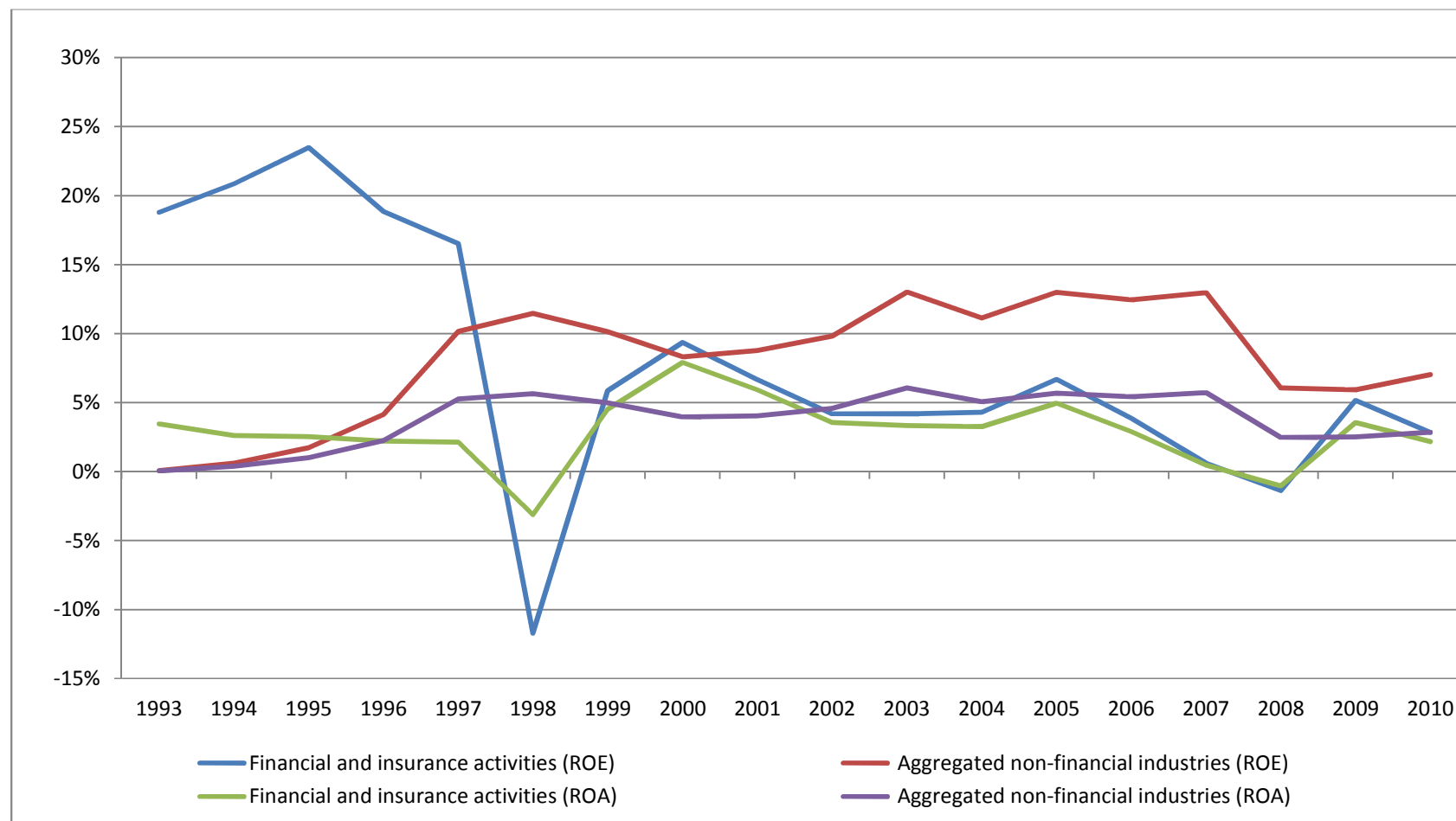
Return on equity (ROE) and return on assets (ROA) indices present similar tendencies for the financial and non-financial sectors as well. As we can see on Figure 5.19 the financial sector was more profitable than the aggregated non-financial sectors from 1993 until 1997 when we take into consideration the ROE indices. Most of the difference had eliminated by 1997. In the four previous years the profitability of non-financial sectors increased, but was below 5% versus more than 18% in the financial sector. The main reason for this difference is the negative results of the mining industry, accommodation and catering as well as the electricity and gas supply industries. The performance of the separate sectors within the non-financial industries is illustrated in Figure 5.20. The outstanding performance of manufacturing together with education, health and social work reduced the difference in profitability. It was the period when foreign companies invested heavily – mostly through privatization – into low-wage-cost Hungarian industries. Lease-work contracts helped to exploit the difference between the core European wage level and the Hungarian one.

As mentioned previously in this chapter, in 1998, three financial institutions generated a loss of 177 billion forints. This is the reason for the sharp fall of the ROE indicator in this year. From 1998 until 2010 there was only one year, namely 2000, where we can see higher profitability in the financial sector (9.35%) than in non-financial industries (8,30%). Except for this year the profitability of the non-financial sector exceeded 10%. The ROE indicator of the financial sector highlights a relatively stable period (from 1999 to 2005) where profitability moved between 4% and 7%. The decline started in 2006 in the financial sector and one year later in the non-financial sector and continued until 2008. 2008 was the second year after 1998, that the financial sector showed negative profitability, although the result of the previous year (2007) was already below 1%. After the crisis of 2008-2009 non-financial sectors' profitability shows an upward trend, but, thanks to the extraordinary bank-levy in 2010, profitability in the financial sector has been heavily fluctuating.

Differences between ROE and ROA indices are not significant (see Figure 5.18). The trends show exactly the same patterns, only the timing and duration is slightly different. In terms of ROA, the profitability advantage of the financial sector had disappeared by 1996, instead of 1997 in the case of ROE. From the point of view of ROA indices, 2001 (next to 2000) was also more profitable in the financial sector, as seen on Figure 5.21.

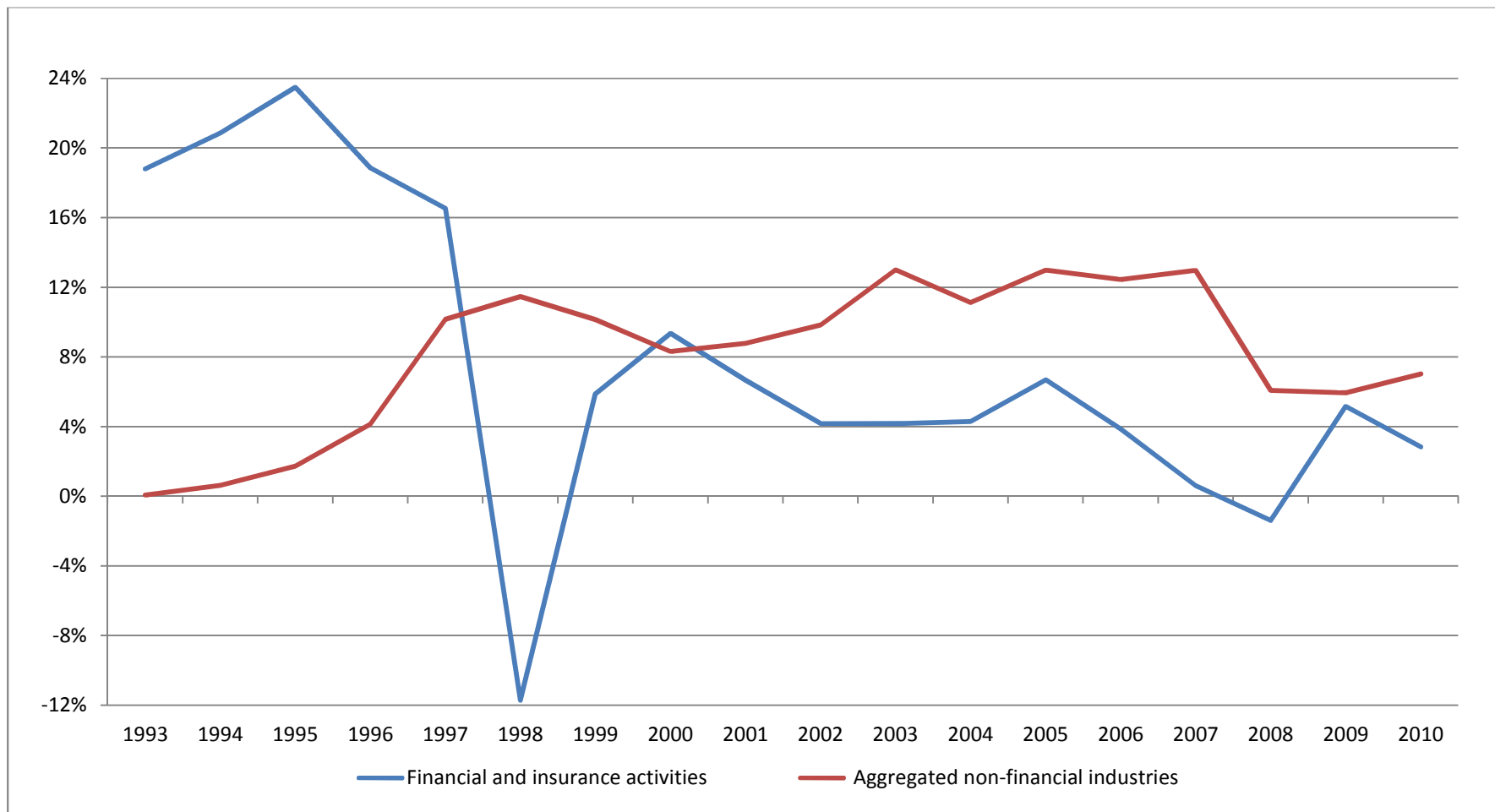
There were only two sectors (mining and agriculture, forestry and fishing) which were able to increase or stabilize their profitability after the fallout of the collapse of Lehman Brothers (see Figures 5.20 and 5.22). In case of ROA, this statement is valid only for agriculture, forestry and fishing. On the other hand, it was in real estate, construction and the wholesale and retail trade sectors where the crisis caused the biggest damage in the profitability level. ROE and ROA in these sectors fell by 15-20% and 6%, respectively. Profitability in accommodation and catering also fell considerably. See further details on ROE and ROA of Hungarian sectors in the Appendix of this chapter.

Figure 5.18. ROA and ROE indices of the financial and non-financial sectors in Hungary (2003-2010)



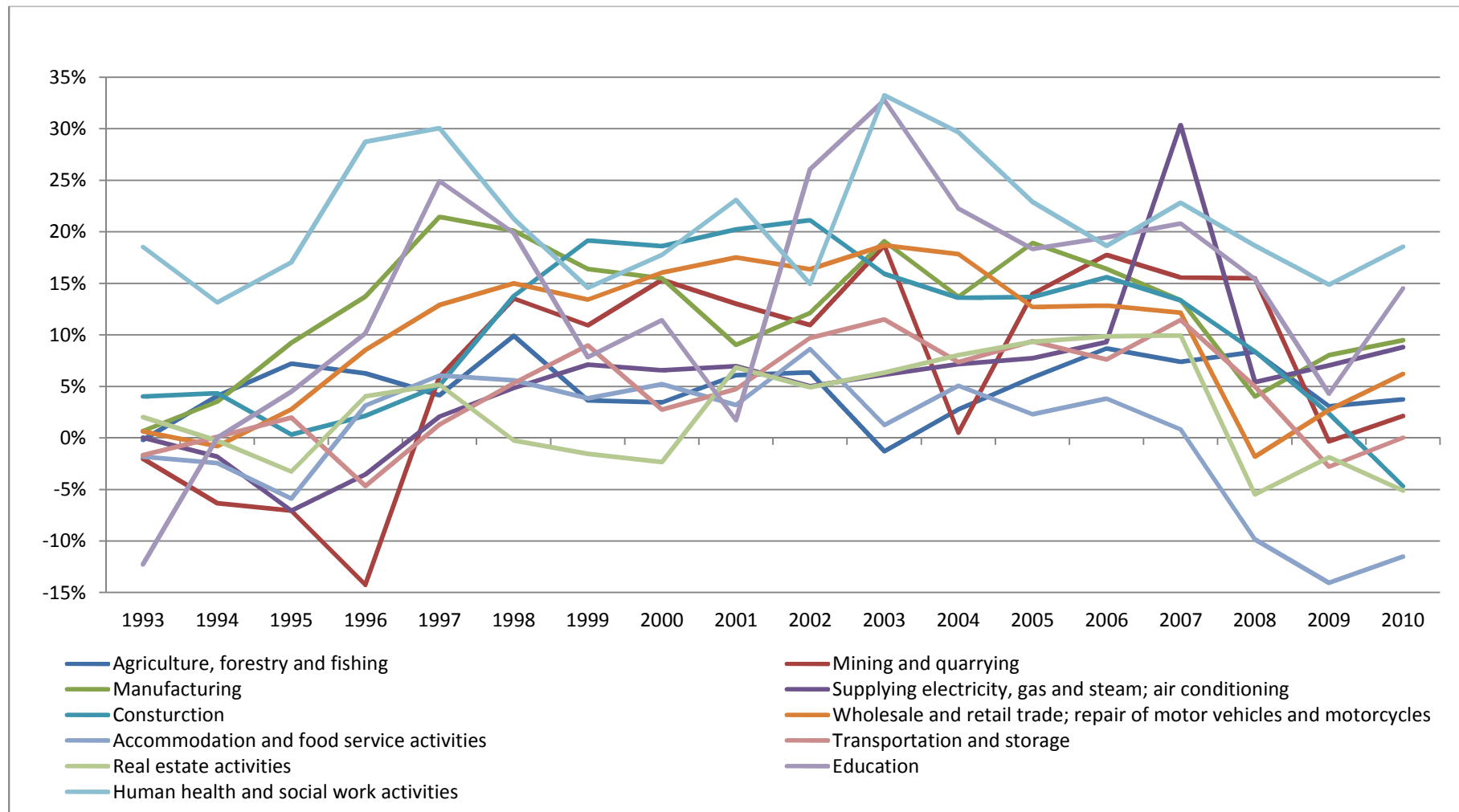
Source: Own calculation based on MNB (2012a).

Figure 5.19. ROE indices of the financial and non-financial sectors in Hungary (1993-2010)



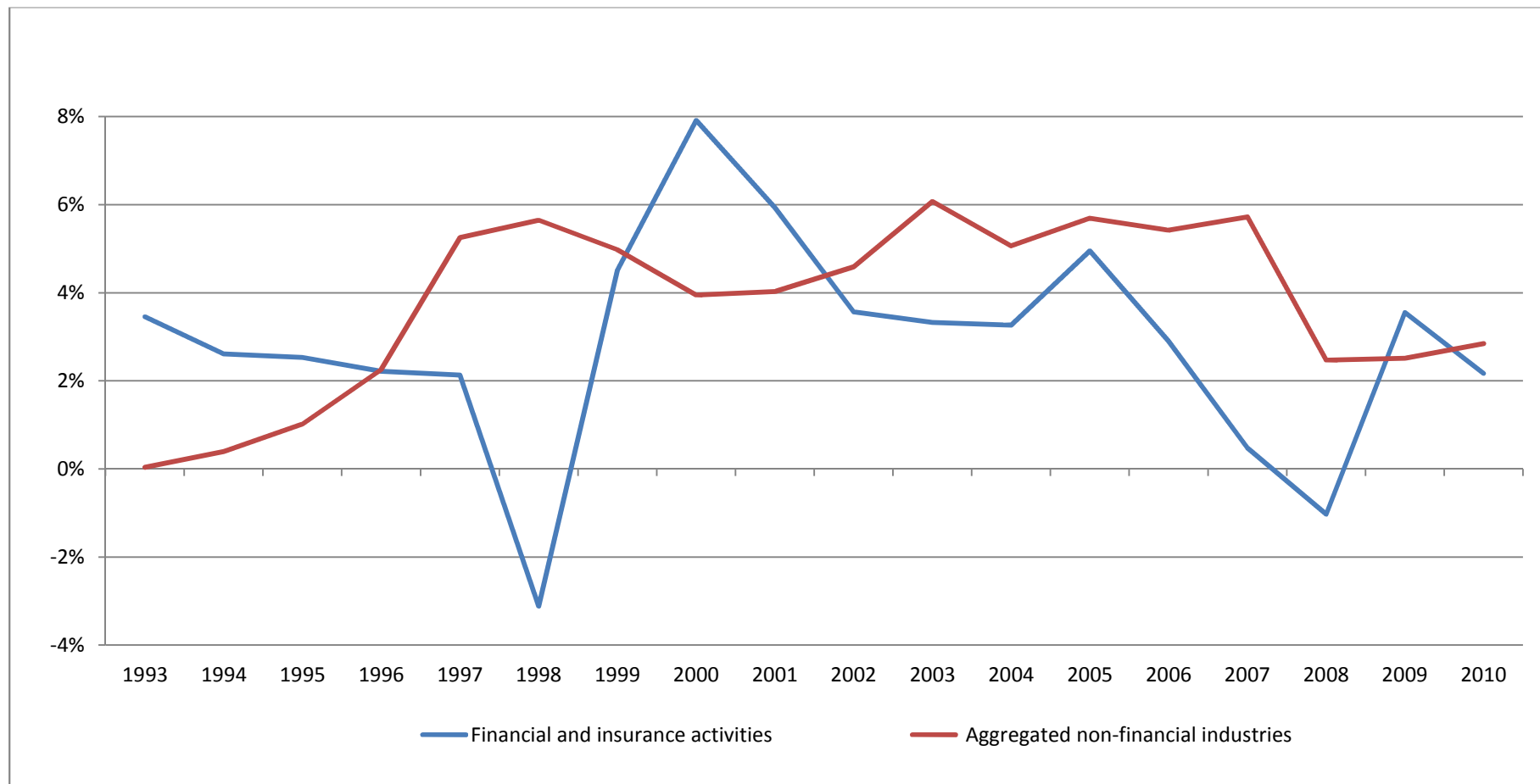
Source: Own calculation based on MNB (2012a).

Figure 5.20. ROE indices of main non-financial industries in Hungary (1993-2010)



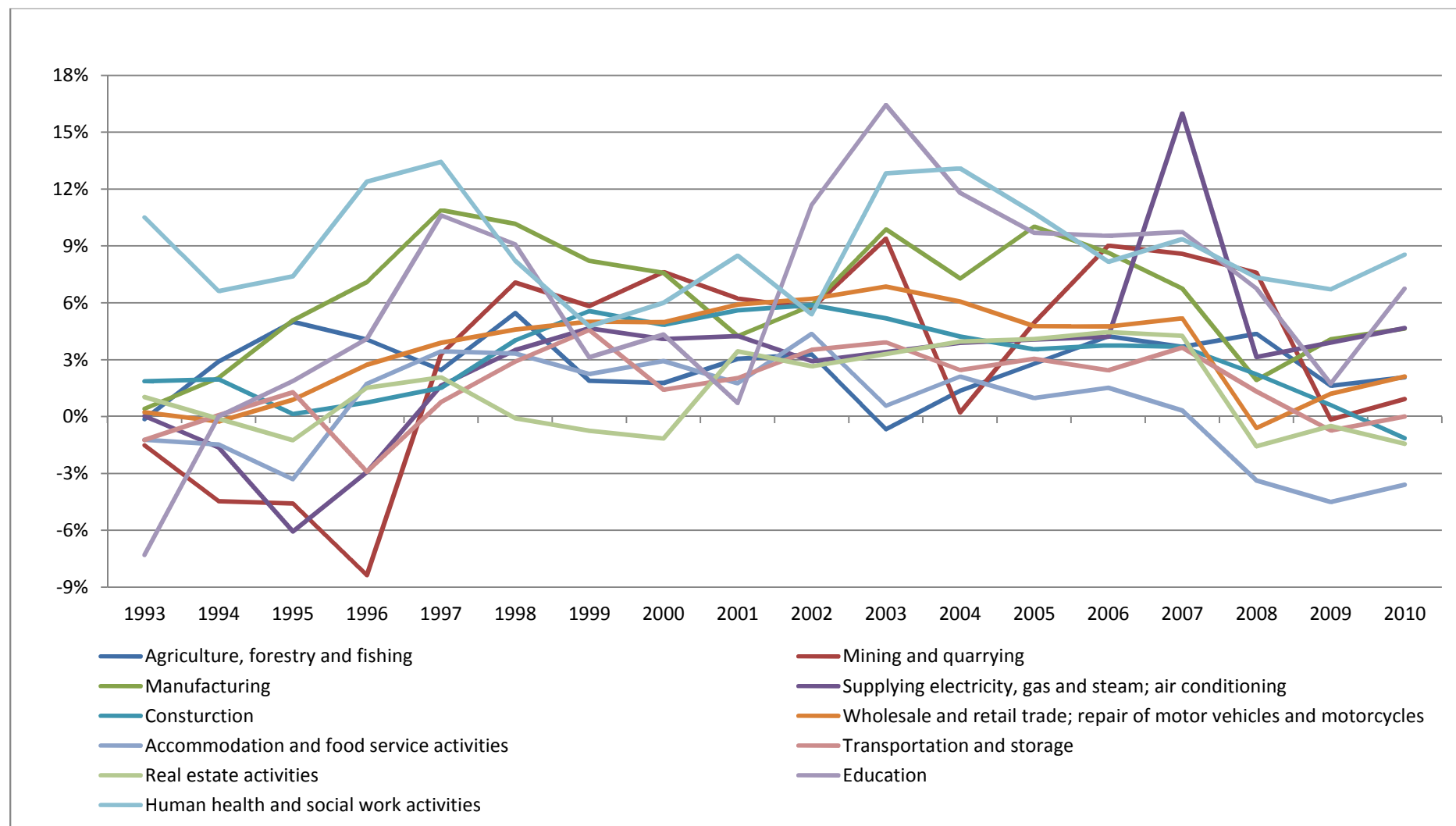
Source: Own calculation based on MNB (2012a).

Figure 5.21. ROA indices of the financial and non-financial sectors in Hungary (1993-2010)



Source: Own calculation based on MNB (2012a).

Figure 5.22. ROA indices of main non-financial industries in Hungary (1993-2010)



Source: Own calculation based on MNB (2012a).

Appendix

Table 5.1. ROE in Hungarian sectors

Industry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture, forestry and fishing	-0,20	4,06	7,20	6,27	4,14	9,90	3,63	3,45	6,08	6,35	-1,29	2,77	5,86	8,68	7,38	8,37	3,07	3,74
Fishing	2,09	3,22	4,50	-3,14	-2,95	-6,33	-3,73	-4,32	-21,00	-2,10	7,33	-3,20	0,79	5,01	5,97			
Mining and quarrying	-2,02	-6,32	-7,06	-14,25	5,91	13,53	10,93	15,35	13,01	10,95	18,68	0,51	13,98	17,77	15,55	15,49	-0,35	2,13
Manufacturing	0,67	3,51	9,24	13,72	21,44	20,10	16,40	15,49	9,02	12,13	19,07	13,69	18,91	16,38	13,37	4,01	8,03	9,48
Supplying electricity, gas and steam; air conditioning	0,03	-1,82	-7,05	-3,54	2,07	4,84	7,10	6,55	6,97	5,01	6,14	7,15	7,74	9,30	30,35	5,40	7,04	8,81
Water and waste management																5,51	5,75	6,18
Construction	4,02	4,33	0,34	2,15	5,09	13,76	19,15	18,60	20,24	21,14	15,91	13,60	13,67	15,60	13,35	8,37	2,34	-4,69
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,64	-0,80	2,78	8,54	12,89	14,98	13,41	16,05	17,51	16,37	18,67	17,83	12,71	12,86	12,15	-1,81	2,73	6,22
Accommodation and food service activities	-1,81	-2,44	-5,89	3,14	6,07	5,60	3,84	5,20	3,20	8,63	1,26	5,06	2,31	3,82	0,84	-9,86	-14,06	-11,53
Transportation and storage	-1,66	0,09	1,98	-4,65	1,30	5,32	8,97	2,76	4,74	9,72	11,49	7,35	9,38	7,61	11,44	5,00	-2,79	0,01
Information and communication																23,28	14,47	25,84
Financial and insurance activities	18,80	20,86	23,48	18,86	16,52	-11,72	5,87	9,35	6,66	4,17	4,17	4,29	6,69	3,86	0,61	-1,39	5,16	2,83
Real estate activities	2,03	-0,26	-3,27	4,05	5,16	-0,24	-1,56	-2,34	6,84	4,93	6,32	8,04	9,33	9,85	9,95	-5,48	-1,86	-5,12
Professional, scientific and technical activities																9,03	14,26	8,74
Administrative and support service activities																38,25	8,13	6,30
Public administration and defence; compulsory social security													4,89	5,34	8,55	9,93	-6,81	1,36
Education	-12,27	0,04	4,50	10,15	24,92	19,88	7,82	11,44	1,73	26,06	32,77	22,25	18,32	19,47	20,81	15,41	4,30	14,52
Human health and social work activities	18,53	13,15	17,04	28,75	30,07	21,24	14,57	17,76	23,10	14,95	33,26	29,67	22,89	18,65	22,83	18,67	14,88	18,57
Arts, entertainment and recreation																15,34	3,73	6,52
Other service activities	-1,02	-0,49	1,34	2,30	-0,78	4,77	2,03	4,83	6,94	8,89	13,46	9,17	8,95	11,17	12,19	1,29	1,69	0,27
Aggregated non-financial industries	0,06	0,62	1,73	4,14	10,17	11,46	10,15	8,30	8,77	9,83	13,00	11,12	12,99	12,44	12,97	6,07	5,93	7,03

Source: Own calculation based on MNB figures (2012).

Table 5.2. ROA in Hungarian sectors

Industry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture, forestry and fishing	-0,14	2,90	4,99	4,06	2,45	5,46	1,89	1,76	3,05	3,28	-0,66	1,36	2,79	4,23	3,68	4,36	1,62	2,07
Fishing	1,60	2,44	3,38	-2,25	-1,69	-2,78	-1,74	-1,88	-9,08	-1,00	3,94	-1,74	0,43	2,73	3,39			
Mining and quarrying	-1,52	-4,47	-4,59	-8,37	3,29	7,07	5,83	7,62	6,23	5,71	9,39	0,22	4,94	9,02	8,59	7,58	-0,15	0,92
Manufacturing	0,41	2,04	5,07	7,09	10,90	10,16	8,22	7,58	4,25	5,85	9,87	7,28	10,03	8,64	6,75	1,93	4,07	4,64
Supplying electricity, gas and steam; air conditioning	0,03	-1,63	-6,06	-2,92	1,63	3,51	4,65	4,09	4,24	2,92	3,40	3,89	4,07	4,21	15,99	3,13	3,91	4,67
Water and waste management																2,66	2,82	3,03
Construction	1,86	1,96	0,14	0,75	1,52	4,02	5,56	4,85	5,61	5,88	5,19	4,22	3,55	3,77	3,67	2,23	0,60	-1,14
Wholesale and retail trade; repair of motor vehicles and motorcycles	0,23	-0,27	0,89	2,73	3,90	4,59	5,01	4,97	5,91	6,21	6,86	6,07	4,78	4,75	5,18	-0,60	1,20	2,12
Accommodation and food service activities	-1,23	-1,48	-3,30	1,73	3,44	3,32	2,24	2,93	1,75	4,37	0,56	2,12	0,97	1,51	0,31	-3,37	-4,51	-3,60
Transportation and storage	-1,23	0,07	1,28	-2,92	0,77	2,91	4,57	1,41	2,04	3,52	3,92	2,46	3,05	2,44	3,64	1,32	-0,73	0,00
Information and communication																9,37	6,41	12,19
Financial and insurance activities	3,46	2,61	2,53	2,22	2,13	-3,12	4,52	7,91	5,93	3,57	3,33	3,26	4,95	2,90	0,47	-1,03	3,55	2,17
Real estate activities	1,03	-0,12	-1,26	1,52	2,07	-0,10	-0,74	-1,16	3,44	2,65	3,30	3,96	4,09	4,45	4,26	-1,57	-0,50	-1,43
Professional, scientific and technical activities																4,55	6,34	4,20
Administrative and support service activities																16,10	3,49	2,51
Public administration and defence; compulsory social security													1,57	1,38	0,77	3,63	-3,28	0,65
Education	-7,30	0,02	1,87	4,10	10,61	9,09	3,13	4,33	0,71	11,17	16,45	11,80	9,69	9,53	9,74	6,75	1,72	6,75
Human health and social work activities	10,52	6,63	7,40	12,39	13,44	8,22	4,77	6,00	8,49	5,39	12,82	13,09	10,74	8,16	9,36	7,33	6,72	8,54
Arts, entertainment and recreation																6,57	1,51	2,51
Other service activities	-0,85	-0,42	1,10	1,80	-0,55	3,13	1,24	2,88	3,84	5,00	7,33	4,75	4,50	5,52	5,79	0,51	0,65	0,10
Aggregated non-financial industries	0,04	0,39	1,02	2,26	5,25	5,65	4,98	3,95	4,03	4,59	6,07	5,06	5,69	5,42	5,72	2,47	2,51	2,85

Source: Own calculation based on MNB figures (2012).

6. Regulation of the Hungarian Financial Sector

6.1. State Regulation

6.1.1. Ministry of National Economy

The regulation of Hungarian taxation and finance belongs to the Ministry of National Economy, as the highest level institution in the regulatory structure. This Ministry is responsible for the general planning of Hungarian economic policy and the implementation of the national economic strategy. It deals with tasks related to job creation, the creation of a family-friendly tax system, improving competitiveness, budget preparation, reducing the national debt and stimulation of economic growth. Within the Ministry, the State Secretariat for Tax and Financial Regulation is responsible for tax and public accounting policy, developing tax legislation, determining the tax strategy and supervising the regulatory legislation process of the financial system.

6.1.2. Hungarian Financial Supervisory Authority

The Hungarian Financial Supervisory Authority (PSzÁF) operates under the supervision of the Government. It is an administrative organ with national competence. Its functions are defined by the Act CLVIII of 2010 on the Hungarian Financial Supervisory Authority (§ 158, PSzÁF, 2010). PSzÁF is a separate legal body and operates as an independent budget authority. Its scope is wide: credit institutions, financial enterprises, the capital market, the insurance sector as well as the fund sector are all supervised by the Authority.

PSzÁF has two major departments; the Supervisory Board and the Cabinet. The chairman of the Board reports to the Government and inform the competent committee of the parliament about its activities annually. PSzÁF also co-operates with the National Bank of Hungary (MNB). PSzÁF is managed by the General Director, who has two deputies. The General Director and his deputies are appointed (or dismissed) by the Prime Minister for six years.

PSzÁF's main tasks in the financial system include:

- (1) assessment of license applications and other requests,
- (2) record-keeping, control of information-service systems and data services of the financial institutions, required by law,
- (3) verification of the realization of rules governing financial activities,
- (4) analysis and evaluation of the prudent operation of financial institutions and the safety of deposits and other repayable funds,
- (5) control of the independent and professional management and control of the main risk factors,
- (6) implementing measures to eliminate perceived irregularities,
- (7) implementing exceptional measures in case of serious irregularities,
- (8) fine tuning due to the identified violations,
- (9) supporting the preparation and implementation of decisions taken by the Board of Directors of The National Deposit Insurance Fund of Hungary (OBA),
- (10) qualification of certain financial or complementary financial service activities in case of dispute.

PSzÁF may issue decrees and apply exceptional measures to insure that market participants meet the requirements of the relevant laws governing their operations. PSzÁF may also impose penalties on any financial institution as well as the executive officers in order to force their compliance with laws. It may apply sanctions against financial enterprises, as well. such as fines or warnings, but in severe cases it may suspend the activity or even cancel the operating license.

In the capital market, PSzÁF controls the whole process from issuing securities until their expiry. PSzÁF's aim is to establish and maintain fair and regulated market competition. PSzÁF may require the issuer of financial instruments to allow insight into its books and/or may require additional reporting for the mandatory prospectus, such as calling any abnormal risk factors to the attention of investors. It oversees the operation of issuers and vendors (brokerages) and, in some cases, the investors of securities. PSzÁF issues the licenses for the regulated activities and regularly

monitors the activities of investment service providers, exchanges and the clearing house.

PSzÁF also plays an important role in customer protection in the financial system. It evaluates customer complaints on licensed activities within 15 days and forwards them to the concerned person or organization for comments. PSzÁF starts inspections in those cases when:

- i) the available documents suggest that the practices of the given organization or person fail to comply with the laws, resolutions or supervisory decrees;
- ii) the entity or person fails to send his comments within the required period of time.

6.1.3. National Bank of Hungary

The Hungarian system is a two-tier banking system, consisting of financial institutions and a central bank. The National bank of Hungary (MNB) supervises and grants permission to provide two types of complementary financial services: payment systems operation and money processing (§112, Para 3, lit 6, HPT, 1996), while the rest of the activities are supervised and the rest of the permissions are granted by PSzÁF.

According to Act CCVIII of 2011 on the National Bank of Hungary (§ 208, MNB, 2011), MNB is the country's independent central bank, whose task is, primarily, to attain and maintain price stability and, secondarily, to support the government's economic policy provided that this endeavor does not interfere with its primary task. MNB has exclusivity in

- (1) formulating monetary policy,
- (2) issuing banknotes and coins,
- (3) maintaining Hungary's official foreign exchange reserves,
- (4) carrying out open-market foreign exchange operations and
- (5) supervising the payment and clearing systems.

Apart from these sole responsibilities, MNB is also involved – together with other institutions – in the collection of statistical data as well as in the prudential supervision of financial institutions in order to maintain the stability of the financial system (§ 208, Paras 3, 4, MNB, 2011).

The main decision-making body of the central bank is the Monetary Council (MC). Its members are the governor, deputy governors (currently 2) and the external members (currently 4), all appointed – the governors by the President of the Republic and the other members by the Parliament – for 6-year terms. In realizing MNB's monetary policy, the MC uses the following tools (§ 208, Para 7, MNB, 2011):

- i) extension of credits to parties with adequate collateral,
- ii) purchase and sale of securities in open market operations and repurchase agreements in the spot and forward markets,
- iii) issue of own securities,
- iv) setting and influencing exchange rates and interest rates,
- v) rediscounting promissory notes,
- vi) regulating the mandatory reserve rate.

MNB issues bills with a maturity of 2 weeks in weekly open tenders. The interest rate paid on the 2-week bill is called the base rate, whose level is decided on every second MC meeting. The rate-setting meetings are held at 4-week intervals. Changes in the base rate, published in governor decrees, are intended to bring about changes in the interest rate of short-term securities, or, the short end of the zero coupon yield curve. The base rate is, therefore, the single most important interest rate in the Hungarian money market. It is also true, however, that the level of the base rate cannot diverge significantly and permanently from market rates and, thus, is ultimately determined by market forces (Szikszai, 2011).

The MC decides exclusively on the ratio of the reserve to be placed with the central bank by banks by the end of every month after their liabilities, certain assets and off-balance sheet items. The MC also decides on the interest rate paid on the amounts

kept on the reserve accounts of banks. These decisions are also published in the form of governor decrees (§ 208, Paras 8, 9, MNB, 2011).

MNB and the central government share the responsibility and make joint decisions over the Hungarian exchange rate regime. MNB then uses its monetary policy tools to act to maintain the jointly agreed exchange rate regime (§ 208, Para 10, MNB, 2011).

MNB identifies the risks to the stability of the financial system and communicates these risks in its regular publications (Report on Financial Stability, Quarterly Report on Inflation). MNB acts to prevent or mitigate such identified risks or, once these risks manifest themselves, acts to mitigate their effects by requiring banks to fulfill complementary capital requirements. MNB follows and analyses the liquidity of certain systemically important financial institutions and acts as a lender of last resort towards these institutions – as well as to OBA – once the stability of the financial regime is in jeopardy. Such a decision, however, should not interfere with MNB's primary goal (§ 208, Paras 12, 13, 65 lit 1l, MNB, 2011).

MNB keeps the account of the central government and the State Debt Management Agency (ÁKK), pays a market-based interest rate which is less than or equal to the base rate and may act as the agent of the central government in security markets. However, after the stipulations mentioned in Articles 104 and paragraph 1 of article 104b of the Treaty on the operation of the European Union, the law forbids any outright lending to the public sector by MNB (§ 208, Paras 14, 15, 17, 18, MNB, 2011).

The cooperation between MNB and PSzÁF is loose. The law only stipulates that they provide each other with all the information that is necessary to carry out their tasks (§ 208, Paras 39, 40, MNB, 2011). MNB, within its own jurisdiction, is entitled to prescribe detailed rules of operation and guidelines of risk management and capital reserve requirements for the operators of clearing and payment systems (§ 208, Para 65 lit 3, MNB, 2011).

6.1.4. Financial Stability Board

Established in January 2010 and consisting of the leaders of the Ministry of National Economy, MNB and PSzÁF, the operation of the Financial Stability Board is a new effort to coordinate supervision of the financial system on the highest level. The Financial Stability Board (PST) is a consultation body, based on Act CLVIII of 2010 (§ 158, Paras 32, 33, 34, 35, PSzÁF, 2010). The main goal of the Financial Stability Board is to create consistency between the activities of micro-prudential and macro-prudential supervision. The former manages the individual institutional risks of the financial intermediary system. The latter manages the risks threatening the whole system. In line with post-crisis practices across Europe, the Board meets at least every three months to discuss issues of micro and macro supervision and regulation acting as a consultation forum of equal organizations.

6.2. Self-Regulation

The emergence of a two-tier banking system in 1987 demanded the creation of a body to represent commercial banks. In the autumn of 1988, a number of the commercial banks founded the Hungarian Banking Association (Association), which came into operation on February 17, 1989. Membership of the Association is open to any financial institution which has the minimum share capital provided by law and which accepts the rules of the Association. The Association was founded by 22 banks and other financial institutions and was registered by the Municipal Court of Budapest in February 1989 (§ 2, Para 15, lit 1, ET, 1989).

The most important function of the Association is to represent its members' interests vis-à-vis third parties. To this end, working committees are established, involving professionals from member banks. In representing its members' interests, the Association participates in the drafting and discussion of laws, statutes and projects that affect the banking sector directly or indirectly. The Association presents its opinions, developed on the basis of consensus, in Parliament, in various government forums and while the legislation is being drafted. It reviews regulatory proposals of MNB and maintains a close cooperation with PSzÁF. One of its important functions is to cooperate with other professional organizations, explaining

to them the views of the Association on current economic, financial and other relevant issues.

In certain specific functions, the Association plays a coordinating role in the implementation of bank modernization projects. It promotes the establishment of institutions which improve the stability and efficiency of the banking system. It has thus had a role in the preparation of the domestic deposit insurance and the credit guarantee institutions, the credit rating institution, the debtor registry and the GIRO system.

The Association develops and coordinates a public relations project to promote an objective view of the operation of the Hungarian banking system, directed at both professionals and the public. The Association is represented on the Board of OBA and on the Board of the Investor Protection Fund (BEVA).

The Association joined the European Banking Federation (FBE) as a correspondent associate member in March 1991 and became an associate member in 1998. Its cooperation with the European Mortgage Federation dates from 1993. The Association's full membership in the European Banking Federation has been effective from January 1, 2004. The Association and through it, Hungarian banking professionals, can participate in the work of the FBE's committees and working groups. Currently, the Association has 48 members.

6.2.1. Code of Ethics

The Ethics Committee was formed in 1996 to address ethical issues in banking. The Association adopted its Code of Ethics in 1999, which is currently being renewed. The objective of the new Code is to ensure that member banks, in their business management, in their dealings with each other and in their provision of services, conduct themselves in a fair and ethical manner, mindful of the interests of the customer, and thus to ensure that members strengthen the confidence of customers, businesses and citizens as a whole in banks and promote cooperation within the banking community. To achieve this, the new Code establishes substantive and procedural rules of ethical conduct in banking. A further objective of the new

Code is to establish an ethical framework for fair competition which duly respects the legitimate and fair profit interests of member banks and other member financial service providers.

6.3. Responses from the Regulators to the Crisis⁶⁸

6.3.1. Response from the Central Bank

In an effort to manage the liquidity crisis in the Hungarian money market, the central bank took several important steps. During and after the financial crisis of 2008 MNB considered maintaining financial stability as its most important task, second to maintaining price stability. Most of its efforts centered around maintaining liquidity in foreign currency lending by assuming the role of 'FX lender of last resort'. In order to restore the foreign currency liquidity of the banking sector MNB introduced bilateral FX swap tenders. Through this, the central bank played a mediating role by pairing partner banks: banks that possessed excess euro (or forint) but could not sell it in the market due to their partner limit could place it with MNB. The central bank also introduced a one-day FX swap facility to increase euro liquidity, aided by a credit facility of 5 million euros secured by the European Central Bank (ECB). These measures helped solve the foreign exchange liquidity problems of the banking sector.

To ensure the liquidity of the domestic money market immediately after the Lehman fallout in October 2008, MNB introduced two measures. It decreased banks' reserve ratio from 5% to 2%, the level applied by the ECB, and narrowed the interest rate corridor around the key (base) rate from ± 100 to ± 50 basis points. This latter measure was reversed in November 2009 when liquidity in the domestic money market was restored.

But stabilizing the situation was impossible without the intervention of parent banks, which did not decrease but increased their exposure towards the country during the most intensive period of the crisis. At the same time, their daughter banks undertook

⁶⁸ Source: Beckmann et al (2011), Csajbók et al (2010), IMF (2012b), MNB (2011), Steiner (2011), Szigel et al (2012).

large-scale adjustments. In the initial period of the crisis in 2009, banks responded to mounting liquidity problems primarily by cutting back corporate lending. This was justified by several factors. As the average residual maturity of the corporate loan portfolio is significantly shorter than that of loans to households, in the short run it allows more robust adjustments on the part of banks. Since competition is much stronger in the corporate segment in the Hungarian banking system, margins are tighter and banks' profits are smaller on these loans. Finally, corporate loans usually have higher capital requirements than the mortgage loans constituting the bulk of the household portfolio. Therefore, the corporate loan portfolio began to shrink, followed by a contraction in household lending. Thanks to the adjustments and the assistance received from parent banks, the banking system weathered the brunt of the first few months of the crisis. Confidence in the country gradually improved in 2009.

Nonetheless, the underlying risks of the loan portfolio materialized as a consequence of the economic recession. Amid a continuous deterioration in the quality of the loan portfolio, banks suffered increasing loan losses in 2010 and 2011. Consequently, even as banks' liquidity position recovered gradually, their capital positions became a crucial issue on account of deteriorating profitability. While banks' capital positions remained safe from a stability perspective, lending did not resume after 2010 and the banking system has failed to support economic growth.

In an effort to boost the domestic supply of loans, in February 2012, MNB introduced three new measures to increase forint liquidity. In the first step, it introduced a new, two-year lending facility at variable interest rate tied to the base rate. The second and third measures were intended both to provide more forint liquidity to participating banks and to enhance the domestic forint denominated mortgage bond market and, thus, promote long-term, forint denominated saving instruments. On the one hand, MNB introduced new regulation allowing for new types of assets, like mortgage and other types of bonds, to be accepted – besides government bonds – as collateral behind loan transactions including the central bank. The minimum criteria for eligibility was modified from an A to a BBB credit rating. Included in these

securities were, e.g., forint, euro and Swiss franc-denominated local bonds issued by municipalities. At the same time, MNB launched a mortgage bond purchase program with the intention of purchasing mortgage bonds in the primary and secondary markets at a maximum value of 100 billion forints. However ambitious they were, it seems that, so far, these steps have done little to improve lending activity.

6.3.2. Response from the Government

After 2008, several CESEE governments introduced laws to improve borrowers' situation vis-à-vis their banks and to shift the burden of the crisis to the banks. Drawing from the experience of the crisis, several regulatory initiatives have been announced and implemented with an impact on lending to households. In light of the problems presented above, these initiatives had two objectives. One was to ensure the formation of a sounder lending structure as lending recovers. Forint-denominated loans came into the forefront with a simultaneous, drastic cutback on foreign currency loans, while authorities strive to pressure banks to assume less risk even in the case of forint loans. The other main objective was to provide better protection to borrowers. Indeed, banks used to have an option to raise interest rates on loans at will, and as a consequence, changes in the installment amounts were not predictable to customers. On occasion, this mechanism may have contributed to the deterioration of the portfolio.

Below we examine the regulatory initiatives that have been implemented in Hungary since the onset of the crisis. In some cases we also present their short-term impacts.

1) Transparent pricing (step 1): Ever since the gradual expansion in household lending, the fact that banks could unilaterally modify the terms of retail loan agreements had been an unresolved problem. After several proposals, the first step was taken by Parliament in 2009. Banks were required by law to provide a cause-and-effect list in their loan agreements as to what entitles them to raise interest rates, fees, or charges. At the same time, the law entitled debtors to prepay their loans free of charge during 60 days from the date of an unfavorable, unilateral

contract amendment (either by refinancing their loan or by taking out a new loan from a different provider). Market players—who denounced the legislation change and tended to stick to the regulation to the letter while they essentially evaded its spirit—inserted tediously long lists into their terms and conditions, which entitled the institutions, for instance, to raise their interest rates even on the grounds of rising marketing expenses. In addition, the long lists did not specify the extent to which transaction rates were to be modified if the listed reasons materialized (for example, the percentage point by which interest rates were to be raised in case of a specific increase in marketing expenses). This counteracted the legislative intent pertaining to transparent pricing.

2) Transparent pricing (step 2): In light of the failure of the previous attempt, with the coordination of PSzÁF, banks finally worked out a Code of Conduct (see Appendix), effective January 1, 2010, under which they committed themselves to exercise moderation regarding their unilateral pricing range. In essence, this translated into a moderate shortening of the cause-and-effect lists. The Government adopted the Code of Conduct and even passed a legislative amendment to incorporate it into the legislation. According to the amendment, creditors have to define their pricing principles in writing, providing an exhaustive list of all the factors on the basis of which they are entitled to unilaterally modify interest rates, fees, or charges at the expense of the customer. Fees or charges may be raised annually by the rate of inflation at most (even though these fees are typically expressed in percentage), and the Code of Conduct includes a consensual —sample of the cause-and-effect list defined in the pricing principles legitimizing interest rate raises. Based on this, lenders can pass, at nearly any time, three types of risks on to their customers by unilateral contract modification: changes in the regulatory environment (changes affecting business activity, that is, changes to legislation, taxes, reserve ratios, and deposit insurance fees); increased cost of funding; and an increase in customer risk. Since this continues to leave ample room for banks to modify interest rates on loans, the criterion of transparency barely improved.

3) Activity of brokers: The activity of brokers also played an important role in the upswing in lending. During the years of the crisis it became clear that the rapid deterioration of the portfolio was partly attributable to the activity of brokers, as they enabled riskier customers to enter the lending process. It thus became important to tighten the previously loose regulations related to their activity. One of the objectives of the regulation was to define the various types of lending intermediaries. The classification is based on the entity on whose behalf they act. Further objectives were reducing the intermediation chains, tightening brokers' working criteria (e.g. license), preventing a conflict of interest (e.g. regulation of remuneration).

4) Prudent lending: The central element of Act CLXII of 2009 on Loans to Customers and Government Decree 361/2009 (XII. 30.) on Prudent Lending to Households, effective from March 2010, was that they defined differentiated loan to value (LTV) limits for retail mortgages, vehicle financing loans, and home leases. In the case of mortgage loans, the LTV limit is 75 percent for forint-denominated loans; 60 percent for euro-denominated loans, and 45 percent for loans denominated in other currencies (for example, Swiss franc). As regards vehicle financing loans and home leases, the regulation is less strict; their limits are 80 percent, 65 percent, and 50 percent, respectively. Another important element of the regulation required banks to set up creditworthiness limits based on the assessment of the creditworthiness of individual loan applicants in proportion to monthly income. As a result of the regulation, the ratio of foreign currency loans to new mortgage loans fell below 10 percent and the domestic market for mortgage bonds virtually froze. Nevertheless, the total gross credit flow, which had already been extremely low because of the crisis, did not change significantly. The regulation appeared to provide sufficient restrictions in the event of an upsurge in lending.

5) Ban on foreign currency mortgage lending⁶⁹: Despite the success of the regulation aimed at facilitating prudent lending, Act XC of 2010 on the Creation and Modification

⁶⁹ The three countries that totally banned certain forms of foreign currency lending include Hungary, Moldova and Ukraine. Ukraine banned foreign currency lending to households, while Hungary prohibited the registration of foreign currency mortgages.

of Certain Economic and Financial Laws of August 2010 prohibited registering a mortgage on real estate in the Land Register if it is based on a mortgage loan contract in foreign currency by natural persons. The effect of this act was rather negligible, given that foreign currency mortgage loans had practically disappeared already on the back of the act on prudent lending.

6) Bank tax: The modification in 2010 of Act LIX of 2006 on the Extra Levies Improving the Balance of the State Budget introduced the so called “bank tax”. Examples of such windfall tax can be found in other countries but the extent of the Hungarian one far exceeds the levies applied or planned in other countries. Although the tax was levied not only on banks but also on insurance companies and other companies in the financial sector, the bulk was applied to credit institutions, calculated based on their modified total assets for 2009. The levy was determined as 0.15 per cent of the tax base under 50 billion forints and 0.5 per cent of the tax base above that. The higher tax rate was modified to 0.53% in 2011. As a result, in 2010 and 2011, the profitability of the Hungarian banking sector was lower than in the countries of the parent banks and other countries of the region (except for the Baltic countries). Initially, the bank tax was to stay in effect until 2012 and half in 2013 but recent policy decisions reversed its exit and it is expected to stay in the long term. If this low profitability of banks caused by the tax remains for a longer period, in addition to banks’ weakening ability to accumulate internal capital, Hungarian banks may suffer a competitive disadvantage in the allocation of parent banks’ funds and capital (see more on profitability in Chapter 5).

7) A package aimed at reducing banks’ abuse of dominant economic position for the protection of distressed customers: Act XCVI of 2010 on the Modification of Certain Financial Laws to Help Distressed Mortgage Loan Borrowing Customers increased the rights of borrowers in certain aspects while it strived to improve the transparency of pricing; however, it failed to achieve real changes. The points accepted include the following:

- In respect of housing loans, only interest rates can be modified by banks unilaterally, and strictly for predefined reasons (service fees and other charges cannot be modified). These reasons, however, did not materially curtail banks' leeway.
- In case of foreign-currency-denominated loans, banks are required to apply either the central bank's or their own mid-rate. (In other words, banks may not use the FX sell rate for calculating the installment amount).
- As regards loans for house purchases, the law set the upper limit of prepayment fees at 1.5 percent, while it abolished prepayment fees altogether for loans under 1 million forints, provided that the customer had no prepayment in the previous 12 months.
- Pursuant to the regulation, once every five years customers may request the extension of maturity of housing loans free of charge.
- Under the new law, in the case of housing loans, 90 days after termination of the contract on a defaulting loan banks may not charge late payment interest, only their normal transaction interest.

8) Early repayment scheme and exchange rate fixing of foreign currency denominated household loans: A series of laws in 2011 called the National Protection package introduced new measures (see Table 6.1) to fine tune banks' lending practices in the household segment along with providing solutions to the problems of servicing households' foreign currency denominated mortgage loans caused by the depreciation of the forint. The most important element of this package was creating the possibility for certain households to repay their existing loans denominated in foreign currency at fixed preferential exchange rates⁷⁰. It required a highly concerted effort from the side of both legislators and regulators. Act CXXI of 2011 on the Amendment of Certain Laws Related to Home Protection, enacted in September 2011 and in force until March 31, 2012, contained the modification of 7 existing laws, which made it possible for households to initiate the final repayment of

⁷⁰ Only households who borrowed at or below the preferential fixed exchange rates could participate in the scheme.

foreign-currency denominated loans at preferential exchange rates. A modification of Act XCIII of 1990 made the process of lump sum repayment free of any other further charges. The aim of the amendment of Act CXVII of 1995 was to ensure the tax-exemption of those participating in the final repayment scheme and the modification of Act LXXXV of 1996 made sure that no extra charge related to land registry would be incurred in case of repayment. Finally, a modification to Act CXII of 1996 defined the preferential exchange rates to be applied in case of early lump sum repayment of foreign currency denominated loans secured by a mortgage: Swiss franc=180 forints, euro=250 forints and Japanese yen=2 forints. Between Sept. 29, 2011 and Jan. 30, 2012, circa 20% of the total 800 thousand foreign exchange denominated (96% in Swiss franc) housing loan debtors repaid their loans, increasing the already huge loss of the banking sector in 2011. Interestingly, only 26%(!) of the participating households borrowed in forint – mostly from other banks – to repay their foreign exchange loans, the rest spent their own family savings on repayment.

Table 6.1. “National Protection” package

Measure	Purpose of the measure
Possibilities for repayment at preferential exchange rate	Deadline for applications for participation in the scheme was 30 January 2012, and debtors had to repay their debt within 60 days from the date of the submission of the application.
Complete credit register	The positive debtors’ list will also apply to households.
Anchoring loans' interest rates to a reference rate	Lending at a fixed or benchmark interest rate will be mandatory in the banking sector. Interest margins stay unchanged over the maturity period
Ceiling the annual percentage rate	The annual percentage rate (APR) is capped at 30 per cent, which is meant to curb and contain usury
Costs raising in HUF can only be transferred in HUF also in case of FX loans	In the case of FX and FX-based loans only charges and fees directly related to the raising and maintaining of FX funds are allowed.

Source: MNB (2011).

Another, piece of legislation, announced earlier in May 2011 and slightly modified in December 2011, was Act LXXXV of 2011 on Fixing the Repayment Exchange Rates of Foreign Exchange Loans and on the Forced Foreclosures of Residential Real Estates. This so called “Home Protection” action plan created the possibility – amongst others (see Table 6.2) – to pay principal and interest installments on the previously mentioned lower exchange rates. It thus became possible to fix the exchange rate applied in repayment for those who lacked the necessary funds – or was ineligible for forint denominated credit – to terminate the contract with lump sum repayment under the repayment scheme. Under exchange rate fixing, the difference between the value of the principal and interest calculated with the fixed exchange rate and the value calculated with the current – most probably likely – exchange rate would be collected on a separate technical account. As an extra feature, the Association and the government pledged to pay 50-50% of the interest part accumulated on this technical amount, so households are only to repay the accumulated principal. The law set the application deadline for the end of 2012 and postponed until 2017 the resumption of repayment of the balance of the technical amount.

Table 6.2. “Home Protection” action plan

Measure	Purpose of the measure
Exchange rate cap	Debtors may pay their installments at preferential rates (HUF/CHF 180, HUF/EUR 250, HUF/JPY 2) during the period of the exchange rate fix lasting until the end of 2014 (later extended to 2017)
Establishment of a National Asset Management Company	The purpose of the established company is to purchase bad loans. The former debtor can stay as a tenant in the property.
Lifting of the moratorium by the introduction of quotas	Gradual lifting of the former ban on distressed sales through increasing quotas (2 per cent of residential properties are allowed to be sold in the final quarter of 2011, 3 per cent per quarter in 2012, 4 per cent per quarter in 2013 and 5 per cent per quarter in 2014)
Resumption of lending in FX	FX loans to applicants with income exceeding 15 times the minimum wage and denominated in FX
Encouraging residential downshifting and low cost housing	Reducing loan repayments or loan debt of the debtors by moving into a smaller property.

Source: MNB (2011).

During this stormy period of legislation in 2010-2011, the degree of cooperation between the Ministry of National Economy, PSzÁF and the Association was volatile and has remained since. While the Home Protection action plan was announced jointly by the Ministry of Economy and the Association, neither the Association nor international partners (IMF, EU) were consulted before the enactment of the bank tax and the early repayment scheme. In November 2011, tensions between the parties eased somewhat as the Association actively contributed in a series of negotiations to continued governmental efforts to ease the burden of indebted households. An agreement between the parties was signed in December 2011 and its content adopted by Parliament in March 2012. The agreement allowed for 30% of banks' losses from the early repayment scheme to be deducted from the 2011 and 2012 bank tax in exchange for the conversion into forint of bad loans together with a debt relief of 25% as well as the concessions made on the exchange rate fixing

scheme mentioned above. The parties also agreed to refrain from unilaterally making further steps without consulting the other party. This part of the agreement, however, was breached in late 2012 when the Ministry announced that the bank tax would not be phased out as promised after 2013.

Notwithstanding the recurring tensions in the legislation process, the measures adopted thus far have been conducive to ensuring that once lending recovers it will be healthier both in terms of volume and structure relative to pre-crisis practices. However, the risk of returning to the irresponsible pre-crisis foreign currency lending practices could be reduced further. While the prevailing regulations prohibit purely collateral-based lending, they allow a wide margin for the income-based creditworthiness limit. It would be advisable, therefore, to introduce significantly stricter payment to income (PTI) limits. While the LTV limit primarily protects banks, rather than customers, from substantial losses, the PTI limit would mainly protect debtors from excessive risk exposure. The existing regulations have not resolved the problems related to the lack of transparency in pricing. Therefore, the pricing of loan products should be subjected to more stringent regulations, for example, through the mandatory introduction of products with an interest rate fixed for a longer interest period, or products with fixed premium and variable interest rates.

6.3.3. Recommendations of the Association

Since the financial crisis of 2008, the Association has also been providing members with recommendations. Recommendation 1/2008 on the uniform treatment and interpretation of the Government Decree 41/1997 (March 5) 8§ Para. (4) deals with the interest rate on deposits, the yield on securities and the calculation and publication of the APR.

Recommendation 2/2008 on facilitating the final repayment of loans, signed by 6 institutions, was intended to increase competition by making bank switching easier before the expiry of the loan repayment. Its simplification lies in that signatory banks apply uniformed forms to record and analyze old debts. When a customer intends to switch banks, the provider of the existing loan may offer better conditions on the

existing contract in order to deter its client from switching. However, the principle of responsible lending means that lenders should consider the long-term interest of borrowers. In other words, customer decisions should not be distorted by the prospect of short-term gains. It is beneficial for both parties if customers take the whole period until maturity into account and make long-term decisions on switching. It is also desirable that agents' interest do not hinder the enforcement of such decisions by customers.

Recommendation 3/2008 on the Guide on switching banks applied at current account products proposes that banks:

- ✓ publish on their websites,
- ✓ use during their customer-information activities,
- ✓ provide in printed version to their consumers

the Guide on switching banks. This Guide was prepared by an expert working group of the Association and signed by 37 financial institutions.

Recommendation 4/2008 on the applicable behavior with Japanese yen based loans, signed by 15 financial institutions, aims to mitigate risks and protect consumers by:

- undertaking that the proportion of household loans in Japanese yen does not exceed the high-risk level,
- attaching high importance to that customers should be able to repay the loan in case of stronger yen exchange rates or at higher yen interest rates,
- integrating additional control points, such as enhanced monitoring, required by the extraordinary risk management of yen based loans.

In order to protect consumers, acceding financial institutions:

- agree that they will emphasize the extraordinary risks (due to the possibility of changes in exchange rates or in interest rates) in the advertisements of yen based loans,

- offer yen based products only to those kinds of customers who are able to assess the risks of these products, and are willing to pay any increased installment,
- point the customers' attention to the potential additional costs incurred in case of a switch between base-currencies.

Recommendation 6/2009 on facilitation of change between retail bank accounts was signed by 18 banks. In January 2008 the European Commission asked the European Banking Industry Committee (EBIC) to develop a process for switching bank accounts in the framework of self-management. EBIC issued the general principles for account switching in November 2009. As national authorities should apply this regulation the Association presented this Recommendation.

Recommendation 1/2010 on the facilitation of corporate reorganization by applying the Budapest Principles as a self-regulation model of reorganization in relation to corporate lending (the so-called London Rules). The Budapest Principles is a type of Code of Conduct based on the London Rules.

The main aims of the Budapest Principles are:

- a) preference for out-of-court restructuring of the debts of the corporate clients,
- b) introduction of standstill period during which no individual actions are taken in order to strengthen their individual positions,
- c) founding a Steering Committee to insure uniform behavior and communication towards corporate clients,
- d) application of an independent business review by experts for professional support of decisions, for transparency and for impartiality,
- e) establishing the need for fair burden sharing and pari passu treatment of creditors,
- f) the precedence of the new institution's claims over the loans provided before the standstill period as subject to the decision of the Steering Committee,

g) creditors' support for a long term solution (reorganization).

Recommendation 1/2012 on retail payment accounts offering basic services is similar to Recommendation 4977 of the European Commission on July 18, 2011 on basic payment accounts. The Commission recommended that all Member States should allow legally residing customers to open and use a basic payment account (the basic account). The Ministry of National Economy asked the Association to implement self-regulation according to this EU recommendation. The new product based on this recommendation met an existing demand in the domestic retail sector.

7. Housing and the financial sector

7.1. Introduction

The vast majority of residential real estates in Hungary households were built before the transition (pre-1990). As a sign of self-provision, home building became the most common form of construction (in 1990 more than 90%, 2000 - 50%, 2005 - 27%, 2010 - 10%). House was the most important asset; it was developed keeping in mind the interest of future generations and investments in the house market were secure and safe investments. This mentality still has an effect nowadays. We can also see from Figure 7.1 and 7.2 that only 11% of total houses were built after the transition. More precisely, one third of the homes were constructed before 1960 (21% before the Second World War); the biggest portion (more than 1.5 million homes) were built between 1960 and 1980, partly financed by the government. The average square meter per person increased from 19 to 31 from 1980 to 2011. At the millennium, the population of Hungary (10.2 million people) lived in 10.4 million rooms. Since the population of our nation is declining (we are more than 400,000 people less than we were in 2000) but the number of rooms is growing, this ratio is even better today. The number of bathrooms increased more significantly in the last 30 years (from 2.1 million to 4.7 million). The number of flats in studio size (less than 39 square meters) fell from 628,000 to 275,000 in the last 32 years. Within 50 years (since 1960) the proportion of semi-comfort flats and flats without comfort facilities dropped from 86.7% to 6.9%. Two thirds of the homes are single-unit, mainly family houses. Residential housing is the other main category, their proportion in the capital is more than 35%, but is even higher in the central cities of the counties (43%).

As we can see from Figure 7.2 there is only a small upward tendency in the stock of dwellings with three or more rooms, while the other types are nearly unchanged. At the transition in 1990 3,853,288 dwellings existed in Hungary whose number increased to 4,358,858 until 2012. More than 90% of these homes are lived in by the owners. This is much higher than the EU average (in 2010 71%), but it is common in the post-communist transition countries (Slovakia: 90%, Bulgaria: 87%). Municipal

ownership and maisonettes are around 3-3%. Privatization of municipality owned dwellings started in 1990, at the time of transition, and it still continues to a smaller extent (e.g. in 2010 more than 2000 dwellings were sold and only 44 were built).

7.2. The First Credit Crisis

The governmental and the financial sector almost disappeared from the financing of the dwellings at the time of the transition and only reentered this market segment at the end of the 1990s. As a result, in 1990, Hungary already experienced a mortgage crisis. The former state financed apartment program ran out of resources by 1982. From that time half of the value of the apartment was to be contributed by citizens while previously these apartments came almost free of charge. The new movers had to borrow a loan even to pay this 50%. The government was able to provide this loan with a relatively small lending rate, at 3%. The cost of credit was already higher at that time and the loss was paid for by the state. However, the budget was able to pay this cost only until 1990. In 1990, there were two opportunities for the debtor. They could either accept an increase of the lending rate (still below the level of inflation) or half of the loan was relieved while the other half would be burdened with market interest rate. The national debt increased due to the debt relief but interest subsidies paid by the state fell considerably. The negative effects of the credit crisis were strengthened by the economic setback at the change of regime. At that time, Hungary lost the majority of its Eastern markets, privatization took place with its natural consequences: closure of plants and layoffs. Due to the privatization of apartments at low prices, the price-level of homes was also cheap. Demand was low thanks to declining real wages and unemployment, but it reduced further after the sharp rise of the public utility fees.

In that period, consolidation and privatization of banks (see Chapter 1) diverted banks' attention from credit services. The high level of the rate of interest (due to the high level of inflation) also worked in the same direction. In addition, due to the lack of orders, the wave of privatization reached the construction industry and the

building materials industry, as well. In Figure 7.2, we can see some interesting data about the credit crises in Hungary.

7.3. The System of State Subsidies (1995–2009 and 2012-)

The new support system was introduced in 1995 and phased out in 2009; people were able to claim subsidy for building or purchasing house. Naturally there were several eligibility conditions, including the followings: 1) it was granted for the first property (in other dwellings the applicant can have less than 50% ownership); 2) 400,000 forints to 2,200,000 was granted as non-refundable subsidy based on the number of children; 3) applicants had to be under 40 years old. This support scheme was, obviously, very popular. From 1997, home savings banks also appeared, creating good opportunities for customers to make high yielding long term savings⁷¹ and even borrow at lower-than-market interest rate with home construction, purchase or even renovation purposes.

In 1999, as a new modification, the value added tax (VAT) could be refunded up to a value of 400,000 forints in case of residential home construction. Another important measure introduced was the interest rate subsidy of forint denominated housing loans. First, cheap priced loans were made available for young couples building or buying new houses. Owing to the initial lack of interest however, the scheme was extended without limits and the interest rate was reduced to 6 percent including bank fees.

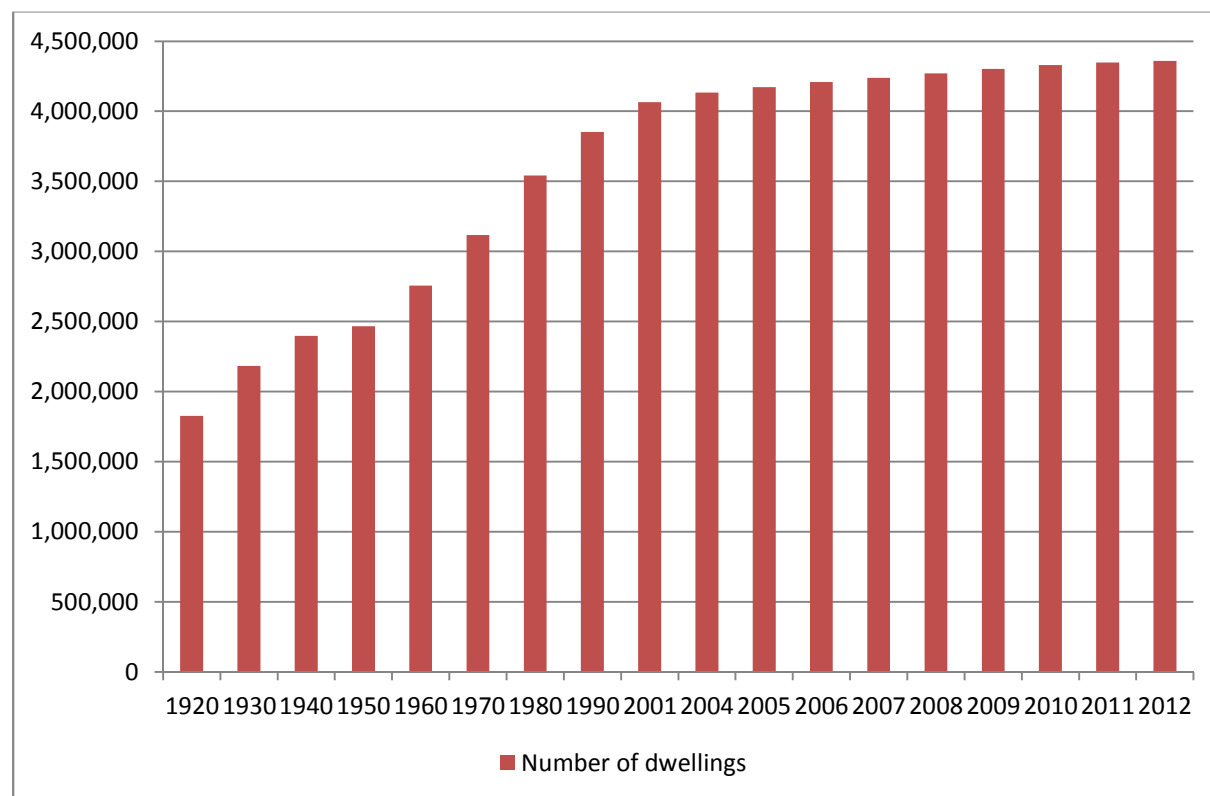
Beginning with 2001, in accordance with Government Decree No. 12/2001 of I. 31., used as well as new homes could be purchased with subsidized credit, and even renovation activities could be financed from such subsidized loans. Another new element was that borrowers could deduct 240,000 forints of tax benefit after the repayment of their loans.

After the abolition of this previous system in 2009, Government Decree No. 256/2011. of XII. 6. specified the new conditions for receiving state support. The subsidy

⁷¹ The State supported savings by 30,000 forints/year, added on top of the deposit interest rate, making this saving product more attractive than an ordinary deposit.

attached to purchasing or building a new home returned, but with some important modification. The new system is not valid for used houses and the available amounts were reduced dramatically.

Figure 7.1. Number of dwellings



Source: Own illustration from the data of KSH.

Figure 7.2. Stock of dwellings



Source: Own illustration from the data of KSH.

7.4. State Measures Related to the Housing Crisis in 2009

7.4.1. Eviction moratorium

The statutory moratorium on evictions was introduced in October, 2009 and pertains to those natural persons who have to leave their own houses and dwellings and the temporary living/staying in that certain house does not violate other people's right to housing. The moratorium was postponed (-2010/04/15, -2010/12/31, -2011/04/15, -2011/07/01) and reintroduced (2011/12/01–2012/03/01) several times. According to the provisions of the law, it can be applied in pending eviction procedures, as well, if the eviction is not complete. The idea was that those borrowers who are actually at risk of eviction threat, but have not found a solution for housing be temporarily granted an extension. The eviction is not only bad for the debtors but is also accompanied with a significant increase in the costs of public social institutions.

7.4.2. Limited auction

The foreclosure moratorium intended to maintain the social security of housing was in effect until July 1st, 2011. The above legislation was adopted on June 20th, 2012, designed to only gradually start to enforce the right on mortgage debts and, therefore, create a sales quota system that regulates foreclosures until 2015. Besides the obvious social benefits for the heavily indebted debtors, it also prevents the residential real estate market from being flooded with oversupply. A significantly higher number of houses in the market would reduce market prices, both creditors and debtors would suffer losses and homeless people would create new challenges for the welfare system.

The sales quota determines the quarterly amount of residential real estates of under 30 million forints (circa 100,000 euros, the average price of a smaller house in Budapest) that can be sold. The quota for 2011 and 2012 was 2% and 3%, respectively. It is 4% for 2013 and would be 5% in 2014. According to PSzÁF (2012a), in the second quarter of 2012, 107,302 mortgage-based credit contracts showed more than 90 day delays in payment. Financial institutions initiated the sale in the case of 3,182 contracts.

7.4.3. National Asset Management

National Asset Management (NEK) would purchase at most 5,000 properties from the debtors until December 31st, 2014. After the purchasing contract is signed NAM can lease out the real estate to the former owner, so the troubled families can stay in their homes but for rent.

7.5. The Distinct Features of Housing Loans in Hungary

Figure 7.4 and 7.5 show that housing loans were taken out mainly for the purchase of used dwellings. Reconstruction and expansion was significant at the beginning of the 2000s at 36.5% of total loans, but has fluctuated between 10 and 25% since 2001. Buying and building new homes together are at around 30%, but they increased to 45% in 2004 when Hungary joined to the European Union. In 2009, the proportion of buying and building a new home was again above 40% but after the collapse of Lehman Brothers it dramatically fell to 11,3% in 2011. Additionally, the share of the loan purpose of redemption of another loan – in the preferential repayment scheme – jumped in 2011 to 8.9% and increased further to 27.5% in the first half of 2012. The process behind this is the effort to reduce the volume of loans based on foreign currency (as detailed in Chapter 6).

Figure 7.6 illustrates the currency composition of housing loans. The amount of housing loans has increased steadily. From 2002 to 2003 volume more than doubled. From 2004 until 2008 the total volume and, within it, newly introduced foreign currency (euro, Swiss franc, US dollar and Japanese yen) based loans increased gradually, while they stalled in 2009. The increase in 2010 is not the result of continued expansion of lending in foreign currency but that of the relative change in the exchange rate of forint vis-à-vis other currencies. Another explanation could be that more insolvent borrowers started to accumulate bad debt. 2011 was the first year when the amount of housing loans fell. The reason was the early repayment scheme for loans denominated in foreign currency (see Chapter 6).

Figure 7.7 shows that banks' massive dominance in the extension of loans disappeared. In the last decade, banks provided 80-90% of all housing loans, with the lowest share of 70% witnessed in 2001. From 2011, their share started to plummet and, in the first half of this year (2012), it was only 46%. On the other hand, mortgage banks became a more significant group of market players. From their share of 5,7% in 2009 they grew to 20% in 2010 and 2011 and further to 24% in 2012. In the last two

years, home savings banks (building societies) also appeared on the supply side, causing the market share of banks to decrease.

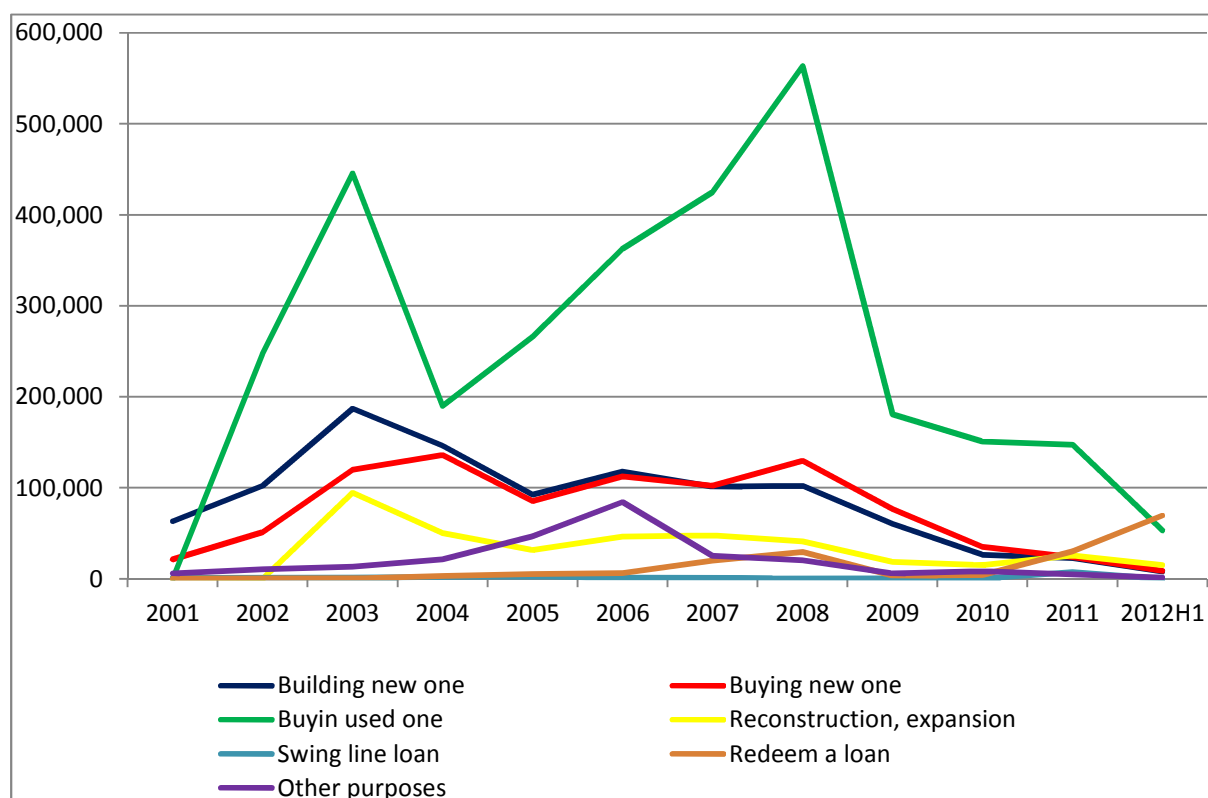
Currently, the maturity of housing loans exceeds 10 years and, in the case of building or buying new dwellings, it is well above 16 years. However, it is already lower than earlier figures as the maturity for these loan purpose was higher than 18 years before the crisis. Swing line loans are to be repaid within more than 8 years while earlier customers had less than 4 years to do that. Over the past ten years, the average maturity of housing loans has increased by 4-5 years in each purpose category.

Figure 7.3. Comparison of two credit crises in Hungary

	1990-1991	2009-2010
Involved volume of loans (in billion forints)	260	4,700
Involved volume of loans (% of GDP)	25	17
Involved stock of dwellings (in million pieces)	2.17	1.4
Average monthly repayment (forints)	1,700	40-45,000
Average monthly repayment (% of net average income)	15	30
Typical loan maturity (years)	30-35	13-18
Average loan to value (%)	50	60
Average value of dwellings (forints)	300,000	6,000,000
Defaulting debtors (%)	0	2
Loss of public ownership (% of GDP)	10	0
Decline in construction (houses, %)	75	50
Participating financial institutes	2	30+
Decline in home prices (%)	25-40	10

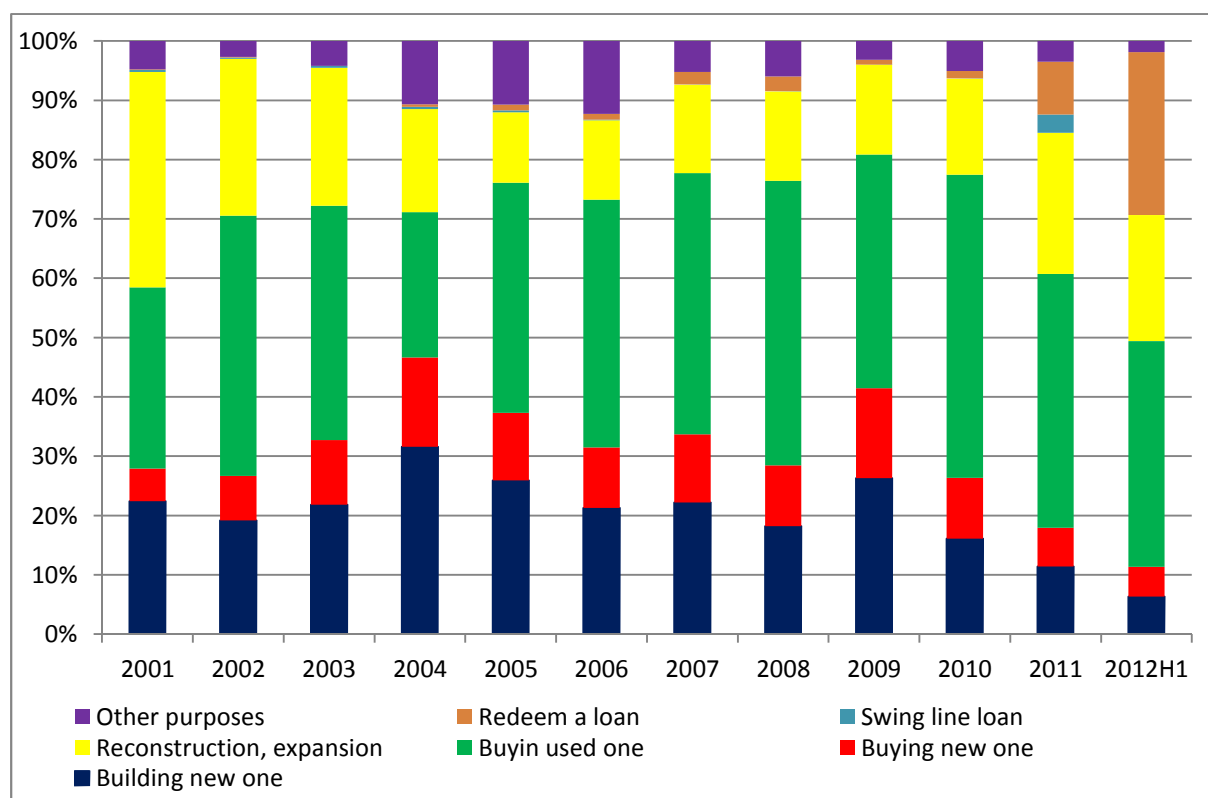
Source: Own table from the data of Giday-Szegő (2009).

Figure 7.4. Disbursed housing loans and grants by purpose (million forints)



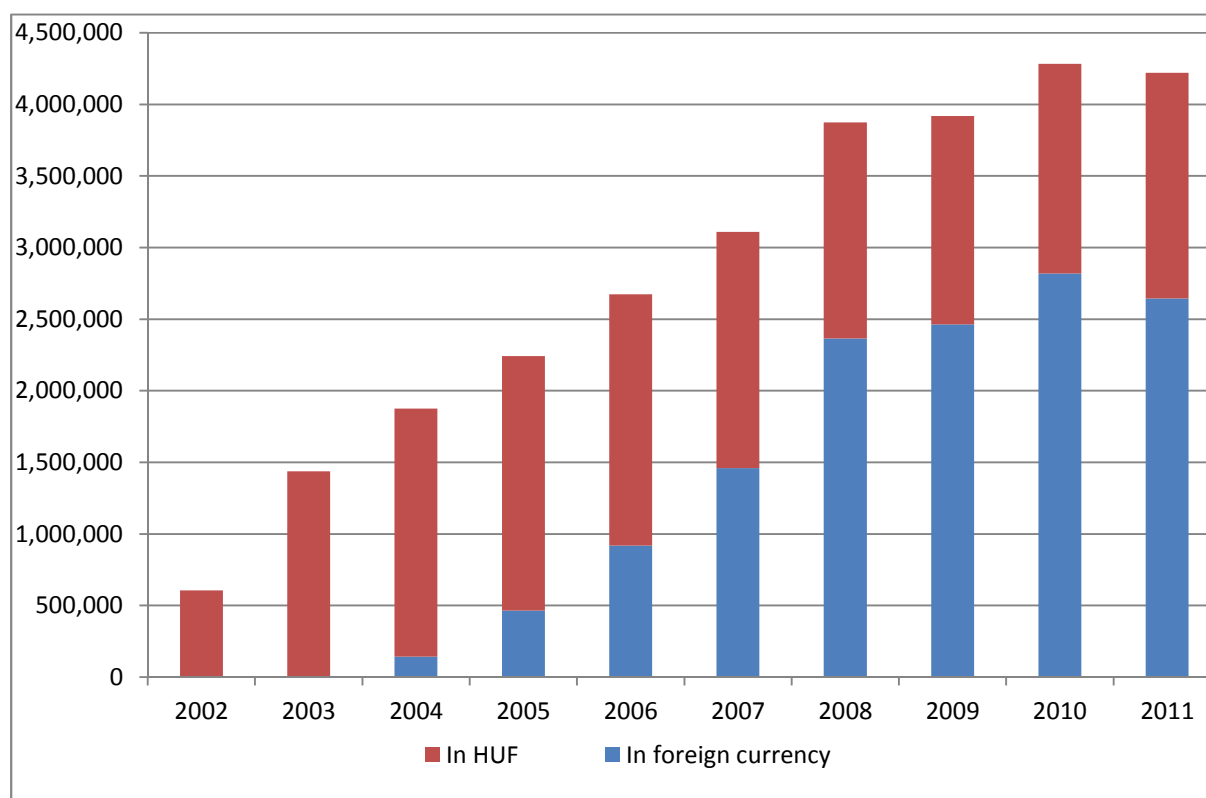
Source: Own illustration from the data of KSH.

Figure 7.5. Disbursed housing loans and grants by purpose



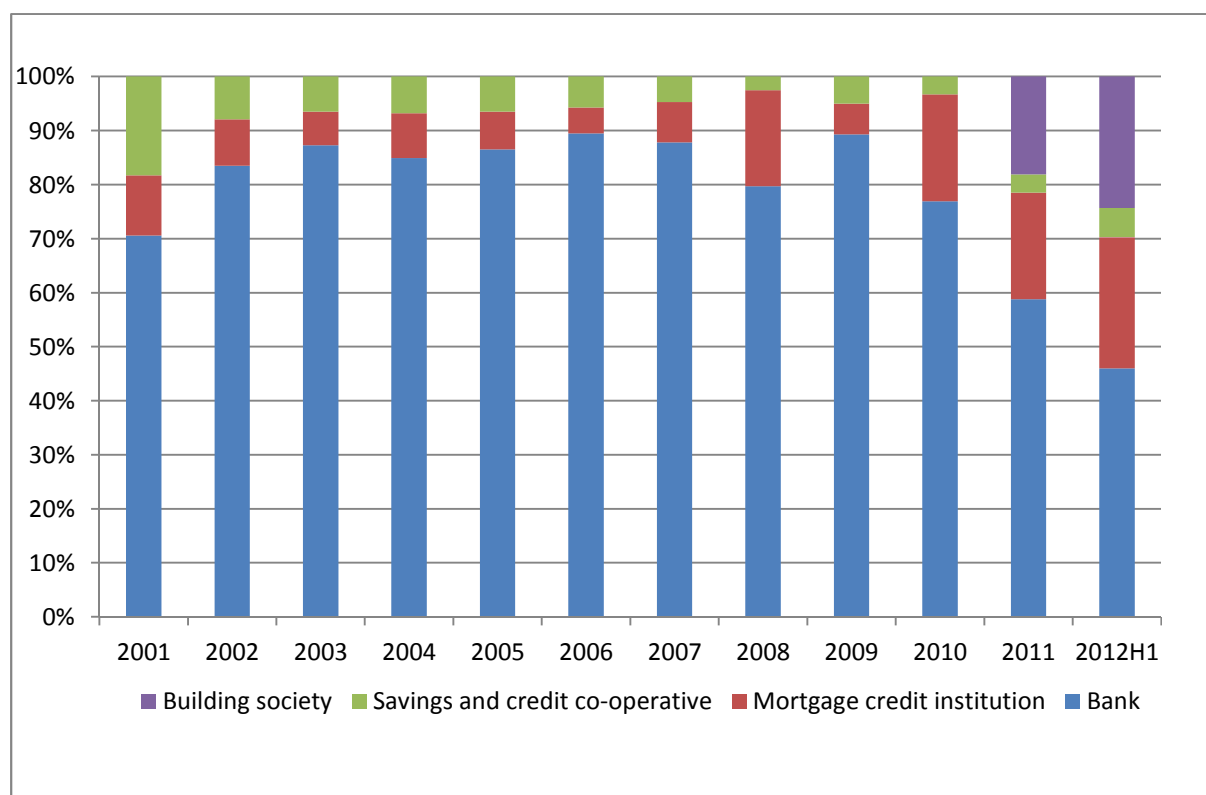
Source: Own illustration from the data of KSH.

Figure 7.6. Stock of housing loans (million forints)



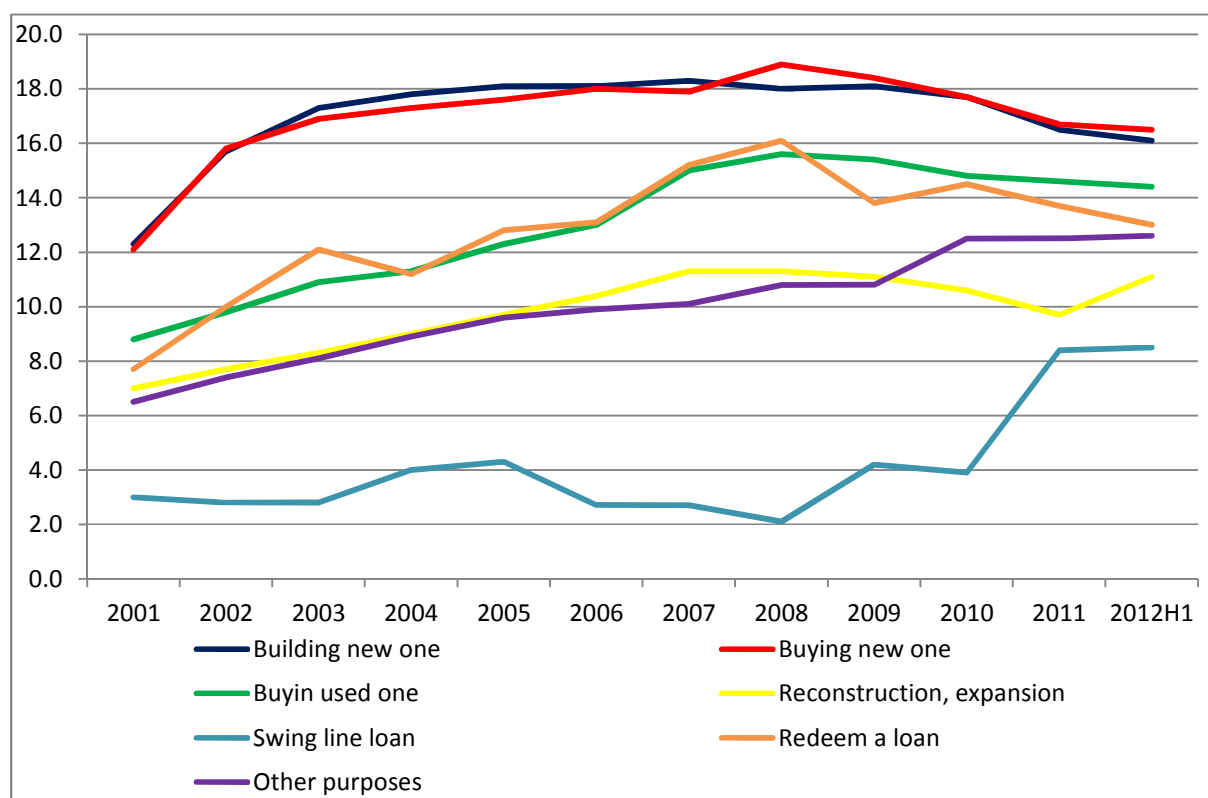
Source: Own illustration from the data of KSH.

Figure 7.7. Distribution of housing loans and grants according to institutions



Source: Own illustration from the data of KSH.

Figure 7.8. Average maturity of housing loans by purpose of reception (years)



Source: Own illustration from the data of KSH.

8. Culture of Bank Cards in Hungary

8.1. Card and ATM/POS Penetration

While in western European countries the payment card business started in the 1960s, in Hungary the first payment card was issued in 1989. Since then, the number of payment cards issued had increased dynamically up till the onset of the financial crisis. Although the number of debit cards is still increasing bank's stricter lending policy and the declining propensity of the population to borrow led to the decrease in the number of credit cards issued by banks after 2008. As a result, the total number of cards has essentially remained unchanged since 2008.

At the end of 2011, the number of bank-issued cards in circulation was 8.9 million⁷² in Hungary, which means 0.89 cards per capita (see Figure 8.1). This figure indicates average card penetration as compared to other CEE countries but is still rather low compared to developed countries. According to the Blue Book of ECB, the number of cards per capita was 1.45 in the EU in 2006 (see Figure 8.2). At the end of 2001 about two-thirds of active aged people already had a payment card⁷³, therefore, the increase of the number of cards was mainly due to the fact that card owners increasingly use more types of cards. At the beginning of the 2000s, increasing card usage was stimulated by banks' product innovation and the spread of credit and delayed debit cards and co-branded cards. The share of credit cards within total cards peaked in 2008, when it was 20 per cent⁷⁴. At the end of 2011, the proportion of credit cards was less than 14 per cent. The number of co-branded and affinity cards was 759,331 at the at the end of 2011, which amounted to 8.5 per cent of the total number of cards issued.

⁷² About 98 per cent of these cards carry either Visa or MasterCard brands, and 85 per cent of them have a debit function.

⁷³ Assuming everyone has only one card. In fact, according to a survey that included 921 out of the 3.8 million Hungarian households, 15 per cent of Hungarian households possessed no cards, at all, in 2010 (see Takács, 2011a). It should also be noted that, in 2010, out of the 3152 settlement of the country there was 875 in which there are neither ATM nor accepting merchant locations. At present, about 5 per cent of the total population of the country live in these settlements.

⁷⁴ The number of credit cards was 1.23 million at the end of 2011.

The number of ATMs and POS terminals per million capita were 491 and 7,324 respectively at the end of 2011 (see Figure 8.3), which is average in the region, but also falls short of the level in the EU, and, especially, that of developed countries. It is a special feature in Hungary that there are not only ATMs but also POS terminals installed at bank branches and post offices⁷⁵ at cardholders' disposal for cash withdrawals. These POS terminals facilitate cash withdrawals in less frequented places where ATMs are not economical. The number of these POS terminals was 10,374 at the end of 2008 which is more than twice the number of the ATMs. It should be noted, however, that the utilization rate of these terminals is much lower than that of the ATMs. While the 4,623 ATMs registered 75 transactions per day, the number of transactions on these terminals was only 2.7 on average in 2008.

Investigating Figure 8.2 and 8.4 it can be said that ATMs and bank cards in Hungary do well in the region and their numbers approach EU levels. However, there apparently is some development lag in the number of POS terminals. This suggests that card owners primarily use their cards to withdraw cash instead of making purchases. Indeed, as Figure 8.5 shows, before 2007 the share of payments within total transactions was below 50 per cent, i.e., card owners used their cards to withdraw cash more often than to purchase with it. This may be attributable, in part, to the relatively low number of accepting merchant locations (the number of these was 61,909 at the end of 2011).

8.2. Card Transactions

The share of card purchases within total card transactions, nevertheless, is rising steadily, due to the spread of credit and delayed debit cards. The propagation of these cards prompts card owners to use cards for payment instead of using them solely to withdraw cash.

⁷⁵ There are about 2800 post offices in Hungary.

The propagation of payment by card may also be attributable to consumer protection laws⁷⁶, bank services and developments enhancing safety (e.g. SMS message following transactions, chip migration). At the end of 2011, there were 356 million card transactions in Hungary⁷⁷, and the share of purchases within total card transactions was around 64 per cent (see Figure 8.5), which is still a rather low value compared to developed countries. While in Hungary the number of card payments per capita was 20.8 in 2010, the same number in the EU was 68. At the same time the average value of payments has a decreasing tendency (see Figure 8.7), which means that card owners more frequently use their cards as a means of payment.

As for the reasons for the low level of card payments, we point out that in Hungary there has been no tradition of payment by means of cheque. It is a common experience that in those countries where cheque payment was widespread before, people are much more willing to use bank cards, because they only switch from one cash substitute to another one (Takács, 2011b). It suggests that the relatively low level of card payments and, therefore, the dominance of cash payments cannot be explained exclusively by the underdevelopment of the financial system. According to Bódi-Schubert (2010), the main reasons for the large share of cash payments⁷⁸ are the high share of non-observed (grey or black) economy, the lack of confidence between business partners and the cash oriented operation of the state.

8.3. Card Abuses

Owing to the advanced stage of the chip migration, the number of card abuses related to cards issued in Hungary is low by international standards. The total number of these in 2011 was 11,595 and their value was 568.4 million forints (see Figures 8.8-8.11). The total loss amounted to 0.007 per cent of total payments in 2011 (see MNB (2012c) and Figure 8.16). It should be noted that the overwhelming majority of these misuses involved cross-border transactions. It means that the

⁷⁶ From December 1st 1999 on, following the announcement of the loss or stealing of the card all the damage must be borne by the issuer of the card. Separately, from December 1st 2002 on, the damage suffered before the announcement must be borne by the owner of the card only up to 45,000 forints (circa 155 euros).

⁷⁷ The value of these transactions was 7,713 billion forints (or 27% of GDP).

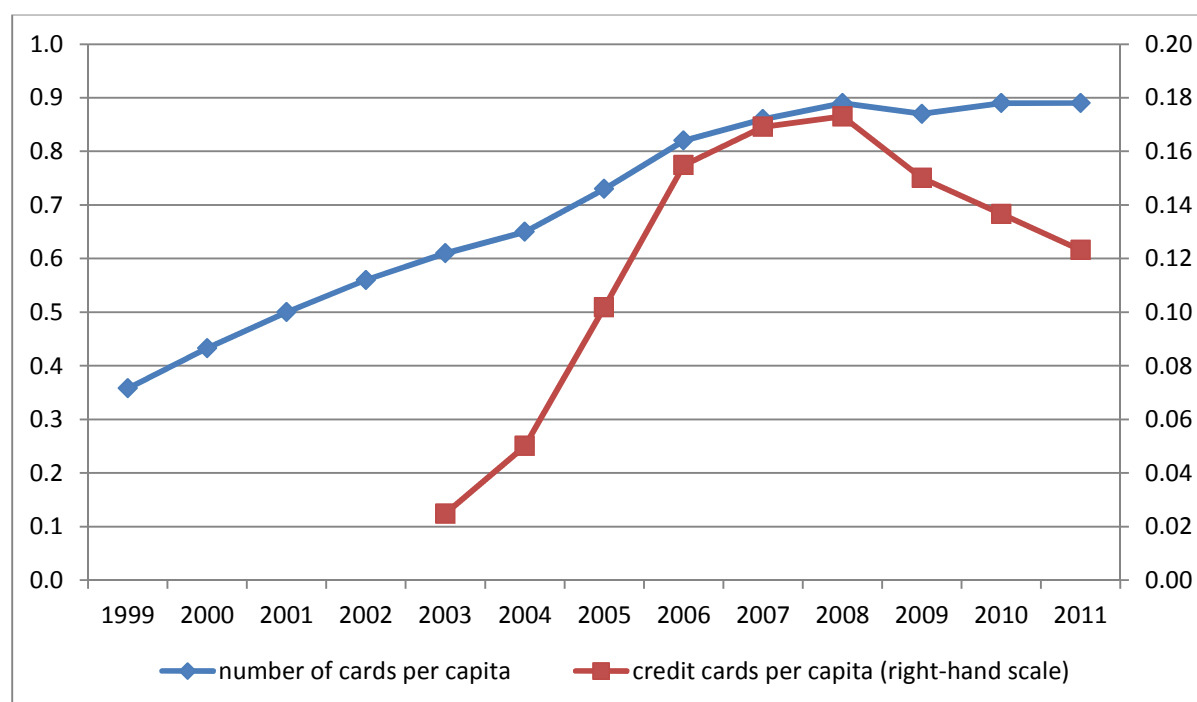
⁷⁸ The proportion of cash in circulation to GDP peaked in 2007, when it was 15 per cent (see Bódi-Schubert (2010)), and about 84 per cent of total payments in Hungary were cash payments in 2011 (see MNB, 2012).

abuses of domestic issued cards are committed predominantly abroad (the share of these was 76%), and the majority (73.5%) of the abuses in Hungary are committed by using foreign cards (MNB, 2012). The ratio of total loss to total card turnover on the accepting side was only 0.0018 in 2012.

Although the number of misuses committed by means of domestic cards abroad (and the total number of losses) has not changed significantly over the last few years (see Figure 8.13 and 8.15), the misuses in Hungary, due to the chip migration, dropped to one-third in the last two years (see Figure 8.12 and 8.14).⁷⁹ The number of the latter was 2,074 and their value was 145 million forints in 2011 (see Figure 8.12). At the end of 2011, essentially all ATMs and POS terminals in Hungary were able to handle cards equipped with chips (see Figure 8.17).

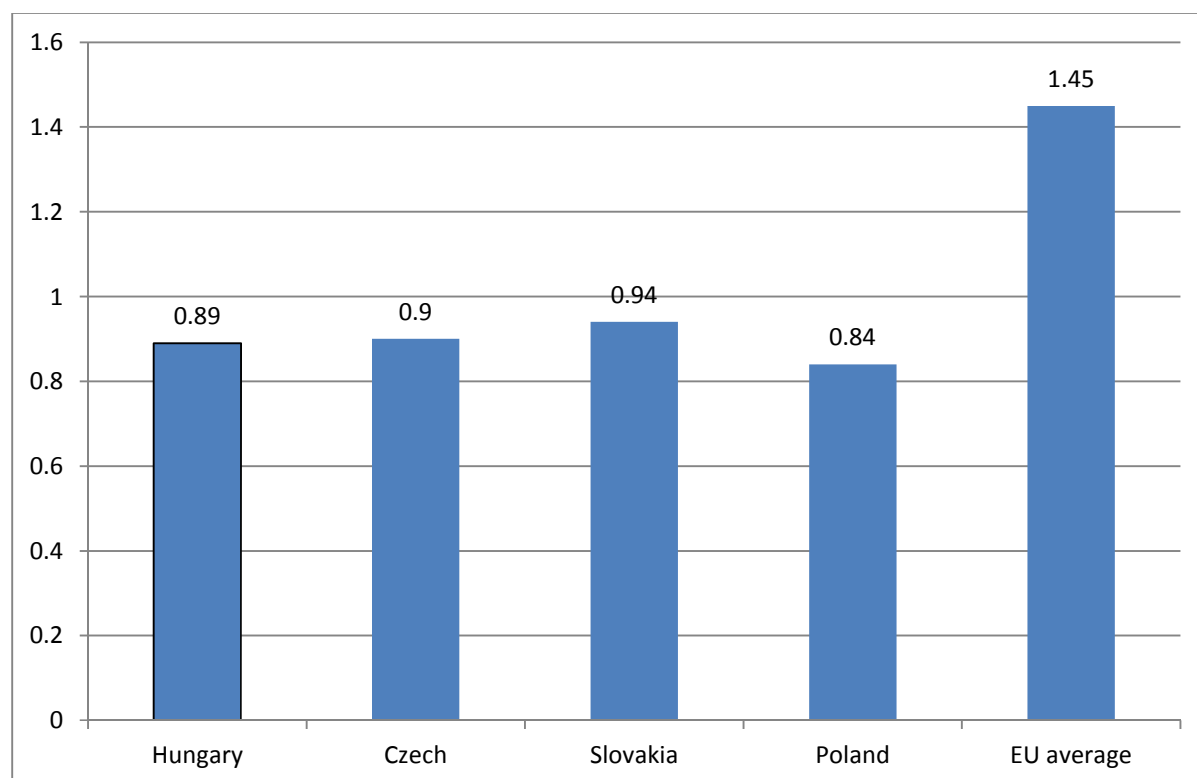
⁷⁹ In fact, the drop in loss caused by forged cards was 290 million forints which exceeded the decrease in total loss between 2010 and 2011 of 287 million forints. This fact underpins the claim that the drop in total loss in 2011 can be attributable to chip migration. It is also worth noting, that, albeit it followed the regional tendencies, the sharp increase in total loss in 2007 was also due mainly to the increase in abuses of forged cards.

Figure 8.1. Number of cards and credit cards per capita



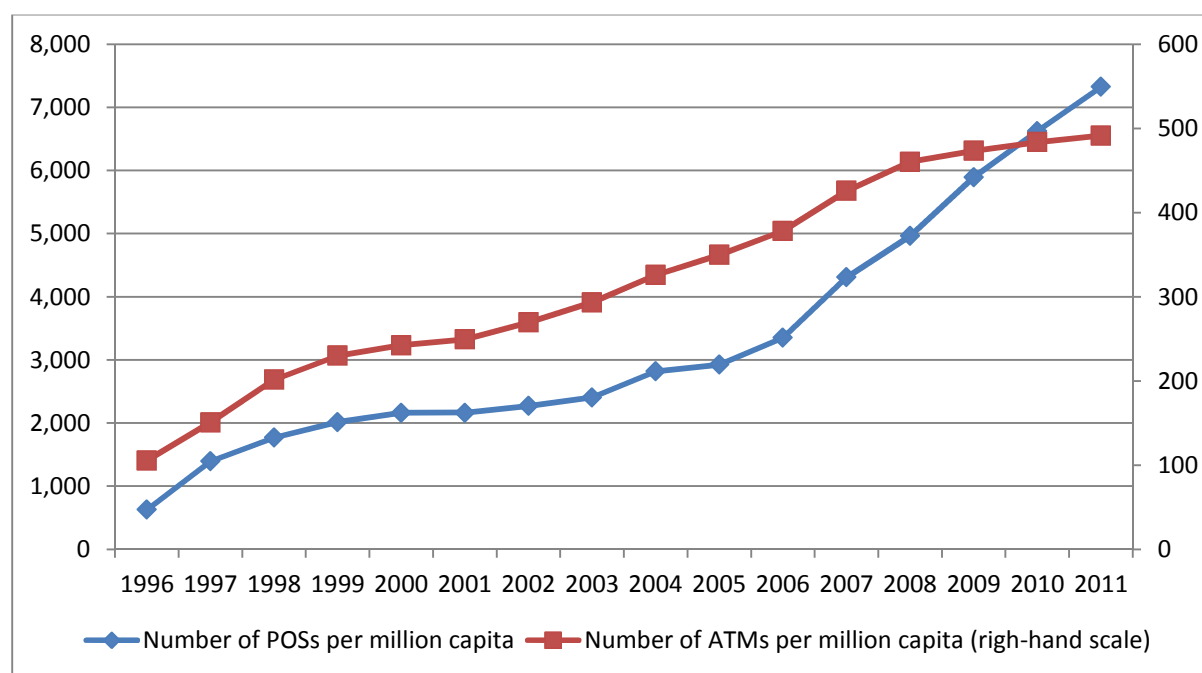
Source: MNB.

Figure 8.2. Payment cards per capita in 2010



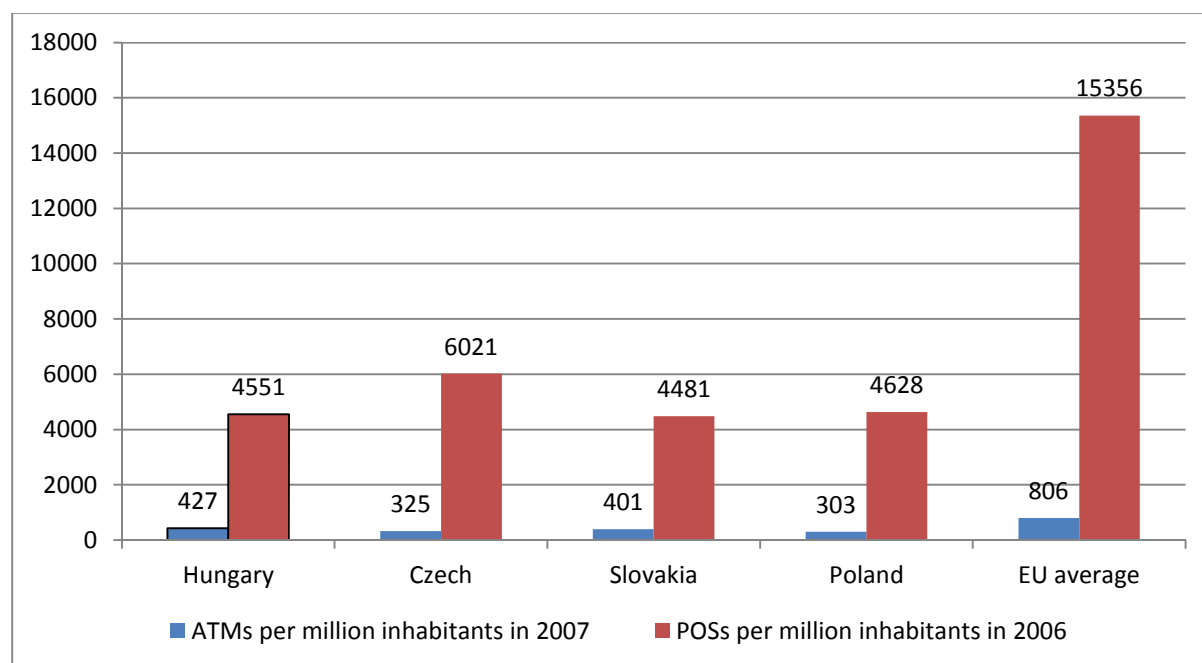
Source: Irish Payment Services Organisation Limited.

Figure 8.3. Number of ATMs and POSs per million capita



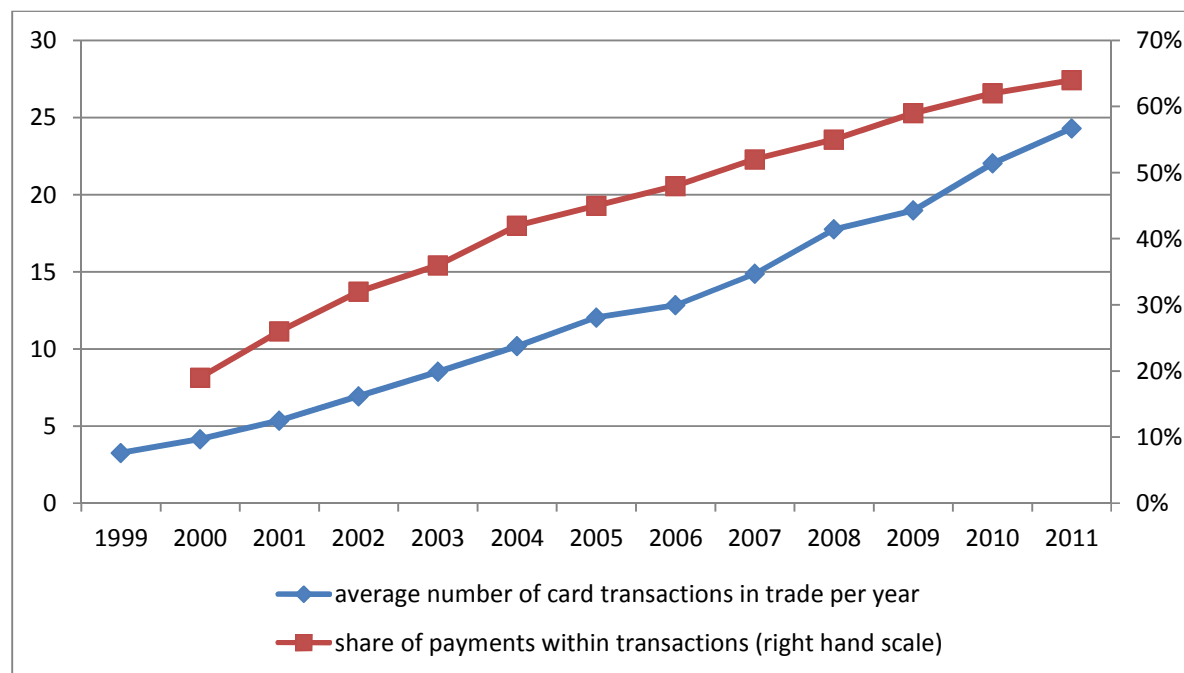
Source: MNB.

Figure 8.4. ATMs and POSs per million inhabitants



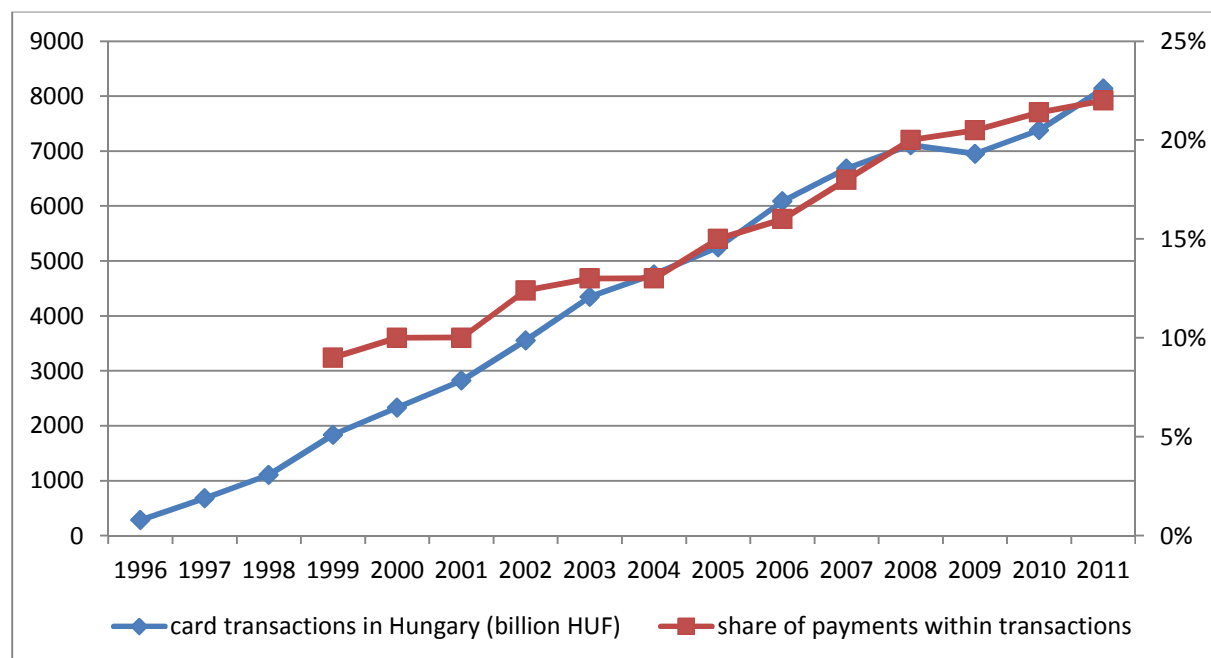
Source: Irish Payment Services Organisation Limited and MNB (2008).

Figure 8.5. Average number of card transactions in trade per year and the share of purchases



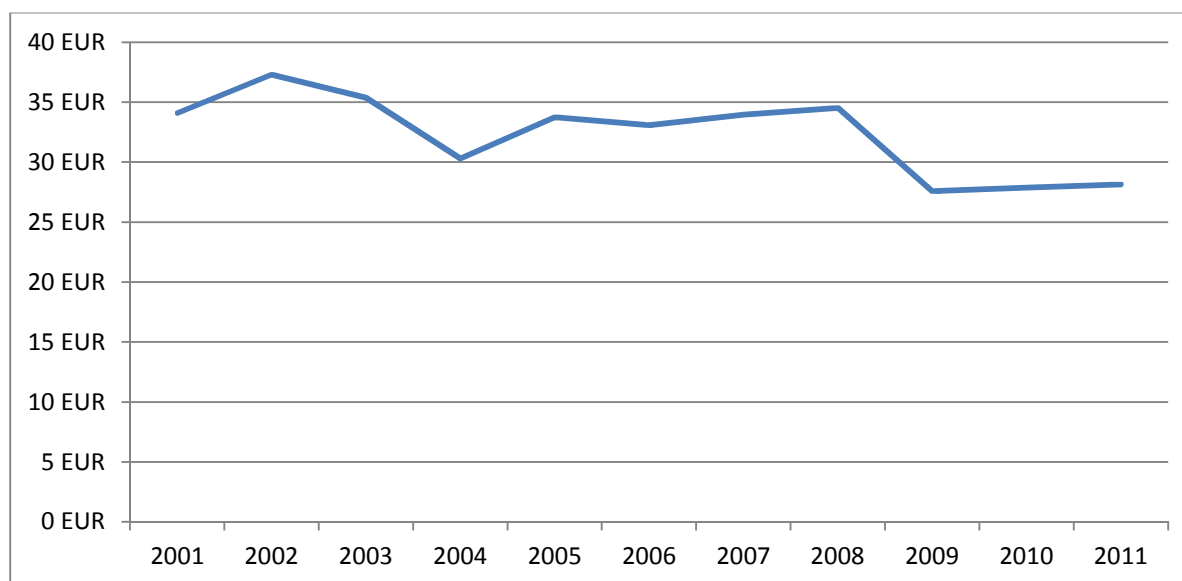
Source: MNB.

Figure 8.6. Card transactions in Hungary (billion forints)



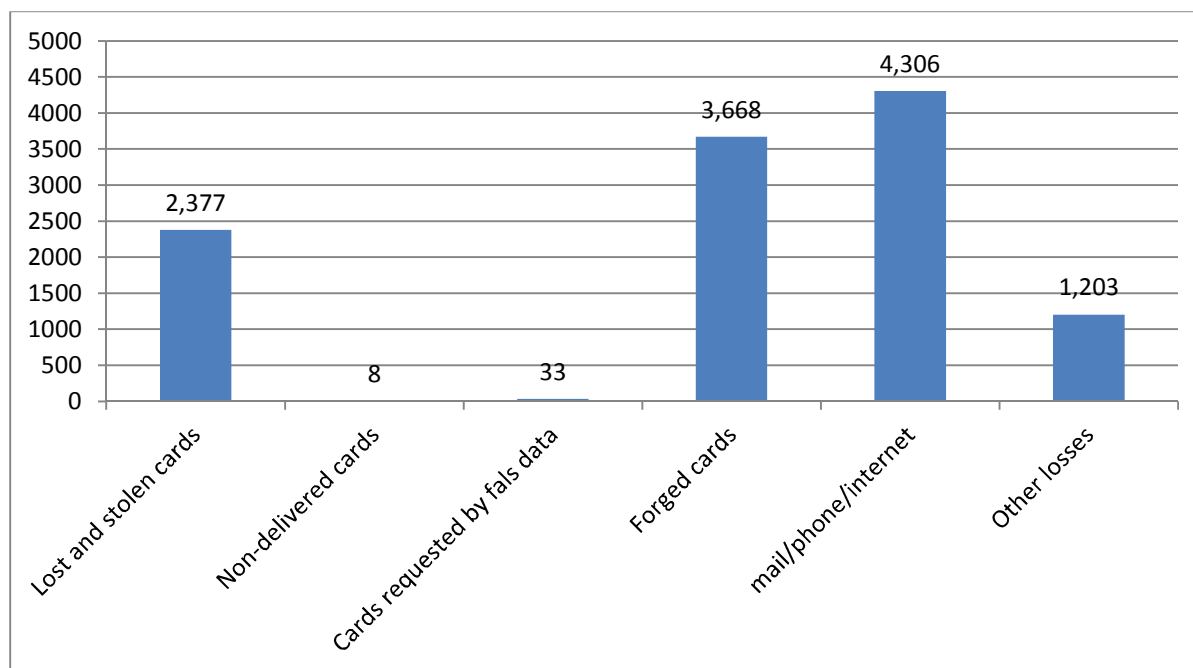
Source: MNB.

Figure 8.7. Average value of payments



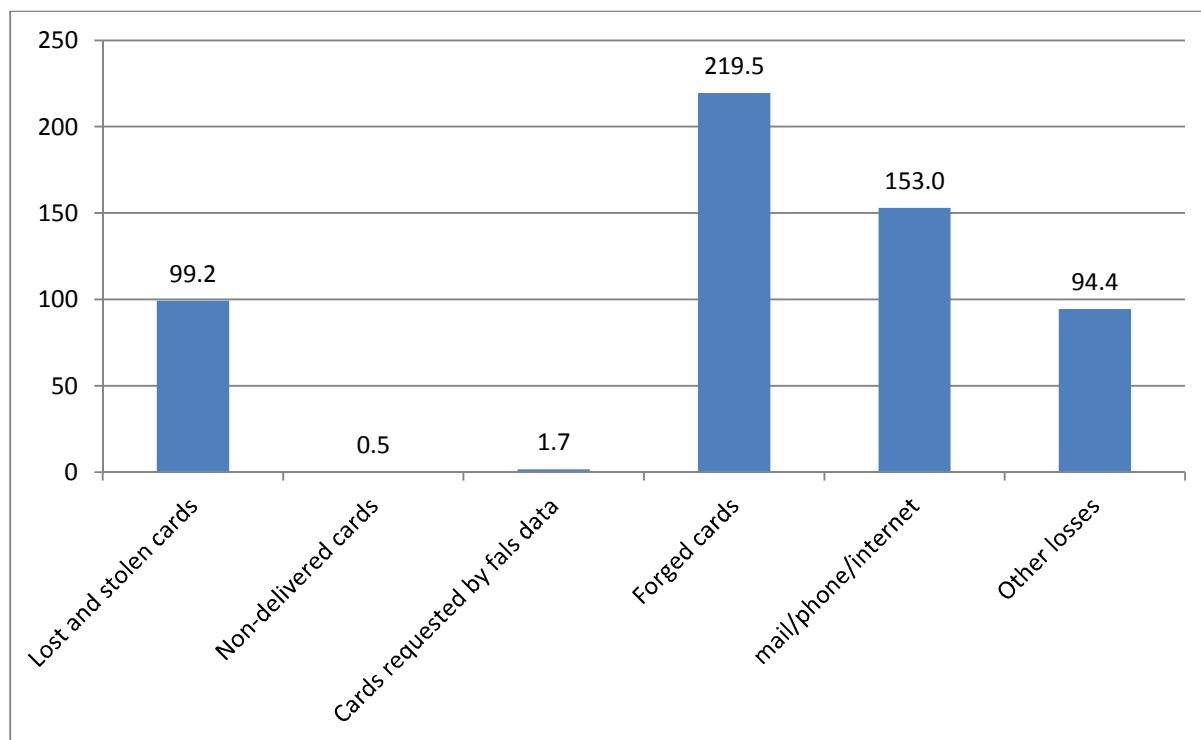
Source: MNB.

Figure 8.8. Number of payment card abuses in 2011 (issuer side)



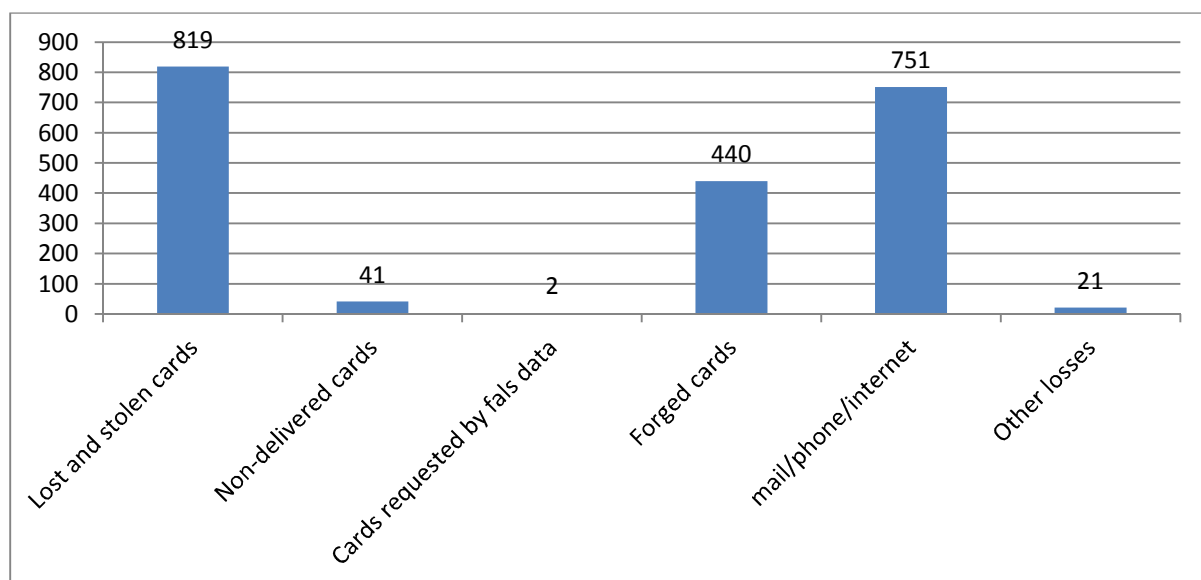
Source: MNB.

Figure 8.9. Losses caused by payment card abuses in 2011 (issuer side in billion forints)



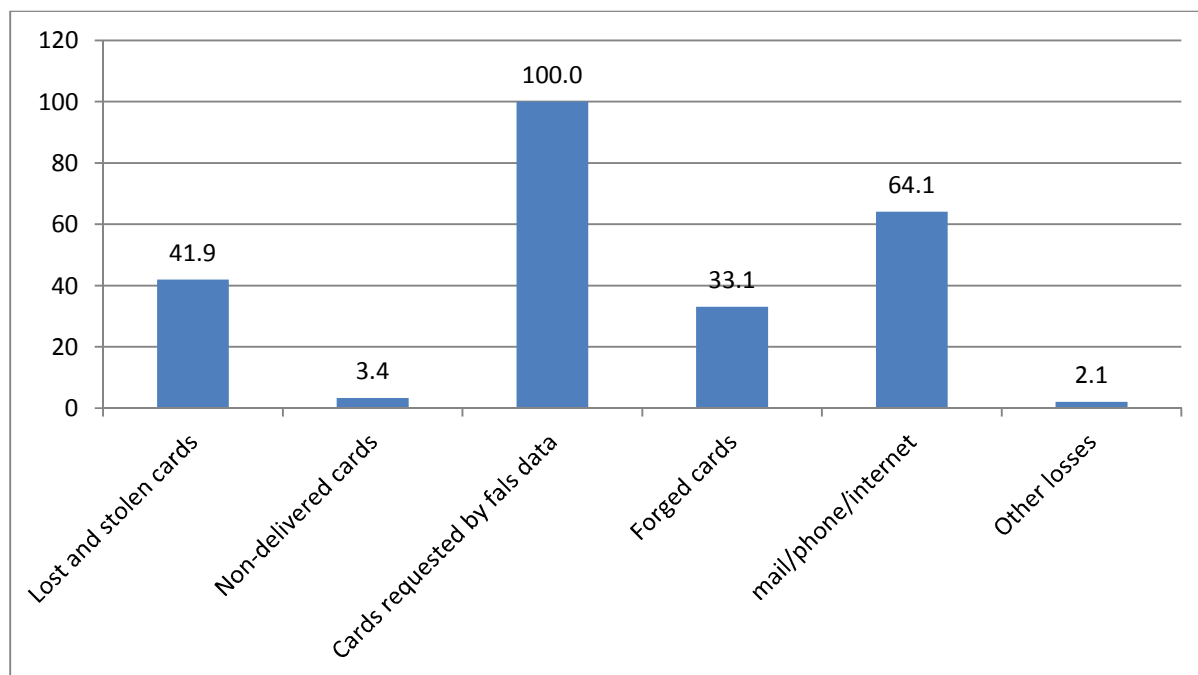
Source: MNB.

Figure 8.10. Number of payment card abuses in 2011 (accepting side)



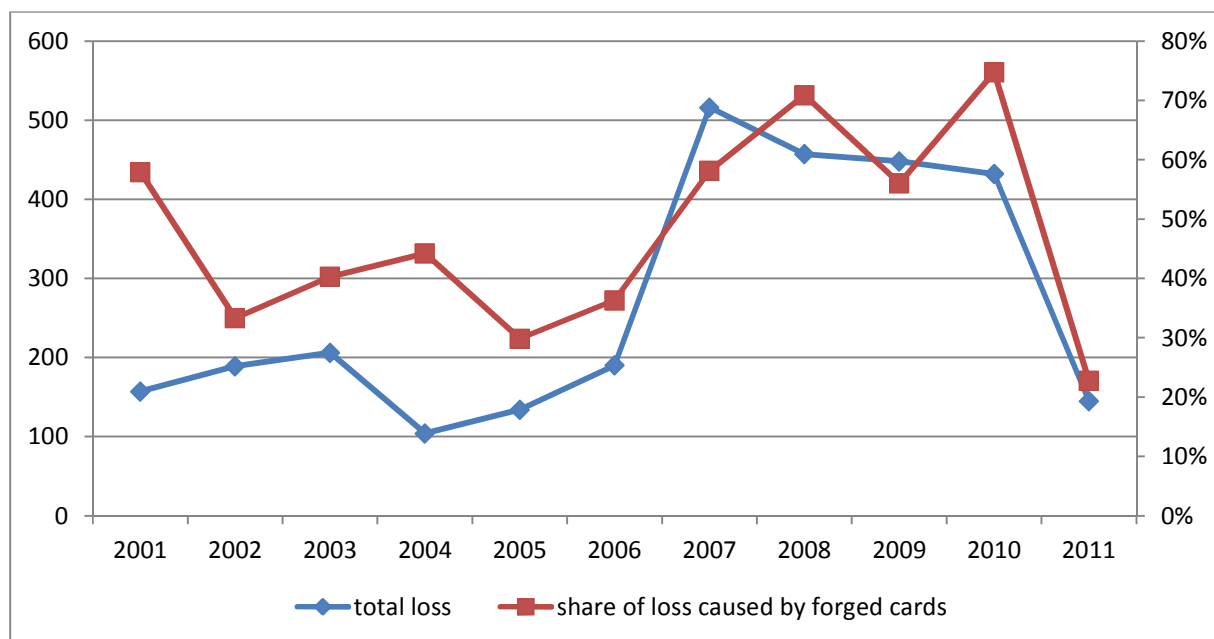
Source: MNB.

Figure 8.11. Losses caused by payment card abuses in 2011 (accepting side in billion forints)



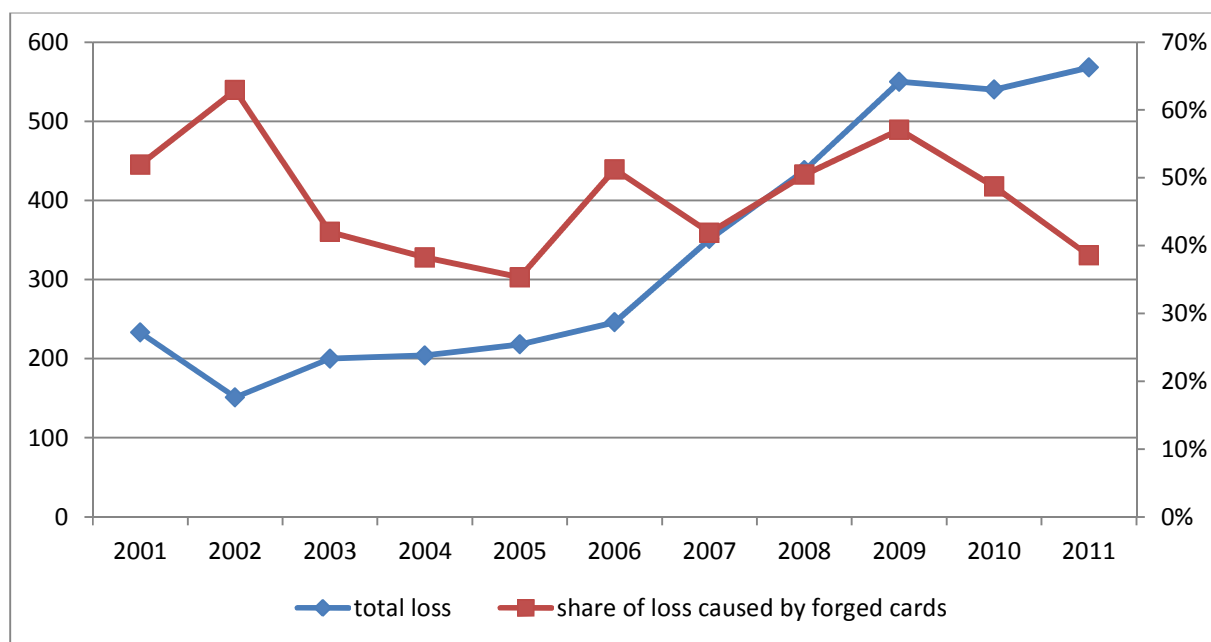
Source: MNB.

Figure 8.12. Losses caused by card abuses on the accepting side (in million forints)



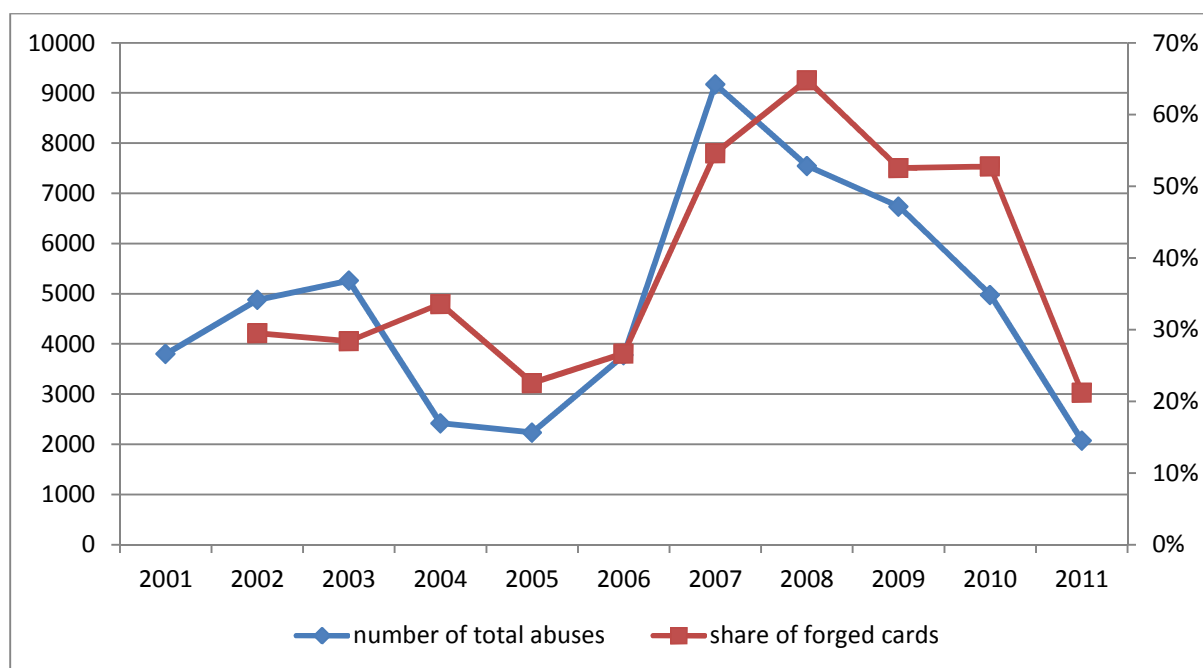
Source: MNB.

Figure 8.13. Losses caused by card abuses on the issuer side (in million forints)



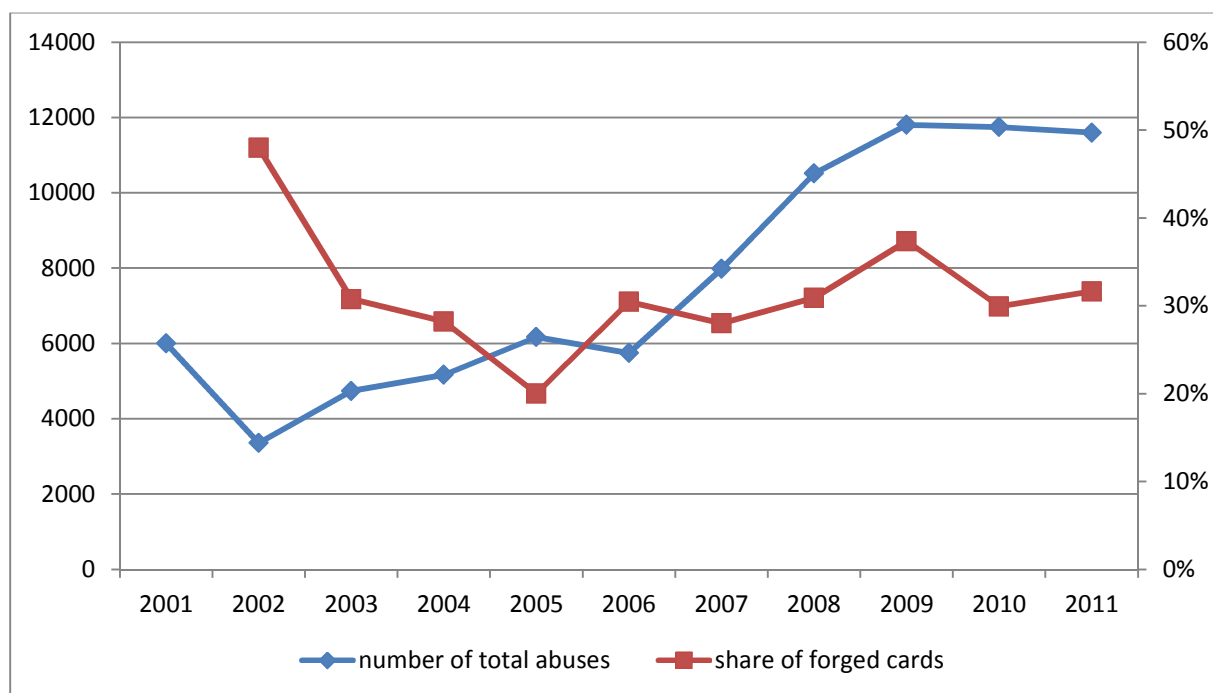
Source: MNB.

Figure 8.14. Number of card abuses on the accepting side



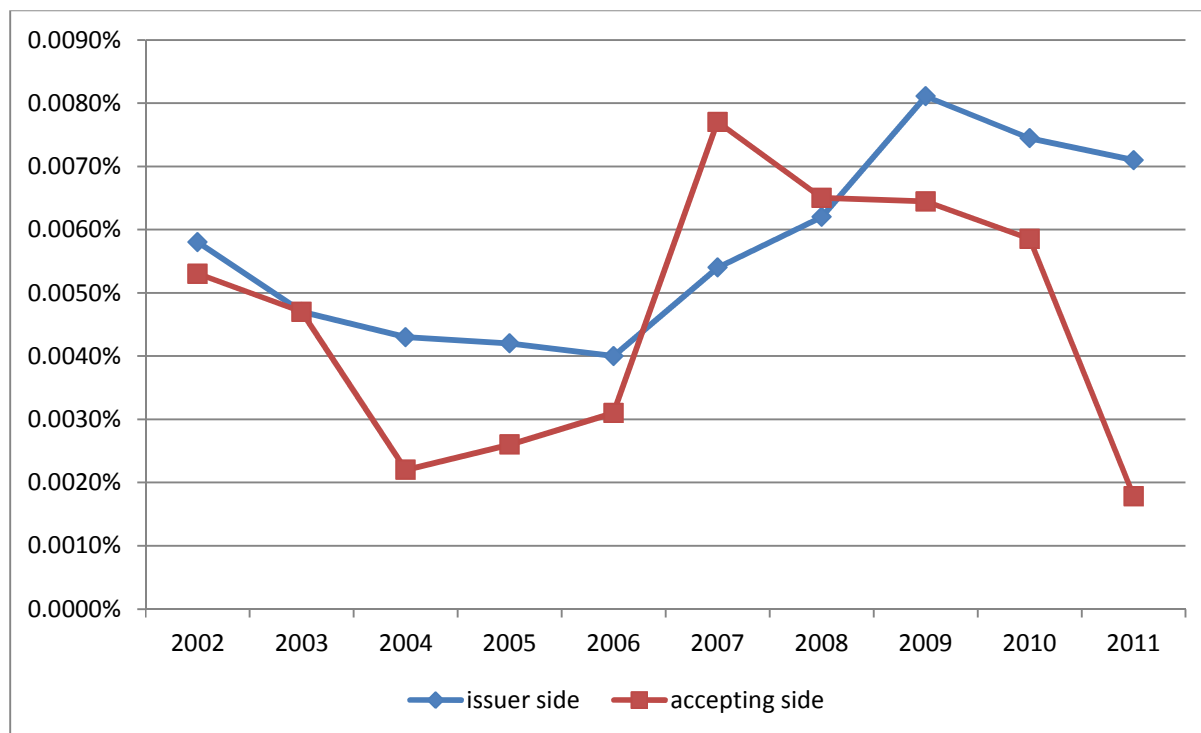
Source: MNB.

Figure 8.15. Number of card abuses on the issuer side



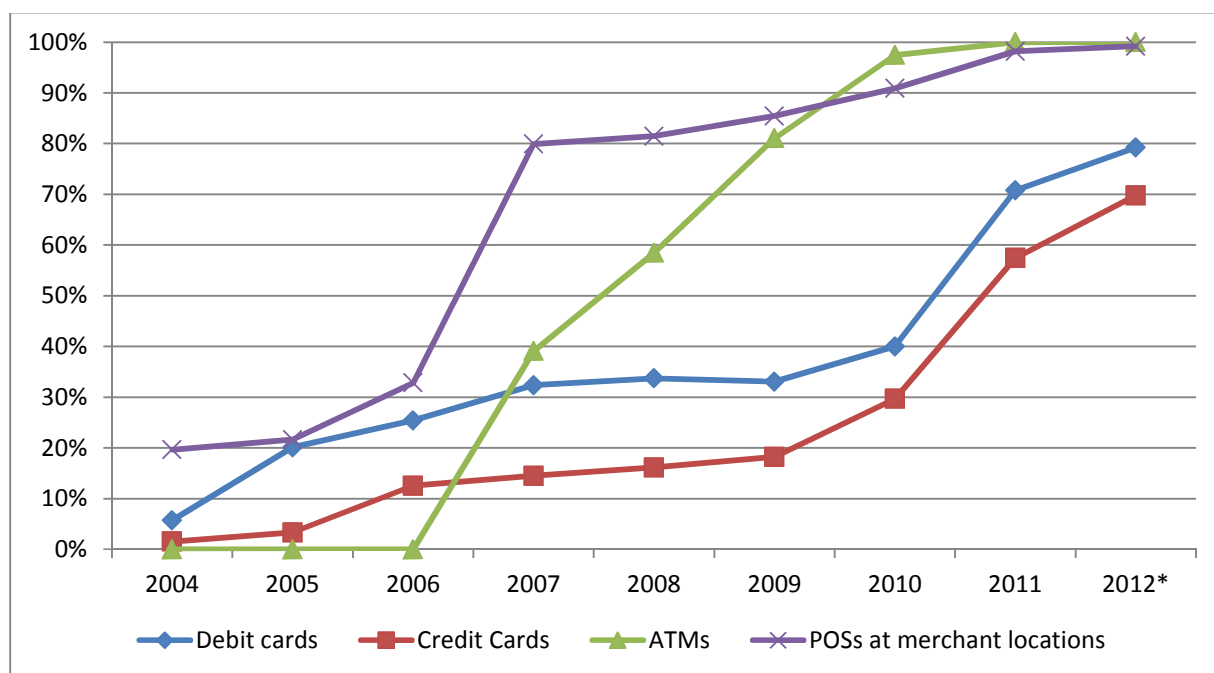
Source: MNB.

Figure 8.16. Share of losses to turnover



Source: MNB.

Figure 8.17. Chip migration in Hungary



*second quarter of 2012.

Source: MNB.

9. The Sources of Funds

9.1. Introduction⁸⁰

Trends experienced in the second half of 2009 continued in the first half of 2010 and the Hungarian fund industry produced outstanding growth after 2008, the worst year in its history. Although in the second half of the year the growth rate slowed down, with more volatile markets and disappearing retail investors, the fund market still grew throughout 2010, and all in all, retail investors poured almost unprecedented amounts of money into funds in 2010 (especially money market funds). Overall, the total assets of Hungarian funds increased by 25.5% in forint terms, and 21.9% in euro terms in 2010.

Regarding portfolios managed by fund managers and the fund management business in general, the pension fund sector's transformation was a major development in 2011 (the government effectively nationalized private pensions, to be discussed shortly). In the first three quarters of the year, managed assets shrank by 34%. 85% of this decrease stemmed from the transfer of portfolios managed for private pension funds and the rest of it derived from exchange rate fluctuations.

The primary impacts of the pension fund system transformation (immediate decrease of managed portfolios, investment fund management gaining dominance, etc.) may be followed by several secondary impacts. The lower volume of managed assets may lead to problems with economies of scale, return generation capabilities may change, and the partial loss of secondary market demand may also affect market structures. In the current economic environment, the willingness of households to save is questionable, and neither is it known whether they would favor the deposit or fund market. Meanwhile, increasing demand is expected for long-term investment products and account types suitable for self-support purposes may lead to positive changes.

Data, shown in Figure 9.1, for household savings come from the National Bank of Hungary (MNB). They include all financial assets of households, including ownership

⁸⁰ Sources: IOSCO (2012), OECD (2008), PricewaterhouseCoopers (2003).

in non-listed companies. Apart from cash and deposits, these make up the largest portion of household savings. When considering life and pension funds, it has to be noted that Hungary had a mandatory second pillar pension system from 1998 until 2010, therefore, it is not surprising that the ratio of pension savings increased rapidly over the years (though 2008 – as in most countries – saw pension assets decrease slightly because of negative returns caused by the financial crisis). The regulatory changes of 2010 meant that this ratio will significantly decrease.

Households in Hungary are generally very risk-averse, the ratio of shares in household savings is limited, though with the huge decline in the stock exchange, households did venture into the stock market at the end of 2008 and beginning of 2009. Households were again buying stocks in 2010, as well as bonds, but most of the new investments of households went thankfully to funds. This was the result of good returns, regained trust, falling interest rates and long-term savings becoming a general issue in a post-crisis situation. Households even left bank deposits for investment fund coupons⁸¹ in the first half of the year.

The ratio of investment fund coupons in household savings varied between 5 and 7% through the years 2001-2005, grew to 8.4% in 2006 and to almost 10% in 2007, fell back again to 7.1% in 2008, and fell further to 6.9% in 2009, despite modest growth. The ratio grew to 8% of household savings at the end of 2010, after strong inflows from households last year.

According to MNB data, 54.3% of investment fund units in Hungary is owned by households, 43.7% by Hungarian institutions and companies and 2% is foreign owned. There are no data on indirect investment fund unit ownership of households, but as an extrapolation of some data by MNB, PSzÁF and BAMOSz, it can be estimated that approximately 2.3 billion euros is held in investment funds via unit-linked products, and a further 4.5 billion euros via pension funds (1 euro and 3.1 in domestic funds).

9.1.1. Regulatory Developments

⁸¹ Securities issued by investment funds.

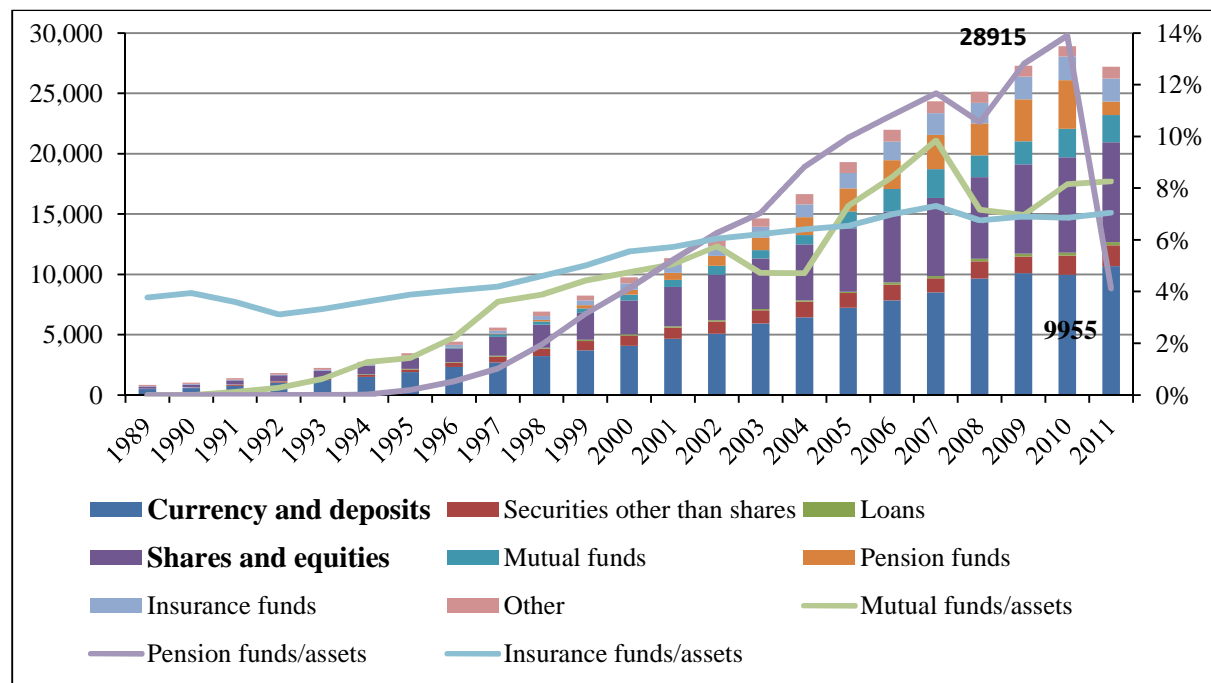
There have been a number of changes introduced with regards to the pension system in 2010. Until November 2010, 8% of gross salary was paid to the private pension system, whereas 1.5% to the state social security for members of mandatory private pension funds, while non-members paid the full 9.5% to the state social security. On top of that, 24% of gross salary is paid to the state social security pension fund (SSPF) by employers for both members of mandatory private pension funds (second pillar, MPPF) and non-members. From November 2010, the total 9.5% was paid to the SSPF, which was increased to 10% as of 1 January 2011.

Moreover, the government encouraged members of MPPFs to opt out from the private scheme, transferring the assets so far accumulated to the state SSPF. The latter was planned to be transformed into a system which is able to manage personal accounts, but that has not happened as yet. Among the incentives to make people revert to the SSPF was the threat that people remaining in the second pillar would not be entitled to state pension, however they will be obliged to contribute to it (by renaming the 24% employer pension contribution as a pension tax). Also, the government decided that opting out was the default, and members wishing to continue to stay members would have to present themselves – in person – at one of the SSPF offices and sign an official statement to opt in. With the low level of financial culture and high level of mistrust (and also the short period available for the statement) this legislation in effect nationalized second pillar private pensions, with only 3% of members staying. The final data on the assets is estimated at around 10% (approximately 300 billion forints).

Regarding tax rules, an extra tax was introduced for financial institutions in 2010. Alongside banks, insurance companies and leasing companies, fund and asset management companies had to pay the extra tax based on total asset under management as of end 2009. The new tax was to be in effect for three years. Additionally, tax allowance for private individuals on contributions to Voluntary Pension Funds and to Individual Pension Accounts will be reduced from 30% to 20%. A new vehicle called “long-term investment account” was introduced in 2009 that took effect in 2010. This new vehicle allows savers to place on a special account

deposits, shares, bonds or fund units, and if they leave their savings on this account for 3 years, tax on interest and capital gains will only be 10 % (instead of the normal rate of 20 %), and after 5 years, tax will be 0 % (tax free).

Figure 9.1. Household financial asset allocation (billion forints)



Source: MNB, own calculation.

9.2. Investment Funds⁸²

The number of investment funds⁸³ has grown fivefold in the last 10 years to 2010 when there were 453 funds in total (Figure 9.2). The rise of guaranteed funds⁸⁴ is striking: they now amount to one third of all funds, the second and third largest group being the equity and money market funds (94 and 57 funds, respectively). The assets of funds took off in 2005: from 2004 until 2007 they registered a threefold surge and after a brief setback from the negative effects of financial crisis they

⁸² Sources: MNB (2012d), BAMOSZ (2011b), EFAMA (2012), PSZÁF (2011).

⁸³ Mutual funds are called investment funds in Hungary but we use these two terms interchangeably throughout the text. See more on investment funds in Chapter 3.

⁸⁴ Most of these funds guarantee the value of the principal and sometimes even a designated, usually low rate of return towards their investors. These funds are mostly closed-end funds, which means that investors must keep their investment coupons until maturity in order to enjoy the guarantee. Although exit before maturity through selling these coupons in the stock exchange is an option, in this case the guarantee is lost. While the costs of maintaining these types of funds is higher than normal, they are a better investment when rates of return are more volatile, as was the case in most of the post-crisis period in Hungary.

reached 3,763 billion forints in 2010 (Figure 9.3). The average fund size doubled to 8.3 billion forints in the last decade. Money market funds are the largest on average (22 billion forints).

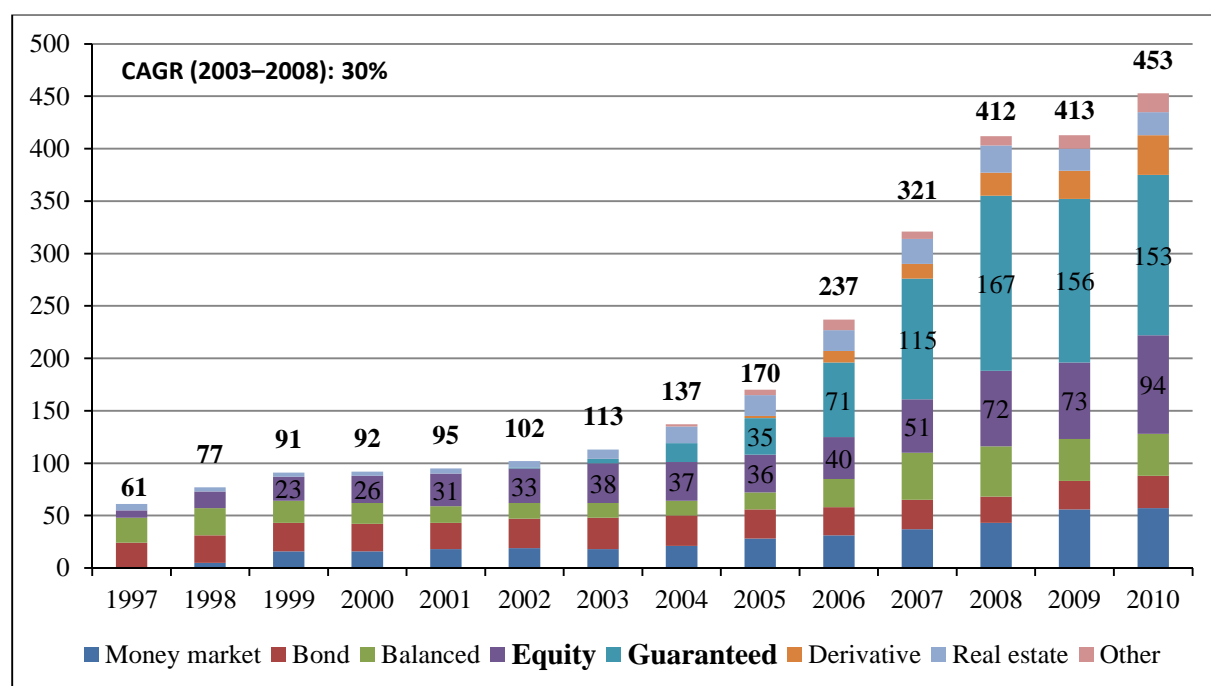
Until 2007 assets grew at a faster pace than gross domestic product reaching a 12.8 percent assets/GDP ratio, after the big downturn in 2008 the ratio jumped up to 14.1 percent. Comparing the assets to the net financial wealth of households we see a similar trend: the ratio was 19.8 percent in 2007 and rose after a slump to 21.3 percent.

At the turn of the millennium most of the assets (67 percent) were held in domestic bond funds, 10 years later one third of them were in domestic money market funds, the second largest group being the international equity funds (23 percentage share). Institutional investors play an increasingly important role in the fund market: they were holding only 16 percent of all mutual funds in 2000, this climbed to 44 percent in the next decade (Figure 9.4).

Inspecting the asset allocation of funds, we can see the prominence of domestic bank deposits (around 40 percentage share on average) which points to the popularity of money market and guaranteed funds (Figure 9.5). Between 2005 and 2011 funds invested increasingly in international equities (21 percentage share in 2010) at the expense of domestic bonds and bills (22 percentage share in 2010). The share of domestic real estate remained roughly 10 percent.

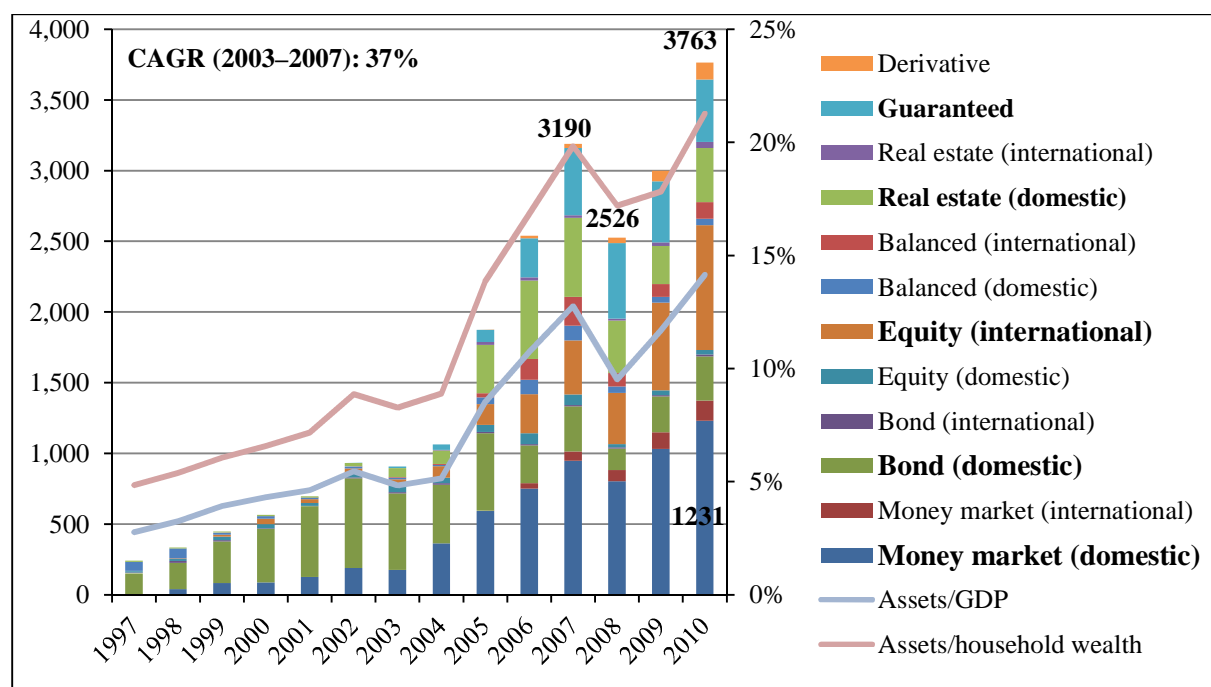
Figure 9.6 illustrates the average annual net returns of the different fund types. Of course, pure equity funds made the largest gains in 2005 and 2009 (38 and 36 percent respectively) and suffered the largest losses in 2008 (45 percent). Interestingly, property development funds were able to create sizeable profits in every observed year and especially in 2008 (22 percent). Liquidity and money market funds exhibited a stable performance of about 5–7 percent returns annually.

Figure 9.2. Number of mutual funds (1997–2010)



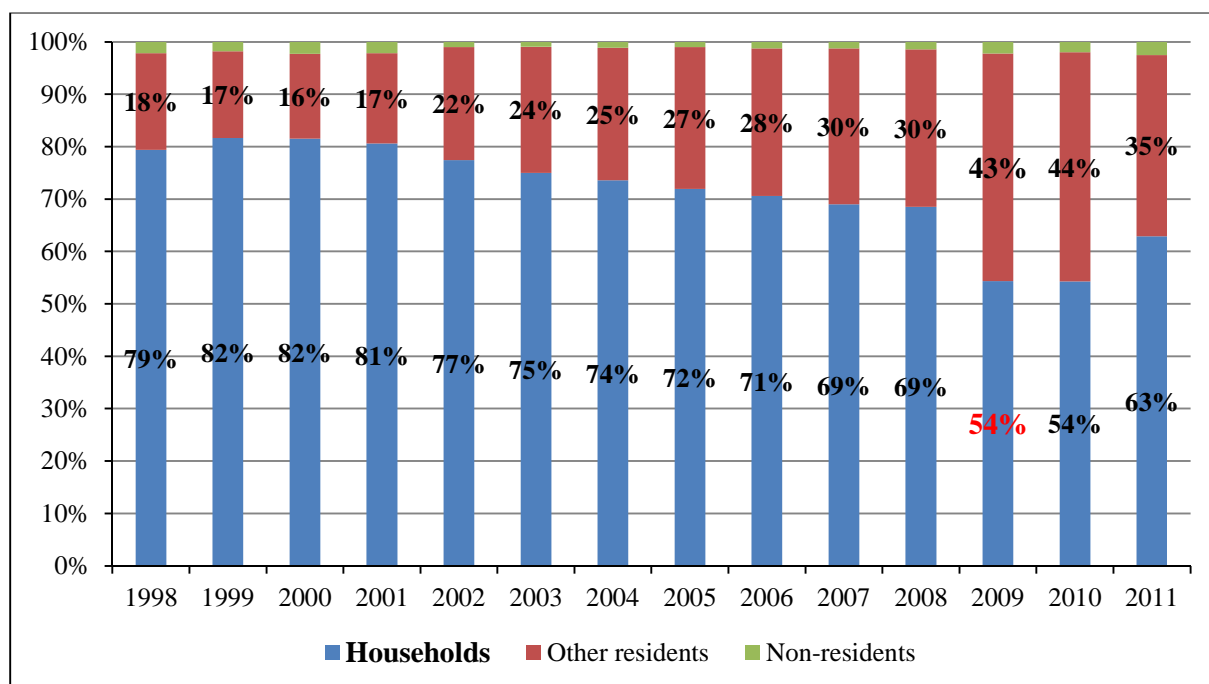
Source: BAMOSZ.

Figure 9.3. Mutual funds asset under management (billion forints and as a percentage of nominal GDP and net financial household wealth, 1997–2010)



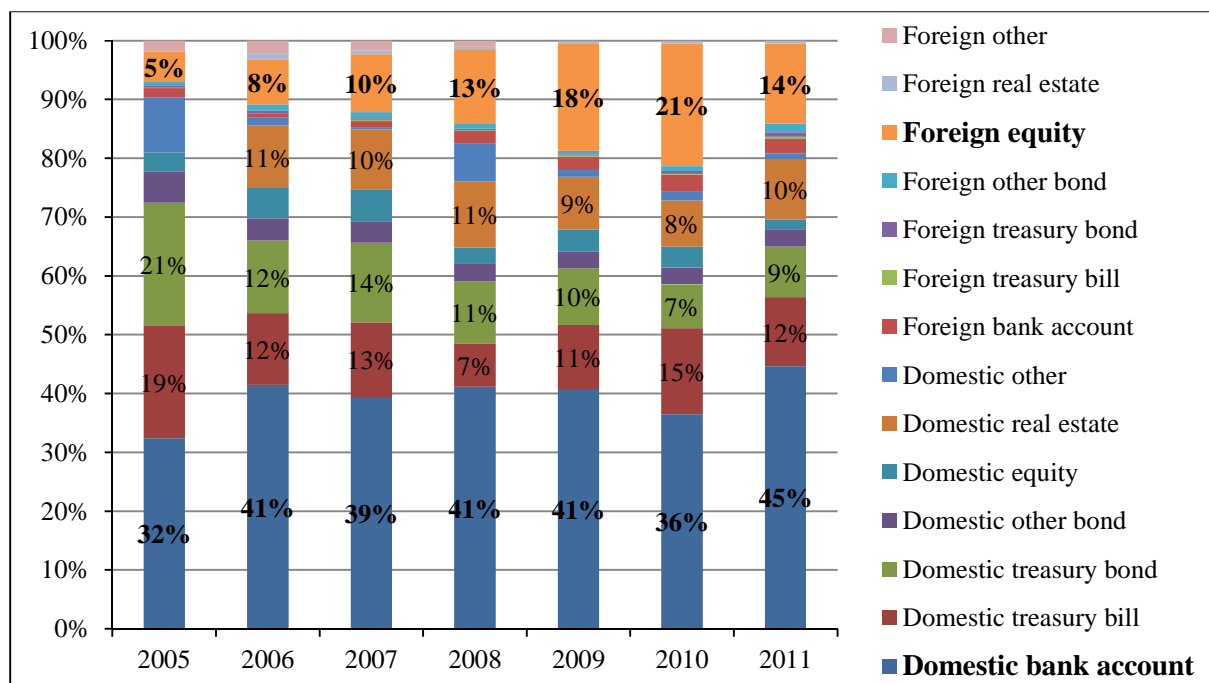
Source: BAMOSZ, MNB, KSH, own calculation.

Figure 9.4. Mutual funds by holding sector



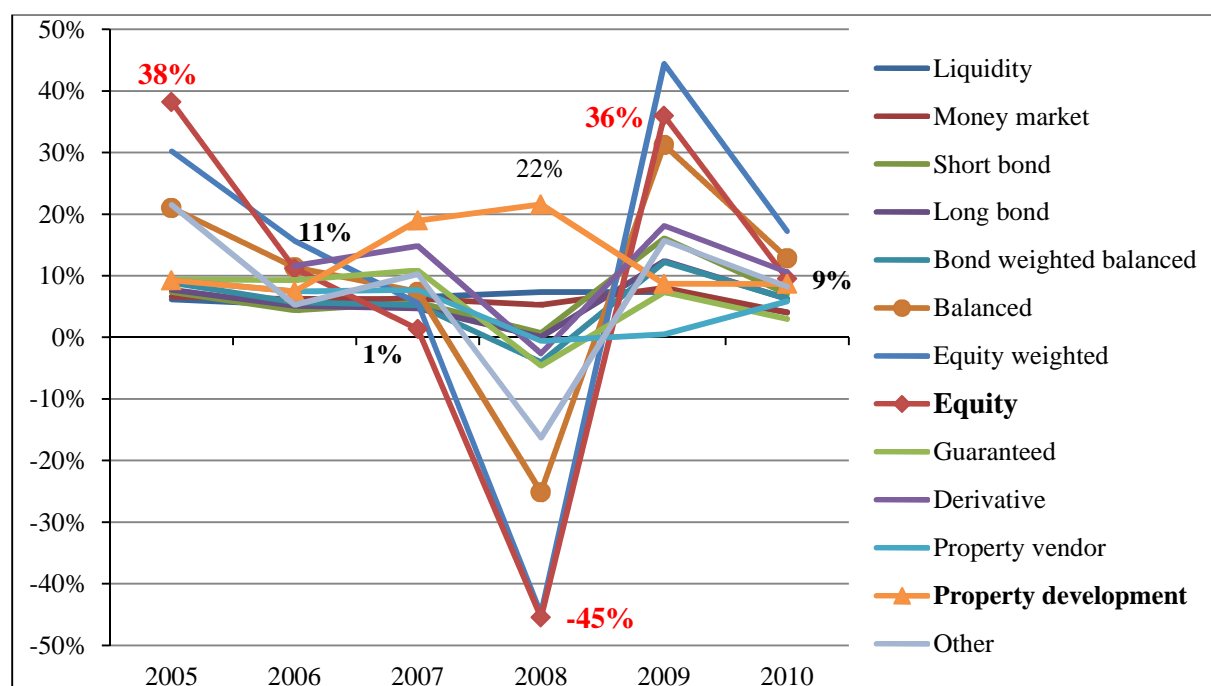
Source: MNB, own calculation.

Figure 9.5. Asset allocation of mutual funds



Source: BAMOSZ.

Figure 9.6. Mutual fund weighted average returns (2005–2010)



Source: BAMOSZ.

9.3. Discretionary Mandates

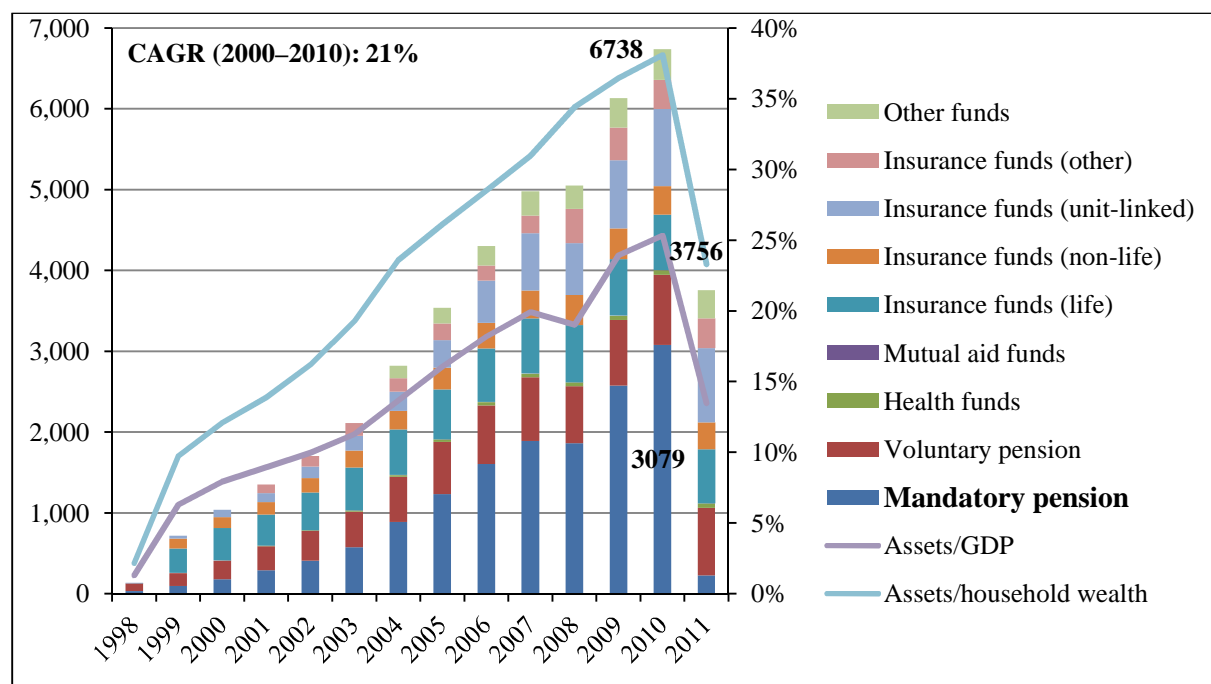
Total assets managed in discretionary mandates⁸⁵ rose dynamically from around 1000 billion forints at the end of 2000 to 6,738 billion forints at the end of 2010 with the exemption of 2008, when it remained even, this indicates a 21 percent compounded annual growth rate (CAGR). In 2011, primarily as the result of the asset takeover specified in the pension reform, assets plummeted to half (3,756 billion forints). This means that there is more money managed now in investment funds than is in discretionary mandates which was very much the opposite 10 years earlier (about 40/60 ratio).

For a long period of time pension, health and mutual aid assets (especially mandatory pensions) gave the largest share (about half on average) of discretionary mandates. In 2011, however, mandatory pension fund managers transferred more than 90 percent of their collected wealth to the state-owned Pension Reform and Debt Reduction Fund. Consequently, pension, health and mutual aid assets amount now only to about one quarter of all discretionary assets, much smaller than insurance funds (about two thirds of assets).

Because of the withdrawal of pension fund assets, discretionary assets to GDP and the assets to net financial household wealth ratio fell back to 13 and 23 percent in 2011, after an increase from 8 and 12 percent in 2000 to 25 and 38 percent in 2010.

⁸⁵ Assets managed in pension, health, mutual aid and insurance funds.

Figure 9.7. Discretionary mandates asset under management (billion forints and as a percentage of nominal GDP and net financial household wealth)



Source: PSZÁF, BAMOSZ, MNB, KSH, own calculation.

9.3.1. Pension, Health and Mutual Aid Funds⁸⁶

As a result of the pension reform the assets of mandatory pension funds decreased by 92% on year-end 2010 figures, while voluntary pension fund assets did not change significantly. The combination of these two factors led to a remarkable shift of asset ratios between different institution forms in the funds sector. Each subsector is highly concentrated.

The number of mandatory pension funds decreased substantially owing to the reform, partly by termination of business without legal succession and partly by mergers: currently there were eleven operating mandatory pension funds in September-2012 (excluding institutions that are under final settlement or merger) and the figure may decrease slightly as some pension funds plan to merge in the near future. The changes are because of deteriorating economies of scale; according

⁸⁶ Sources: BAMOSZ (2011b), PSZÁF (2011), OECD (2011, 2012b), Simonovits (2009), Lukács (2011).

to September 2012 data, aggregate membership in the mandatory pension fund subsector is 72,347 which equals 2.3% of the number of members at the end of 2010.

The declining trend of voluntary pension fund membership since the end of 2008 has not been broken, either, and is currently accelerating. In the first nine months of 2011, the number of members decreased by 20,383 (-1.57%) while in the same period in 2012 the number fell by a further 38,310 (-3%). Although the number of new entrants far exceeded the relevant 2010 and 2009 figures in all three quarters, the growing ratio of departing members and of those receiving service payout offset this impact. The growth in the number of departing members stems from the current situation of the labor market and the economy. Thus, after the waiting period, the withdrawal of the individual account balance was accompanied by departure from the pension fund. Further, probably because of the continued crisis and the reduction of tax credit on payments to voluntary pension funds, fewer people find such funds attractive. In addition, many considered membership in voluntary pension funds an investment and employer contribution, other payments and former tax allowances were all perceived as yield elements.

The number of members in healthcare funds was 1,041,370 at the end of September 2012. As cafeteria services⁸⁷ shepherd savings to healthcare funds, membership and managed assets have been dynamically growing, consistently increasing the market significance of healthcare funds.

The voluntary mutual aid fund segment continues to shrink, albeit at a slowing pace; its membership has been decreasing since early 2007 (from 120,239 to the current 37,975). The assets of these funds totaled 2 billion forints in September 2012, the same level as three years ago.

⁸⁷ Different types of non-salary compensation paid by employers in Hungary, called cafeteria services, include lunch coupons, contribution to local transport costs, school start subsidy for children, Széchenyi recreational card (SzÉP card), contribution to tuition costs and contributions paid into voluntary pension and healthcare funds. These cafeteria services can be considered labor costs, taxed at a 30% lower tax rate than normal salary (31% instead of 61%), and have a maximum amount of 500,000 forints/year, approximately twice the monthly gross medium salary in Hungary. Contributions to voluntary pension and healthcare funds are maximized at 46,500 and 27,900 forints/month, respectively.

Within mandatory pension fund portfolios, in line with capital market developments, the balanced portfolio performed best in 2011, while in the second and third quarter the classic portfolio, i.e. the one with the largest government bond content, was the best performer. The average yields of classic, balanced and growth portfolios equaled, respectively, 2.5%, 3.1% and 1.8% in the first quarter, 1.4%, 0.7% and 0.1% in the second quarter and 0.6%, -3.8% and -8.3% in the third quarter. In Q2 and Q3, the asset-weighted average yield of voluntary pension funds exceeded that of mandatory pension funds again after Q1 2009 and Q2 2010. Growth portfolios have a high stock ratio and strongly deteriorate the average yield of mandatory pension fund portfolios. In Q1 and Q2, positive real returns were achieved on classic and balanced portfolios while growth portfolios underperformed the other two portfolio types. In Q3, only the classic portfolio produced positive real yields.

Effective with January 1st, 2011, the upper limit of asset management fees was lowered from 0.8% to 0.2% amplifying concentration pressures from an economy-of-scale viewpoint. Based on actual figures, not weighted asset management fees equaled 0.19% in Q2, calculated as the average of unique rates dispersing between 0.14% and 0.2%, and cleaned from refunded unreasonable additional expenses incurred on indirect investments, which were detected during a former PSzÁF inspection.

The total value of the portfolio of mandatory pension funds equaled 192 billion forints as of September 30th, 2012 (average asset value per member: 2.66 million forints, or, circa 9,200 euros); the same figure for voluntary pension funds was 882 billion forints (717,416 forints, or 2,474 euros, per member). The share of investment units slowly gains ground within the portfolios, at the expense of Hungarian government bonds and, to a lesser extent, shares. However, this trend principally arises from the investment strategy of pension funds that use the selectable portfolio system. Nevertheless, the ratio of Hungarian government bonds consistently remains over 62%. According to an OECD study covering 27 countries, Hungarian pension funds (mandatory and voluntary combined) had the third largest ratio of government securities in their investment portfolio (behind the Czech Republic and Mexico),

while the ratio of shares in their portfolios was below the average. These results indicate low risk appetite. The foreign exchange exposure of pension funds is equally low; the composition of mandatory pension fund portfolios is 80% forint assets (at voluntary pension funds, VPF, this ratio is 87%), 8% EUR (VPF: 6%) and 12% other foreign currencies. At sector level, investments in EU member states decreased and investments into US-based assets grew.

During the past approximately two decades, the voluntary fund sector performed its mission and grew up to be the second largest financing institution following the national insurance in the Hungarian pension and health systems. Hungary can be proud of Act XCVI of 1993, on the regulation of funds, for its having been one of Europe's first pioneer initiatives in those days. Following the social transformation, it achieved the goal of reducing the involvement of the state, providing parallel alternative for the self-provision of citizens. The creators of this act could only foresee what we, successors exactly know today, following two decades: the French Mutualité, providing the basis for the Hungarian fund system proved to be almost the only one in the European social insurance systems being viable in financial terms, as well.

The goal of the introduction of the voluntary pension fund in 1993 was the creation of the institution of private and corporal self-provision keeping in mind that the only existing state run single-pillar pay-as-you-go (PAYG) pension system may perform insufficiently in the future. We must note that the Act XCVI of 1993 belongs to the few acts in Hungary that has enjoyed support from the two leading parties in the Parliament when it was accepted⁸⁸. While the pension fund serves to complement the pension paid by the state, the health fund completes or substitutes the services of the actual social insurance system and the mutual aid funds render assistance in

⁸⁸ Consensual decisions, receiving the approval of both the left and the right of the political arena, are rare in Hungarian politics. This law was unique in the sense that, the creation of these funds required no additional budget expenditures and even decreased the need for state financing of the healthcare and pension systems while it emphasized the beneficial side of capitalism by guiding citizens towards saving more for self-subsistence. All in all, it was politically approvable from most aspects.

case of unanticipated financial burdens for the families (e. g. unemployment, birth, funeral).

Based on data published by PSZÁF, in 2010, the voluntary funds sector exceeded 2 million in headcount and provided its members with 136.64 billion forints worth of services for an amount of 96 billion forints. By the end of 2010, the market value of voluntary funds reached 868.49 billion forints. In the period under review, the health insurance funds increased continuously their share within the three-player voluntary funds sector (pension, health and mutual aid funds). While health insurance funds had until 2009 realized 8.3% of total voluntary fund income, this share amounted to 42.13% in 2010. Concerning service expenditures, in 2010, health insurance funds provided 58% of total services (pension fund: 40%). It means that the health sector has overtaken the leading role in social risk management.

The state social insurance systems' greatest weakness is demography, i. e. the higher life span of the population and the increasing number of pensioners relative to the employed population. Concentrating on the pension system exclusively and considering the present tendencies, the Hungarian system of state-sponsored pension supply will collapse by 2050: the ratio of the pensioners to contribution payers will be 103% (in 2010, this ratio was 76%). The intensive growth in the voluntary funded pension related savings is justified mainly for those, who remained members of the private pension fund wanting to complete the strongly limited pension offerings from the first, state run, pillar. For people entitled to state pension purely from the PAYG, the privately funded pension scheme is recommended to counterbalance the risks involved in the social-demographic system.

The fact that presently 1.3 million people are members in pension funds demonstrates that people are afraid of losing their living standards enjoyed in the active years in the years of retirement. The changes to be introduced necessarily as early as in this governmental cycle aiming at the OEP financing – entitlement to services tied to payment of contribution, higher level of co-payment to basic services rendered by the state, the relocation of disability pension to OEP and the supervision

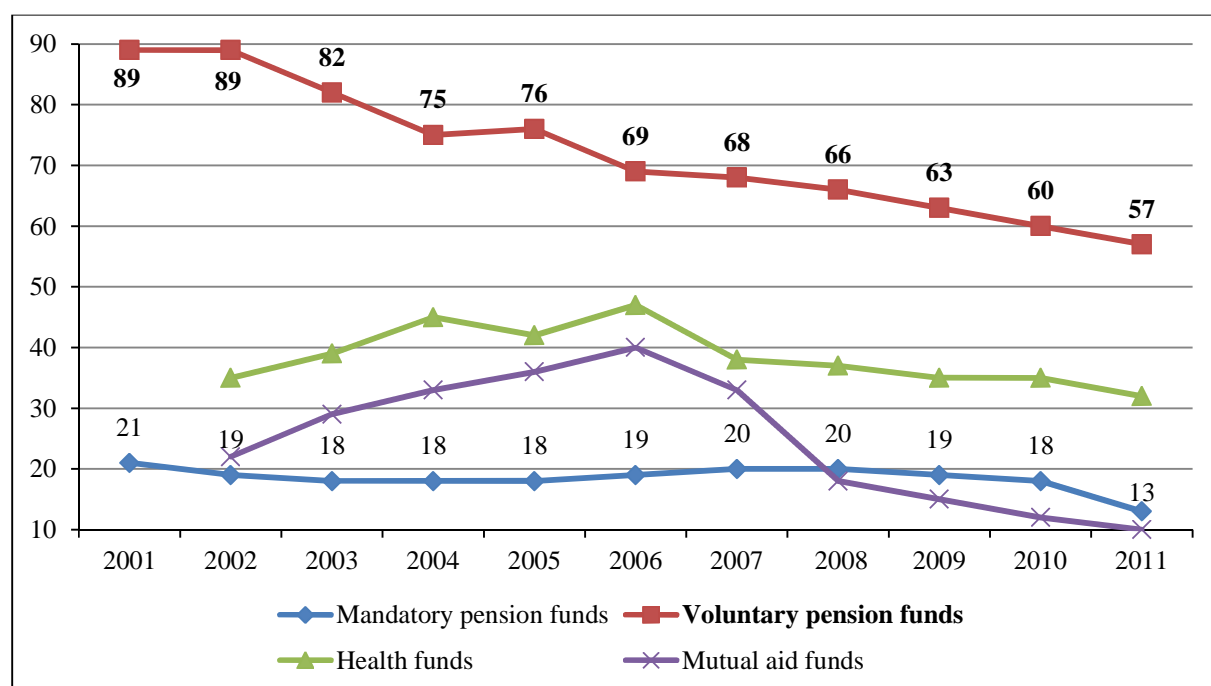
of the entitlements – will result in fundamental changes in the attitude of the people towards self-provision in the following years.

Almost no other form of investment can cope with the advantages of the voluntary fund payment: every 5 forints invested generates a return of 1 forint within one year. Those who increase their savings by private payments into voluntary funds, are entitled to income tax allowance of 20% to be reimbursed at the time of next year's tax return. The fact that more and more people recognize the significance of this shows clearly that the number of those requiring tax reimbursement within the sector has grown by one quarter, while the amounts credited on the accounts increased threefold. Those who are beneficiaries of the changes in the income tax introduced in 2011 will surely appropriate money for filling up the fund accounts, because the only remaining advantage is the fund-related income tax allowance of 20%. The more well to do people will prefer the pension funds, while for the young people the health insurance fund will be more attractive, because the expenditures of the family appropriated for medication and health care (e. g. sports) can be financed by the health card. However, the pension fund is a good alternative for younger generations, as well, because the interest yields double the amount of payments over a few decades, increasing the payable pension significantly.

Following the transformation of the private pension fund, the voluntary pension funds will play a new role: the pension pillar will be operated in the funded pension scheme in an accessible manner for masses of people, eliminating the real risks of the state run PAYG system. Following the crises of recent years, the preservation of the property will be an eminent duty of the pension funds resulting in excessive carefulness decreasing the yields in short term, but it could be a good decision in the long term (several decades), as the funds will be able to maintain the confidence of their members. The health insurance funds – especially as a result of the reduction of the budget of OEP – will become more important than ever in financing the co-payment of citizens enabling them to have access to OEP services, at all. The low aptitude of Hungarian inhabitants for self-provision was even more weakened by consecutive governments changing the regulations relating to the voluntary funds

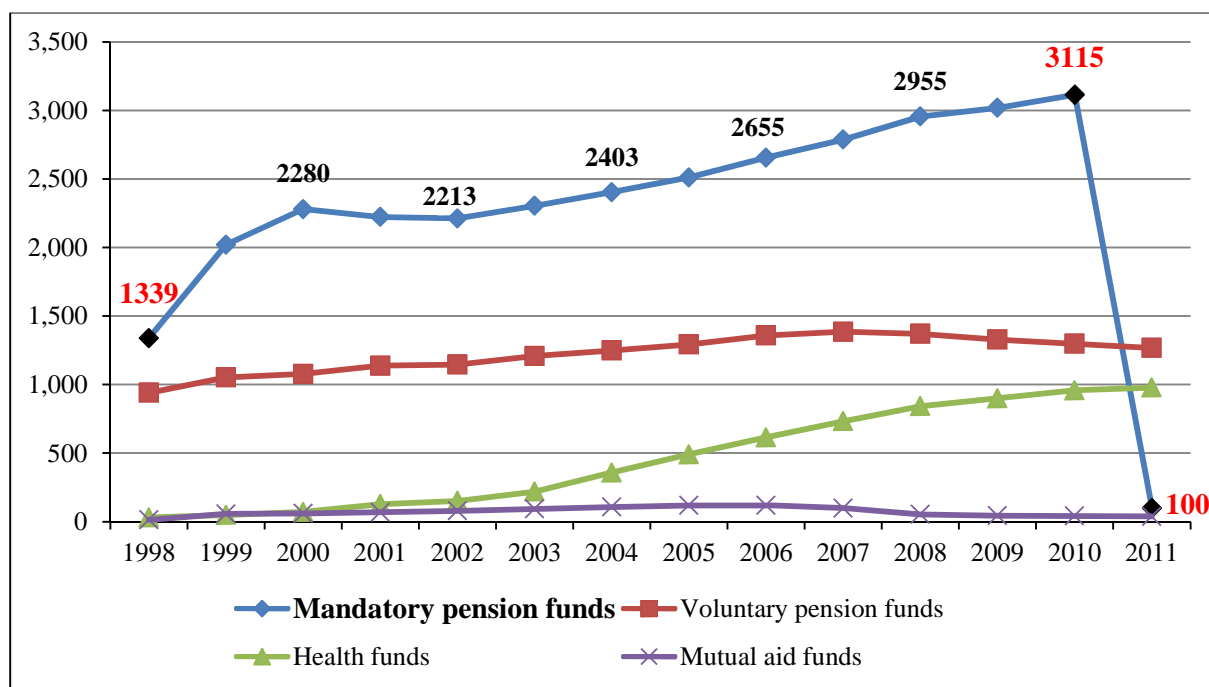
almost yearly, making this institution totally incalculable. The majority of modifications were simple restrictions reducing the income tax allowance to one fifth of its original rate and employers' payments to one quarter. To retain the voluntary funds as the most important institutions of self-provision for decades, a calculable system of regulations fitting the long term features of the demographic processes should be devised.

Figure 9.8. Number of mandatory, voluntary pension, health and mutual aid funds



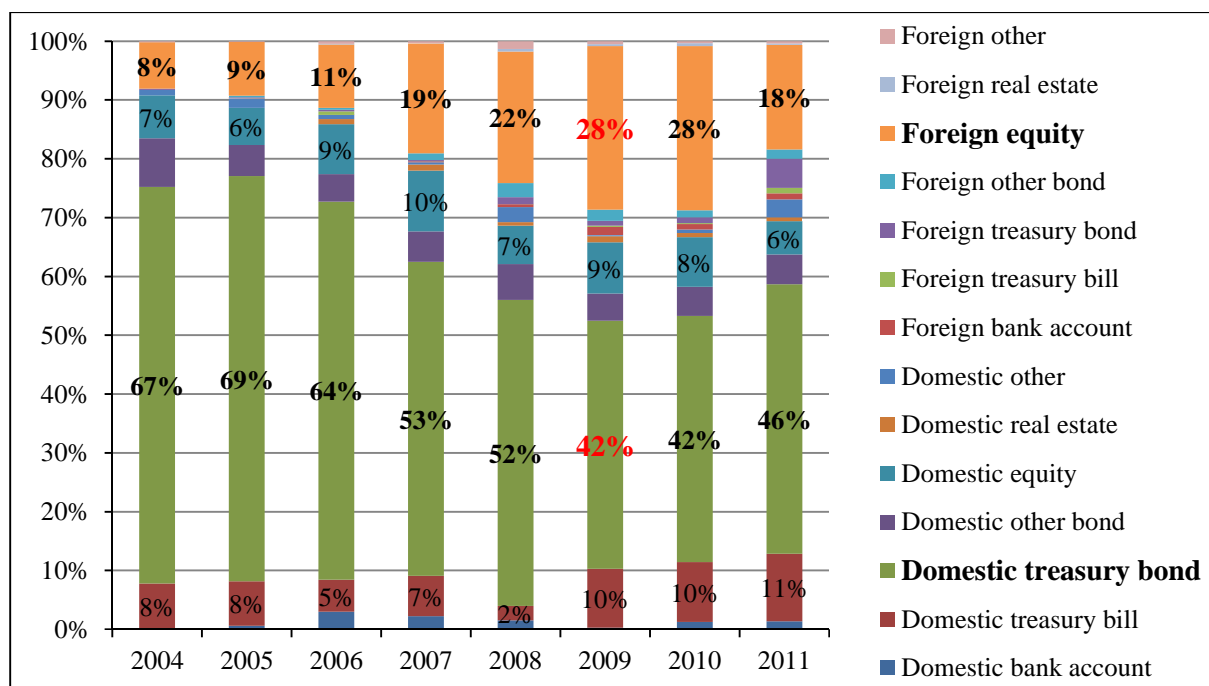
Source: PSZÁF.

Figure 9.9. Members of pension, health and mutual aid funds (thousand persons)



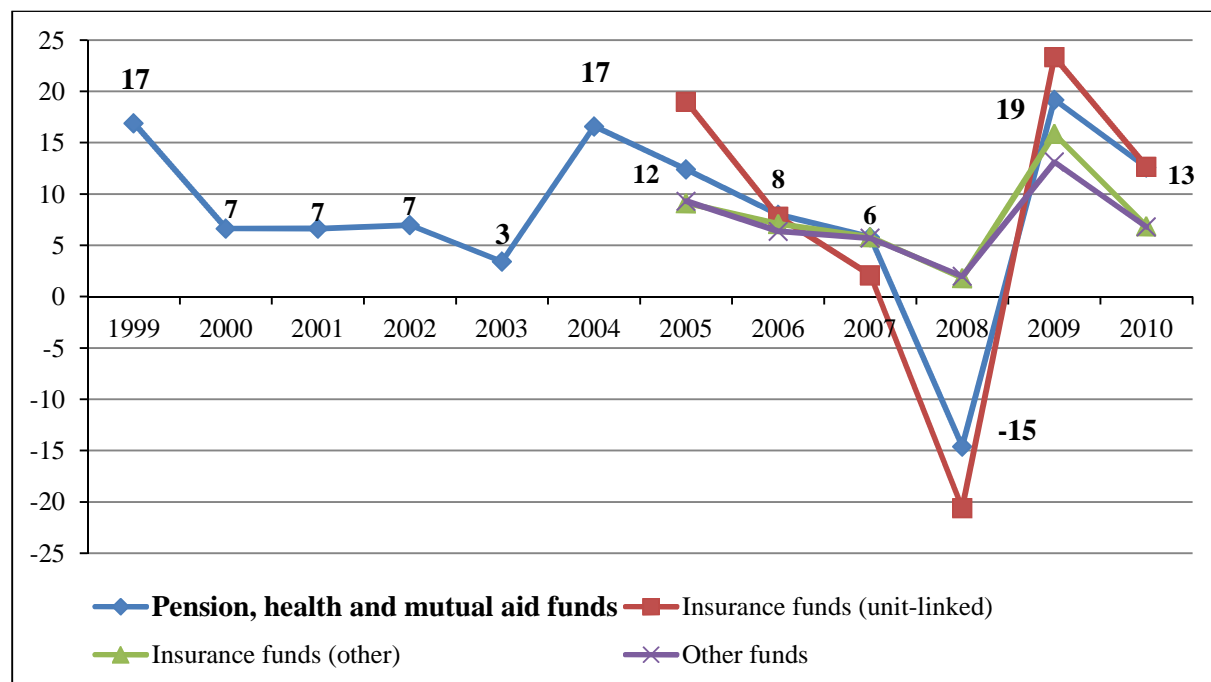
Source: PSZÁF

Figure 9.10. Asset allocation of pension, health and mutual aid funds



Source: BAMOSZ.

Figure 9.11. Discretionary mandates weighted average returns in percentage points (1999–2010)



Source: BAMOSZ, PSZÁF, own calculation.

9.3.2. Insurance Funds⁸⁹

In 2011, the value of total assets fell to around the corresponding 2009 figure, 2,363 billion forints, a 3.1% year-on-year decline. Within assets, the value of investments (including unit-linked life insurance policies) stood at 1,998 billion forints. This involved traditional life sector reserves and also unit-linked life insurance reserves. The assets behind unit-linked life insurance policies were 595 billion forints at the end of 2010, 11.5% higher than one year earlier, while other assets represented 898 billion forints, down by 12.5% on an annual basis.

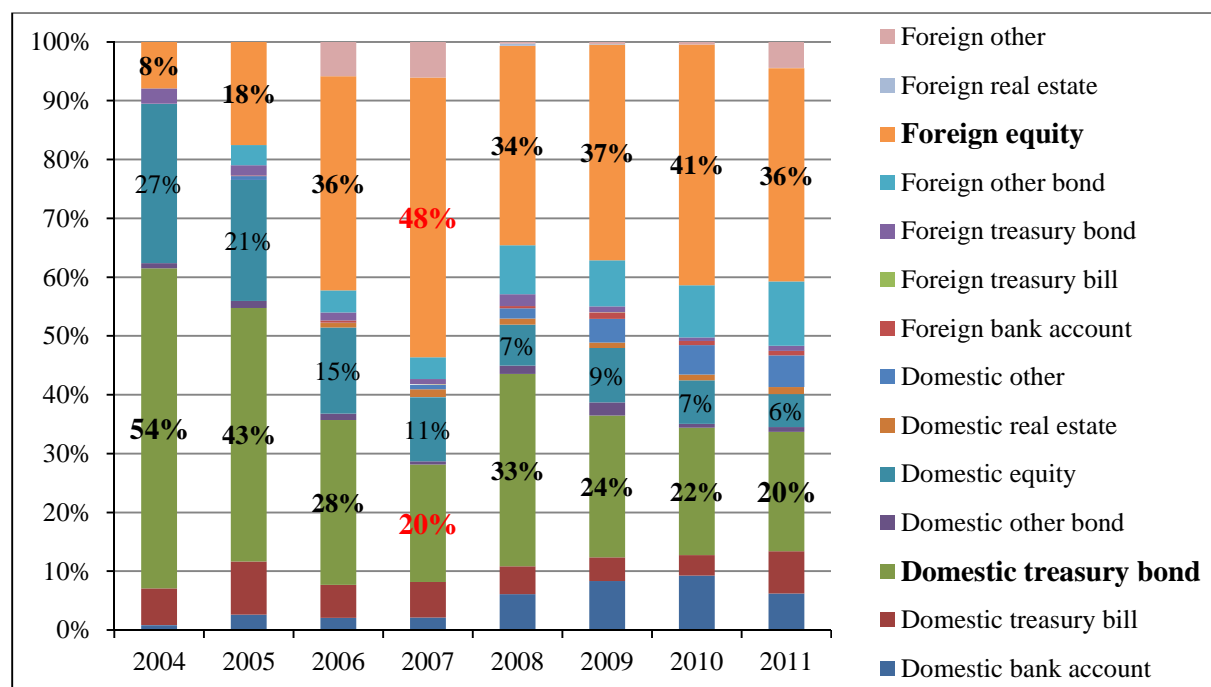
Within investments, the portfolio of domestic government securities remained dominant with a share of 52%. Insurers do not apply real valuation, thus the rising interest rate risk of government securities is not reflected in their accounting statements. As these securities are typically retained until maturity, insurers do not run actual interest rate risk. The ratio of investment units to total investments is 29.4%, more than 90% of which relates to reserves for unit-linked life insurance policies.

In 2010, the share of foreign equity products in the portfolio of insurance funds was already as high as 40.9%. Foreign assets represented 51.6% in total, the share of equities among all assets rose to 48.3% while the weight of domestic government securities declined. The portfolio of unit-linked insurance policies, therefore, shows a higher risk appetite than that of mutual funds. The investors of unit-linked products prefer to take relatively more risk for a number of reasons. One is the longer holding period of the unit-linked products and the other is the positive impact of the more frequent investment of considerably smaller amounts on risk taking. Finally, the intermediating role of agents and their persuasive power may also explain the lower risk aversion of these clients.

80-85% of the insurers' traditional reserves are kept in domestic government securities and bank deposits. In 2010, the share of foreign bonds oscillated between 8.5% and 10%, while shares represented 4%.

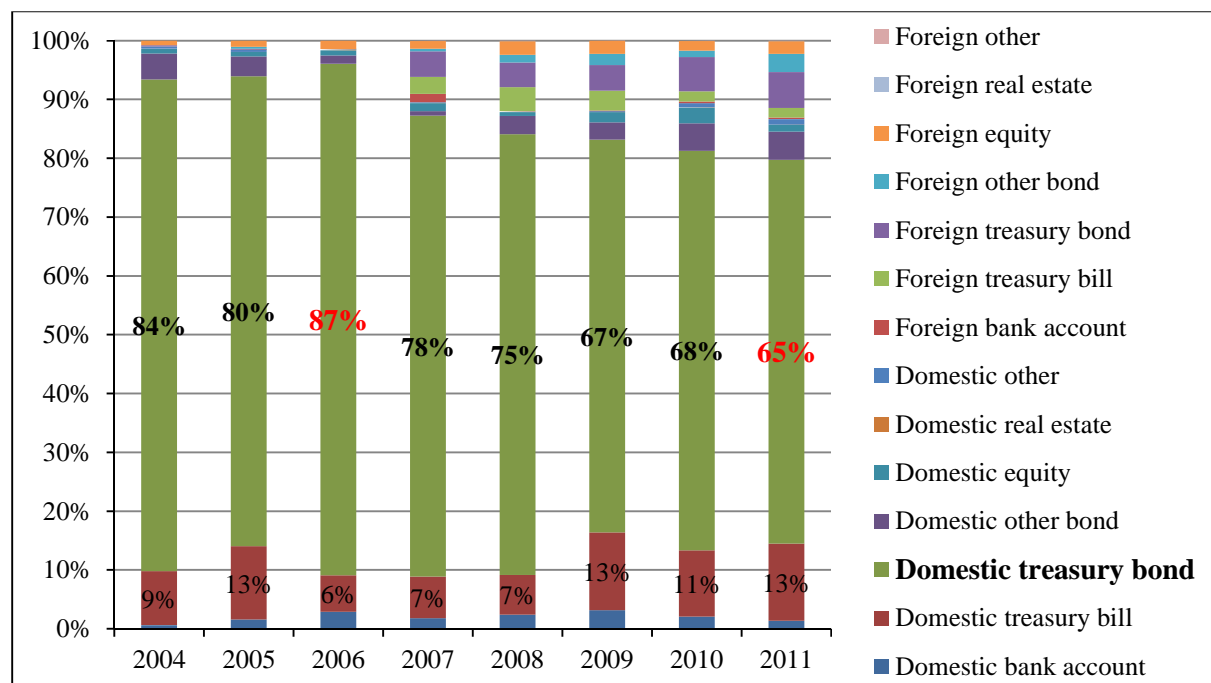
⁸⁹ Sources: BAMOSZ (2011b), PSZÁF (2011).

Figure 9.12. Asset allocation of unit-linked insurance funds



Source: BAMOSZ.

Figure 9.13. Asset allocation of other insurance funds



Source: BAMOSZ.

9.3.3. Miscellaneous Funds⁹⁰

Miscellaneous funds (portfolios managed for private individuals, businesses, municipalities or the Investor Protection and Deposit Guarantee Funds and other institutional investors) represent a smaller portion of assets under management. These assets under the management of BAMOSz members grew 4.7% in 2010 from 363 billion to 381 billion forints. Their share, however, fell to 4.1% of total assets under management from 4.7%. These funds invested 85% of their assets in domestic government bonds and deposits and 10% in other domestic bonds, while shares represented a slightly higher, but still negligible share, growing to 1.5% from 1.1% a year earlier.

The annual Global Wealth Report 2011 published by Credit Suisse estimated that in 2011 the Hungarian mass affluent population was 402 000, which represents about 5 percent of all adults. Membership of HNWI and U-HNWI groups (number of adults) in Hungary was 4000 (0.051%) and 0.405 (0.0051%), respectively. These values represent the average of the other three CEE countries, while they considerably lag behind similar values of developed economies (see Table 9.1).

Table 9.1. Distribution of wealth* (thousand persons, 2011)

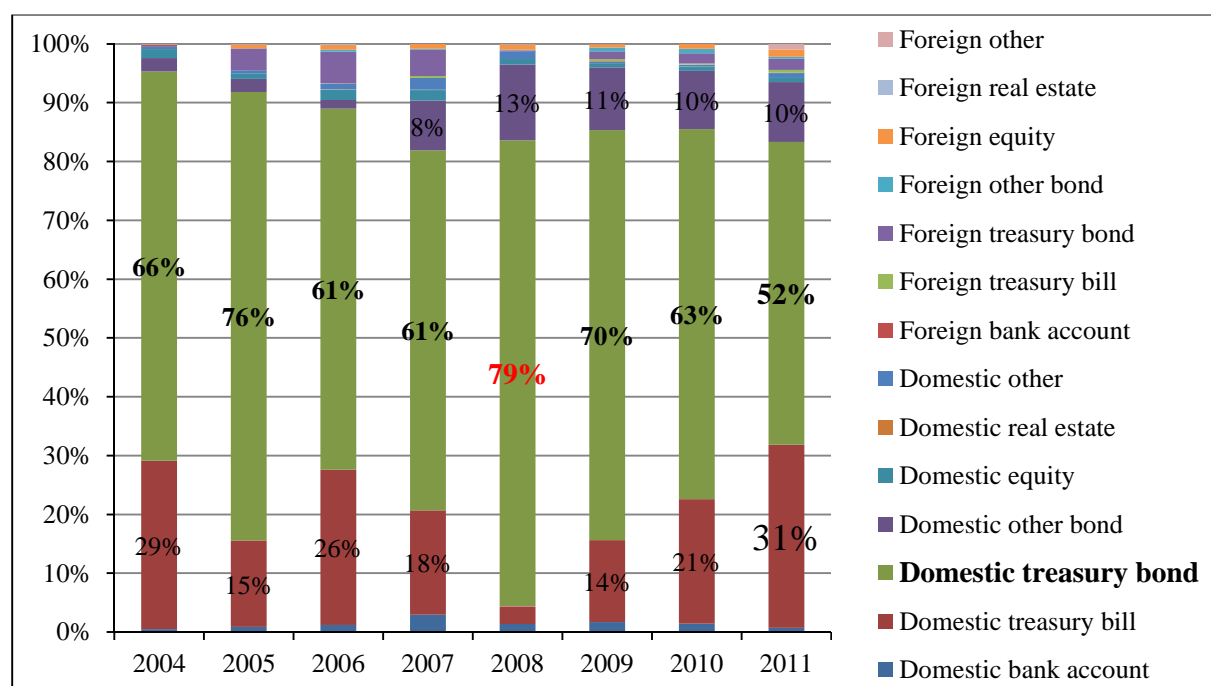
Country	Adults	Mass affluents	Mass affluent s' share	HNWIs	HNWIs' share	U- HNWIs	U- HNWIs' share	Gini
Hungary	7910	402	5.1%	4	0.05%	0.41	0.0051%	64.2
Czech Republic	8379	537	6.4%	25	0.30%	0.27	0.0032%	74.7
Slovakia	4257	145	3.4%	ND	ND	0.23	0.0053%	62.6
Poland	30087	1177	3.9%	48	0.16%	0.87	0.0029%	74.9
Germany	66958	27495	41.1%	1753	2.60%	15.93	0.0240%	75.0
United States	23373 1	84728	36.3%	10061	4.30%	57.86	0.0250%	82.4

*Mass affluents, high-net-worth individuals (HNWIs) and ultra-high-net-worth individuals (U-HNWIs) have over 100,000 US dollars, over 1 million dollars and over 30 million dollars in liquid assets, respectively.

Source: Credit Suisse, Wealth-X, own calculation.

⁹⁰ Sources: BAMOSZ (2011b), Barclays Wealth (2008), Credit Suisse (2011), Wealth-X (2011).

Figure 9.14. Asset allocation of other discretionary mandates (2004–2011)



Source: BAMOSZ.

9.4. Private Equity and Venture Capital Funds⁹¹

9.4.1. The Significance of the Industry in Hungary

As Karsai (2012) points out, due to the specificity of the Hungarian venture capital and private equity (VC & PE) industry, it is relatively difficult to document its development with exact data. Similarly to other CEE countries, systematic data collection in the first decade after the change of the political system in Hungary was non-existent. In 2004 and 2011, a comprehensive survey on VC & PE investments and exits⁹² in Hungary covering the period of 1989–2004 was commissioned by HVCA, which represented a major step towards better understanding the ongoing processes in the region. Data collection relied on two sources: reports from investors and news from business journals (as data collection of both organizations has been based on voluntary data disclosure of investors, with its accuracy and completeness difficult to judge).

⁹¹ This chapter is largely based on HCVA (2011) and Karsai (2012).

⁹² That is, sell-offs of purchased companies.

The data collection, encompassing more than two decades between 1989 and 2010, included the investments of 126 VC & PE funds with interests in the Hungarian market. These funds were managing a total capital of more than 20 billion US dollars. Out of the 8 billion dollar capital theoretically available for investment in Hungary, they invested 3.2 billion dollars into Hungary-based companies in about 420 transactions. On the one hand, only transactions with known data could be included into the database, on the other hand, not every player of the industry was a member of the HVCA. Although the number of domestic firms affected by the VC & PE investments and the total capital they received were obviously higher, the survey gives a realistic picture of the processes taking place in the industry, due to the relatively broad publicity received by bigger transactions. According to the estimation of industry players, the survey covered 100% of the capital allocated for investments, approximately two thirds of the capital invested and around half of the number of transactions. Accordingly, during the twenty years reviewed the total VC & PE invested in Hungarian firms reached nearly 5 billion dollars, and the number of transactions ranged between 800-900. The survey data recorded more than 180 exits with a book value of approximately 900 million dollars. However, as the data reported by the investors was incomplete, the exits were only partially included and it should only be considered as tentative (Karsai, 2012).

In order to make a comparison with European data, the market share of the Hungarian VC & PE market is measured by the annual rate of the value of investments into companies headquartered in Hungary as a proportion of the country's GDP. Hungary ranks high not only within the CEE region but also among other EU member states. The value of VC & PE investments in the Hungarian market compared to the GDP, between 2002 and 2009, continuously exceeded the ratio measured throughout the region, and in addition, due to some outstanding investments the ratio surpassed by far the EU equivalent in 2006 and in 2008 (see Figure 9.15). Regarding the VC & PE investment/GDP ratio the Hungarian market ranked fifth in Europe in 2006, ninth in 2007, sixth in 2008, and tenth in 2009. As a result of the crisis reaching Hungary in 2010, when the country was already in a very

unfavorable economic situation, the shrinking volume of investments was only sufficient for the 22nd place. However, in evaluating these high rankings, it has to be taken into account that individual high value buyouts substantially influence the aggregated value of annual VC & PE investments while they have no similar effect on the change of GDP. This may be due not only to the significant difference in the orders of magnitude, but also to the fact that the owners of the companies receiving investment were not necessarily based in Hungary (Karsai, 2012).

The controversial assessment is caused by the fact that by its size the classical venture capital financing market in Hungary usually was ranked among the last in Europe. According to the survey of Eurostat, the proportion of Hungarian venture capital investments (without buyouts) to GDP between 1998 and 2009 exceeded half of the total European share only in 2001, during the time of the dotcom fever. Otherwise, it typically was below 10%. Concerning informal venture capital investments by private individuals (business angels), the gap between the Hungarian and European markets is even bigger. Given that informal capital investments serve basically the needs of newly established companies, this gap may also be due to financial problems coming to surface at later stages of development. The number of active business angels in Hungary is approximately 2000 (Karsai, 2012).

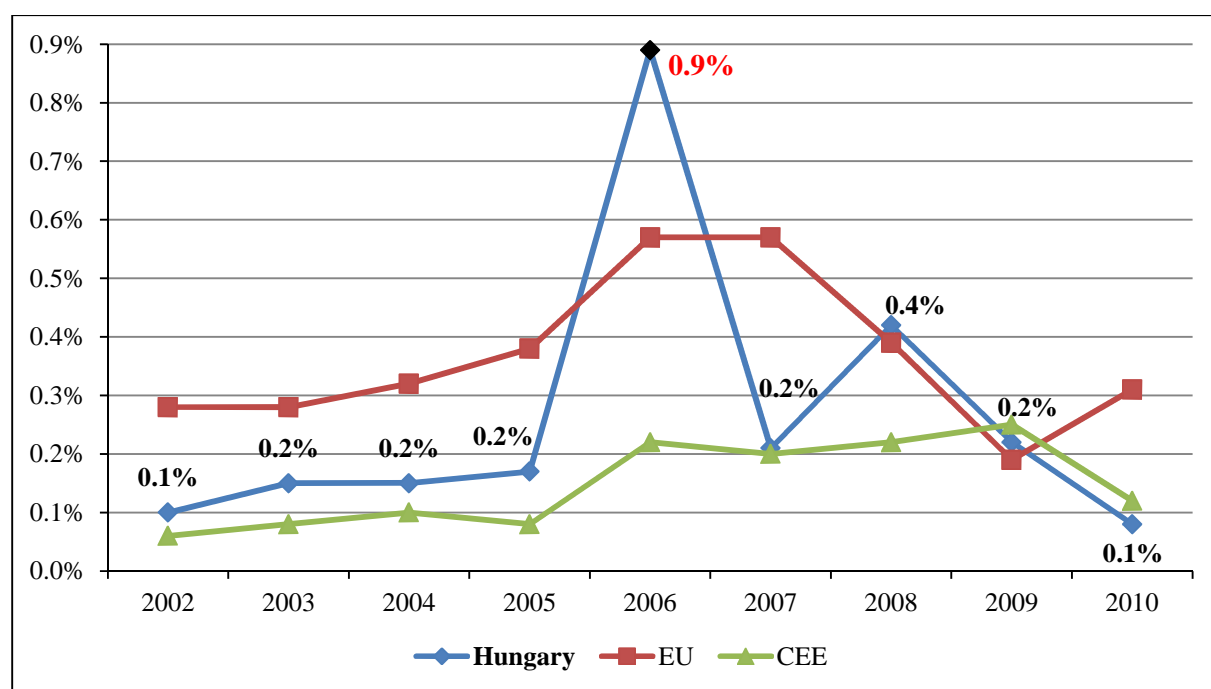
The European Venture Capital Association (EVCA) estimates that between 1989 and 2004 some 900 CEE enterprises received VC & PE. Since then the number of companies receiving funding in the region grew by almost 1,000, thus, by the end of 2010 this number was close to 2000. It can thus be assumed that one quarter of total investments in the region during the twenty years were implemented in Hungary. Despite the prominent ranking of the country in regional terms, the number of Hungarian companies receiving VC & PE lags behind the European average. Given the sector's relatively late start and the less developed Hungarian capital market, it is not surprising that while EU VC & PE injections targeted 6% of SMEs, the same ratio in Hungary was hardly 0.2%. Consequently, the proportion of companies with access to VC & PE is insignificant in Hungary (Karsai, 2012).

Karsai (2012) underlines that a survey reviewing the period 2001-2004 showed significant differences between Hungary and other European countries, as well as the world as a whole, in terms of accessing VC & PE capital. According to experts making their judgment on a scale of 1 to 5 with regard to accessing venture capital in Hungary, in Europe and in a world as a whole, the result was as follows: 2 for Hungary, 3 for Europe and 2.9 for the world. Another survey prepared in 2008 and mentioned in Karsai (2012) found that only 0.25% of Hungarian SME companies are suitable to be targeted by venture capital investors. Accordingly, it is estimated that the potential market of SMEs for institutional venture capital investors and business angels includes around 400-600 firms.

Karsai (2012) emphasizes that the access for Hungarian firms to venture capital is hampered primarily not by supply but by demand factors. The broader spread of venture capital in Hungary is hampered not only by its low awareness in the market, by the lack of organizations promoting contacts between parties, by the immaturity of potential companies for receiving investments but also by the poor competitiveness of the majority of firms seeking external funds, their insufficient level of innovation, as well as the weak expertise of corporate managers. Karsai (2012) cites two surveys conducted on the effects of VC & PE investments on Hungarian firms. The first analysis at the turn of the new millennium found, based on the review of more than 70 venture capital investments, that the number of employees at firms financed by venture capital decreased, whereas the total number of firms with double-entry bookkeeping grew. Obviously this was not independent of the fact that the turnover per employee improved much more at companies receiving venture capital compared to the average of companies with double-entry bookkeeping. Concerning the further development of these companies, 10% of them proved to be extremely successful and were admitted to domestic or foreign stock exchanges, 20% of them were sold successfully to strategic investors with favorable conditions, and the future of a further 20% of them was promising at the time of review. However, almost half of the companies went practically or officially bankrupt.

According to the other survey mentioned in Karsai (2012), which reviewed the impact of venture capital among 680 firms in 2008, financing by business angels or institutional VC investors affected slightly more than one-fifth of the companies. The survey showed that the competitiveness of companies receiving venture capital was significantly better compared to those without venture capital financing. As for the increase in the number of employees, there was practically no difference between firms having received venture capital or not. As for the increase in revenue, the proportion of firms in the highest growth rate category was more than double those in the other group. Firms receiving venture capital showed considerable strength in the decisive factors of competitiveness such as uniqueness of products, level of technology and continuous innovation.

Figure 9.15. Value of invested private equity compared to the GDP in the EU, CEE and Hungary (2002–2010)

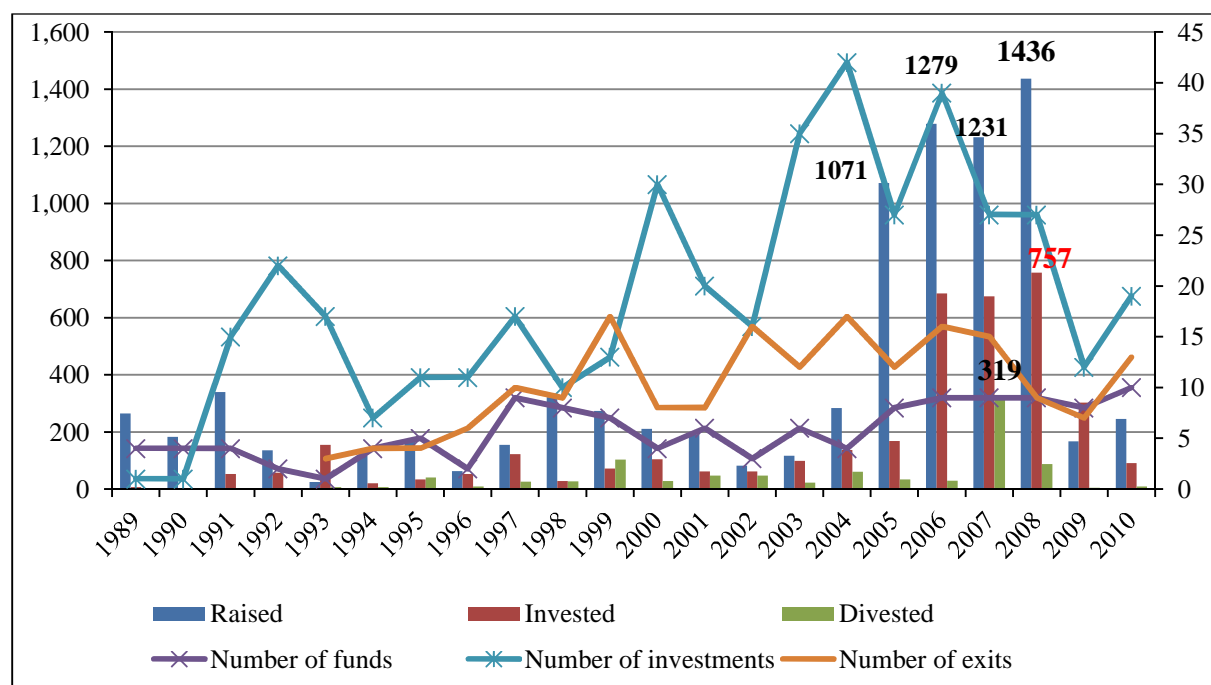


Source: EVCA.

9.4.2. Raised Capital

During the last two decades, potential VC & PE investors raised an average of 360 million dollars per year to finance their Hungarian investments. The total amount was nearly 8 billion dollars, although this was not evenly spread during the period (see Figure 9.16). As capital accumulation started to develop in Hungary only after 1990, about 90% of the sources of Hungarian VC & PE funds came from foreign capital markets. The volume of VC & PE raised for the Hungarian market fluctuated cyclically following international capital market cycles and changes in the rate of growth of the domestic economy. The Hungarian market, ranking high within the CEE region for the development of market economy, became a preferred area for foreign capital investors until the 2008 crisis, with nearly two-thirds of the invested capital having arrived to the market after 2005 (Karsai, 2012).

Figure 9.16. Raised, invested, divested private equity (million US dollars) and number of funds, investments and exits (right scale) (1989–2010)



Source: HVCA.

9.4.3. *Invested Capital*

As Karsai (2012) explains, the 126 investment organizations included in the survey of HVCA actually invested approximately 50% of their 8 billion US dollar capital available for investments in Hungary. During this time, 3.7 billion dollars in venture capital and private equity was provided to Hungary-based companies through approximately 420 transactions. The allocation of capital and the capital investments were both characterized by four-year cycles, while some shifts were apparent between the raising of capital and the actual investments.

After raising a substantial amount of capital after the change of political regime, investments started after a three-year delay as preparation took time, then in 1993, when fresh capital was scarce, they reached their peak (see Figure 9.16). As a result of increasing capital collection once again, in 1994 (the first election year), the amount of investments started to increase and in 1997 it reached a new peak. Despite the dynamics of the growth of capital allocation up to 1998, investments dropped sharply thereafter partly due to the uncertainty related to the change of government and the Russian crisis. From 1999 recovering investor confidence and the evolving IT-boom increased capital investments massively. As the IT-boom lost momentum they again decreased in 2001-2002 and eventually bottomed out. This process reversed once again in 2003, mainly due to Hungary's expected accession to the EU. The growth of investments accelerated between 2007 and 2009, beating previous records. The Hungarian market – similarly to the whole region – profited from a transitory situation at the beginning of the crisis when the investment problems in Western Europe did not extend to the CEE region for some time. In 2009, however, when the crisis spread to CEE countries, the willingness to raise funds and to make investments dropped. In addition, the crisis affected the already weak Hungarian economy more than it did other CEE countries, which is reflected in the significant drop in investments in 2010 (Karsai, 2012).

The surge in the value of investments and in the number of investment transactions was first apparent in the years preceding the first elections (see Figure 9.16). Only

the technological bubble at the turn of the century, the investment boom during the last third of the first decade of the 21st century and the economic crisis broke the upward trend. In the 1990s, the highest-value investment transactions were deals related to privatization. At the time of the IT-boom, the value of investments increased due to the accumulated effect of a growing number of smaller technological deals. In the second half of the last decade, generally some high value buyout deals involving internationally active, mature companies usually in need of reorganization, caused a significant increase in the value of investments, while the number of transactions fell. In 2010, when the investments of the Jeremie funds were launched, the number of investments started to grow again (see more in Chapter 3). However, the total value of investments still remained low as high value buyouts did not materialize due to the crisis. The highest VC & PE value (670 million dollars) came to the Hungarian market immediately before the crisis, in 2008, while the highest number of investment deals (42) were registered in 2004, following the revival of the investments of public VC organizations. During the last two decades, an average of 19 Hungary-based enterprises companies received VC & PE investments annually. The average value invested into Hungary-based companies amounted to about 170 million dollars per year, with an average of 9 million dollars invested per transaction. In the period between 1990 and 2004, the average capital value invested through individual transactions barely reached 4 million dollars per year, whereas average investments in the years following Hungary's EU accession increased 4.5-fold, to 18 million dollars (Karsai, 2012).

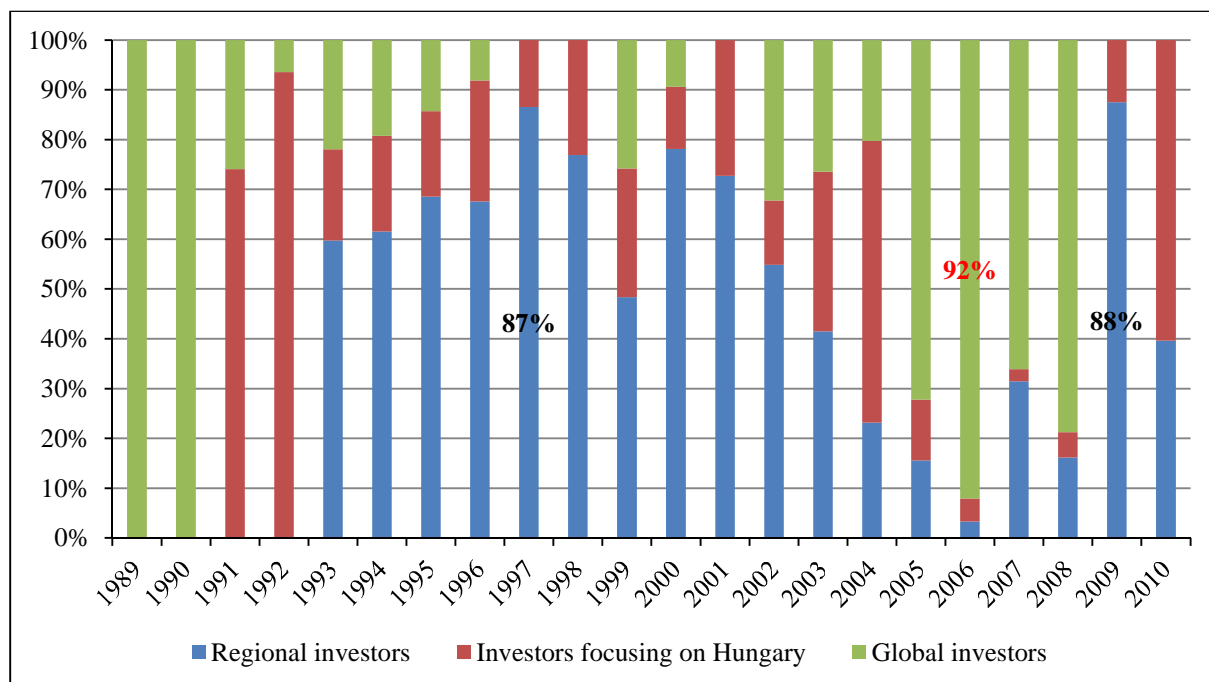
Karsai (2012) also points out that the changes in the average investment volumes in the individual years are marked by the structural changes of the funds that made the investments. The largest investments were made by global funds, whose role gained in importance from 2006, until their exits at the end of the 2000s. At virtually all times since 1993 almost until the end, regional funds exercised a decisive role in the development of investments. The significance of Hungary-only funds increased at the beginning of the investigated period, in 2004, and later again during the last three years (see Figure 9.17).

In the Hungarian VC & PE market funds financed by governmental and private sectors fulfilled different but similarly important functions, the average size of their investments varying according to the nature of their activities. Government financed organizations invested an average of 3 million dollars per transaction, while private sector funds invested five times as much on average, above 15 million dollars. Over the course of the twenty years analyzed, government backed funds financed every second deal. As organizations with government links operated only in classical venture capital investments, these transactions mobilized significantly fewer funds than the buyouts. The 650 million dollars invested from government funds in the Hungarian market represented 18% of the value of total investments, which is relatively low (see Figure 9.18).

Realizing the difficulties of start-up and early stage companies in accessing venture capital funds in Hungary, the government has established a number of venture capital firms using budgetary sources since 2002. Following the increased activity of state-owned investor organizations, from 2004 on the role of the state in the Hungarian venture capital market has strengthened in financing smaller companies. In this segment of the market venture capital from private sources was hardly present after the end of the technological boom. Thus, smaller venture capital projects have been financed by state-owned investment companies. That is, in Hungary state-financed venture capital substituted private investors. Public funds usually financed the most expansive development phases of firms, preferring the traditional sectors. As a result, the state did not play a venture financing role in high-tech sectors. In 2010 the Jeremie funds were launched by the EU, prompting the Hungarian state to indirectly participate in venture capital investments via hybrid funds, in addition to its direct capital investments. Through the Jeremie funds the Hungarian government tried for the first time to turn private-sector venture capital funds towards enterprises preferred by the state to finance innovative, small start-up companies, which had been neglected by both private and public sector investors. In order to achieve its goals, the government motivated private investors by financial incentives, e.g., by sharing the expenses and the yields of investments

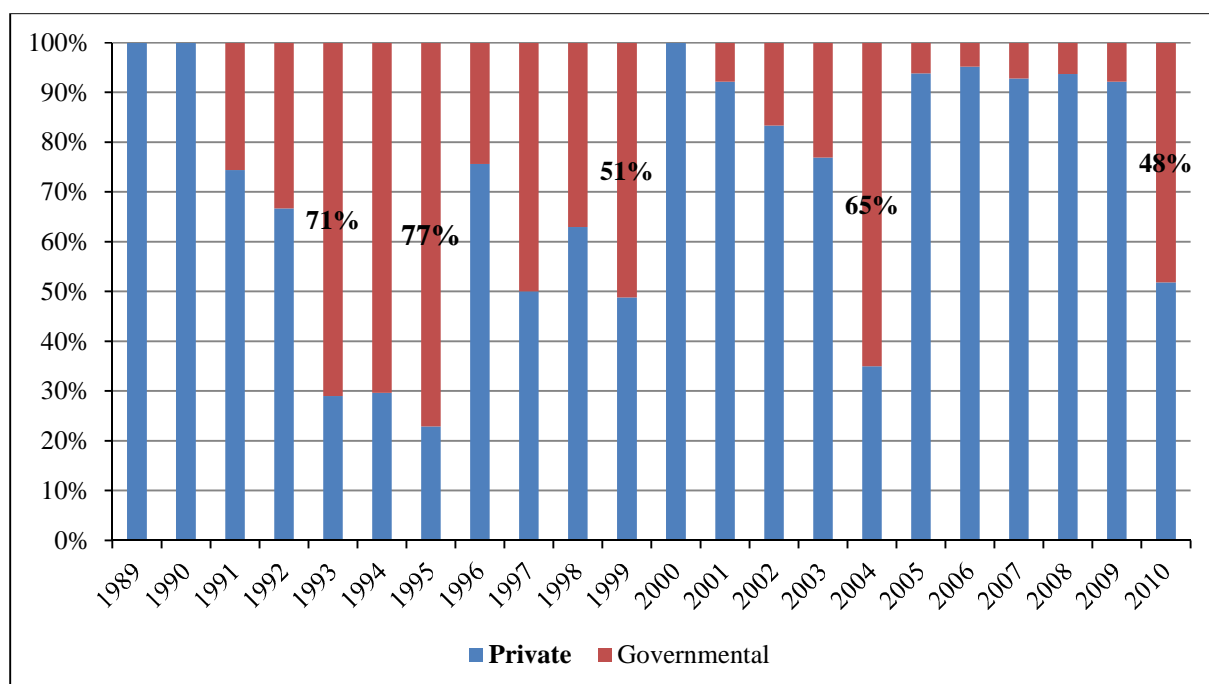
disproportionally in the favor of private investors. In their first year of operation Jeremie funds reached a similar proportion in the market as private sector investments. Due to the crisis and the increasing uncertainties in the economy, however, private sector market players lost interest in Hungarian projects (Karsai, 2012).

Figure 9.17. Proportion of private equity investment value by funds' geographical focus (1989–2010)



Source: HVCA, own calculation.

Figure 9.18. Proportion of private equity investment value by ownership background (1989–2010)



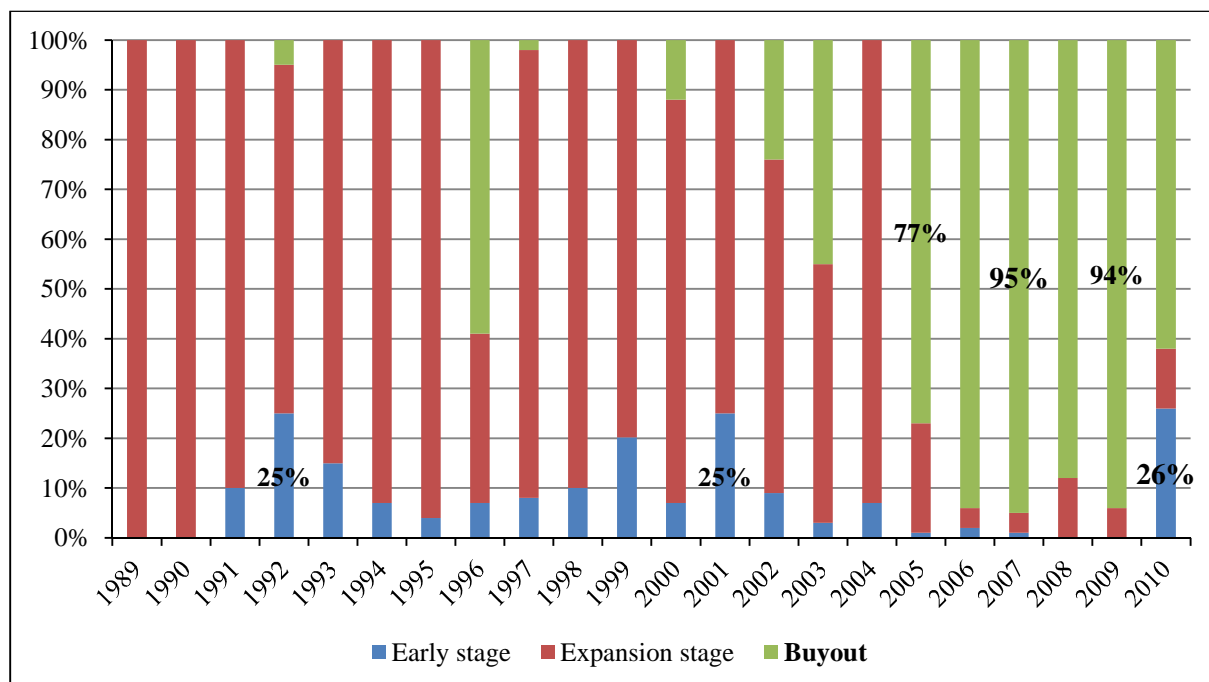
Source: HVCA, own calculation.

The function of VC & PE investments within the economy is determined by the phase of development in which the financed enterprises receive the capital. The capital received by ventures in Hungary from VC & PE fulfilled different functions during the period investigated by HVCA (see Figure 9.19). It provided capital for start-up companies and for their development at an early stage and also facilitated the expansion of companies. More mature and established companies used the capital to become international businesses, reorganize themselves or change ownership. While compared to other European markets the proportion of start-up capital was relatively low, the proportion of financing buyouts to the total amount of investments was, however, more significant. As the weight of the individual functions changed during the two decades, so did growth among the various types of investments. As a result, companies in Hungary did not have equal opportunities to receive capital investment due to their various life-cycles. Similarly to the entire CEE region, investments in the expansive phase were the most frequent in Hungary, representing approximately 60% of the number of investment deals, and approximately 30% of total value. Thus, the value of investments aimed to nurture businesses was insignificant compared to the capital provided to 10% of the companies for financing buyouts, which, over the twenty years, represented more than two thirds of the investment volumes, or 2.5 billion dollars. Early stage investments were made predominantly in 1992, 2001 and 2010, while investments in the expansive phase dominated almost continuously until 2004. From then on, although these transactions continued to be the most numerous, the focus of investments shifted to buyouts because of the high-value individual buyout transactions (Karsai, 2012).

The effect of the VC & PE investments was that the sectors that received the highest amounts of capital experienced the strongest economic growth. The VC & PE investments made over the last twenty years in Hungary were strongly concentrated in specific sectors, both in terms of frequency and volume. The highest number of VC & PE investments were made in the communication sector and in manufacturing (around 20% each). Concentration was even higher with regard to the value of

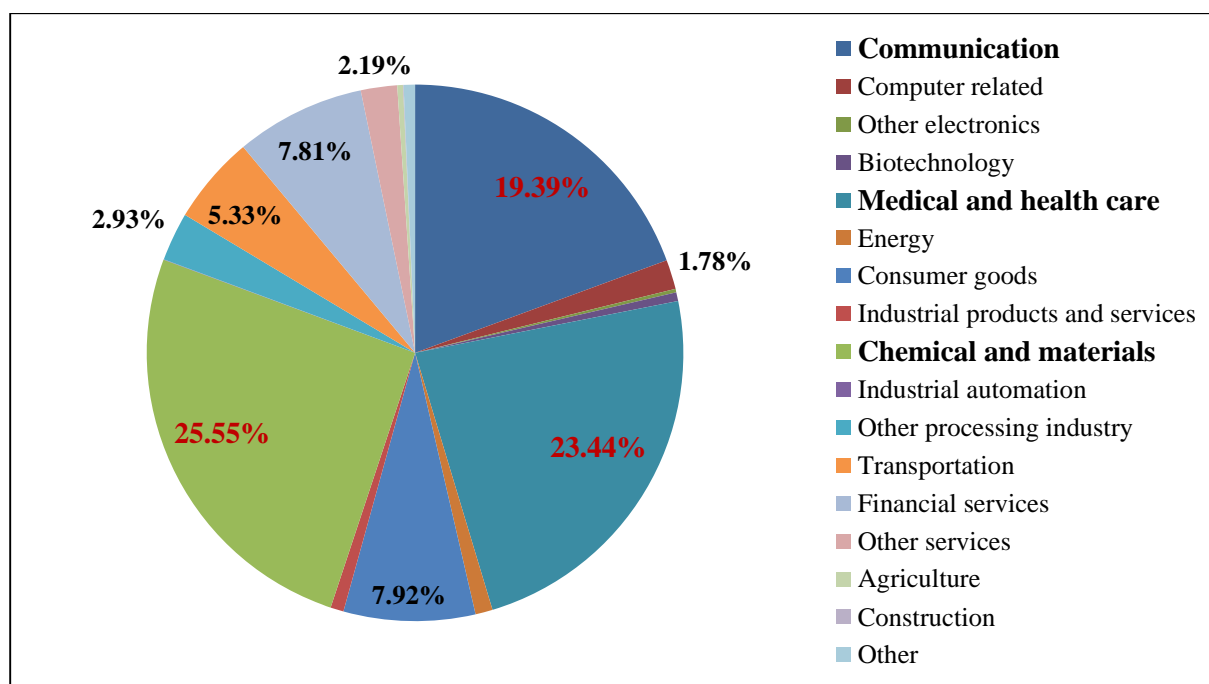
investments. Almost half the value of investments carried out in the course of the last twenty years in Hungary have been absorbed by the chemical and the pharmaceutical sectors (Figure 9.20). Regarding the regional distribution of investments, VC & PE venture capital contributed mostly to the development of firms based in the capital. Between 1989 and 2004, 77% of the number and value of investments were directed to firms based in the capital (Karsai, 2012).

Figure 9.19. Proportion of private equity investment value by function of the financing (1989–2010)



Source: HVCA.

Figure 9.20. Proportion of private equity investment value by sector of the investee (1989–2010)



Source: HVCA.

9.4.4. Divested Capital

Karsai (2012) stresses that a distinctive feature of VC & PE investments is that these investors finance selected companies for only a temporary period and usually sell their stake when the predefined period of time expires. Over the period analyzed by HVCA, venture capital funds investing in Hungary exited from approximately 200 investments. The value of these transactions at investment cost amounted to 900 million dollars. The changes in the value of raised, invested and divested capital generally followed one another with a one or two-year shift (Figure 9.16). Annually, there were, on average, 10 exits by VC & PE organizations investing in Hungary-based companies, and the investors sold stocks in the average of 50 million dollars per year, calculated by the cost of investment. Exits did not take place at even intervals. In the first few years investigated no exit was made. Subsequently, the number of exits increased continuously, and stalled only in 2000 in the year when the dotcom bubble burst. The value of divestments significantly exceeded the annual average of 50 million dollars before crises in 1999 and in 2007-2008.

In Hungary approximately an average of 5 million dollars of capital was divested in an exit. However, exit modes varied substantially. Similarly to the entire CEE market, the most frequent and highest value exits were trade sale exits, averaging at 9 million dollars, representing more than one-third of the number of exits and two thirds in value. Secondary sales were made predominantly by investors specialized in buyouts, where funds sold their shares to each other, reaching a similar average exit value (8.5 million dollars). Since these transactions were leveraged buyout deals, they occurred a lot less frequently than trade sales, until the latter half of the last decade, and made up only 5% of exits. Consequently, secondary sales made up only about 9% of the total value of exits. The value of exits by public offering were commensurate at 5 million on average, occurring in approximately 10% of the exits. One fifth of the deals involved equity repurchased from venture capital investors by the owners/managers of the concerned companies. This latter type of exit was typically applied by government backed funds but it only represented about 5% of the total value of exits due to the low individual value of the deals, below 1 million

dollars. The proportion of individual types of exit mode varied significantly over the period, typically depending on the international capital market cycles. Trade sales played a dominant role in most of the investigated years. Public offerings were most prevalent in 1999, during the dotcom bubble. Secondary sales to other private equity funds and sales to financial organizations played a greater role in 2008 (Karsai, 2012).

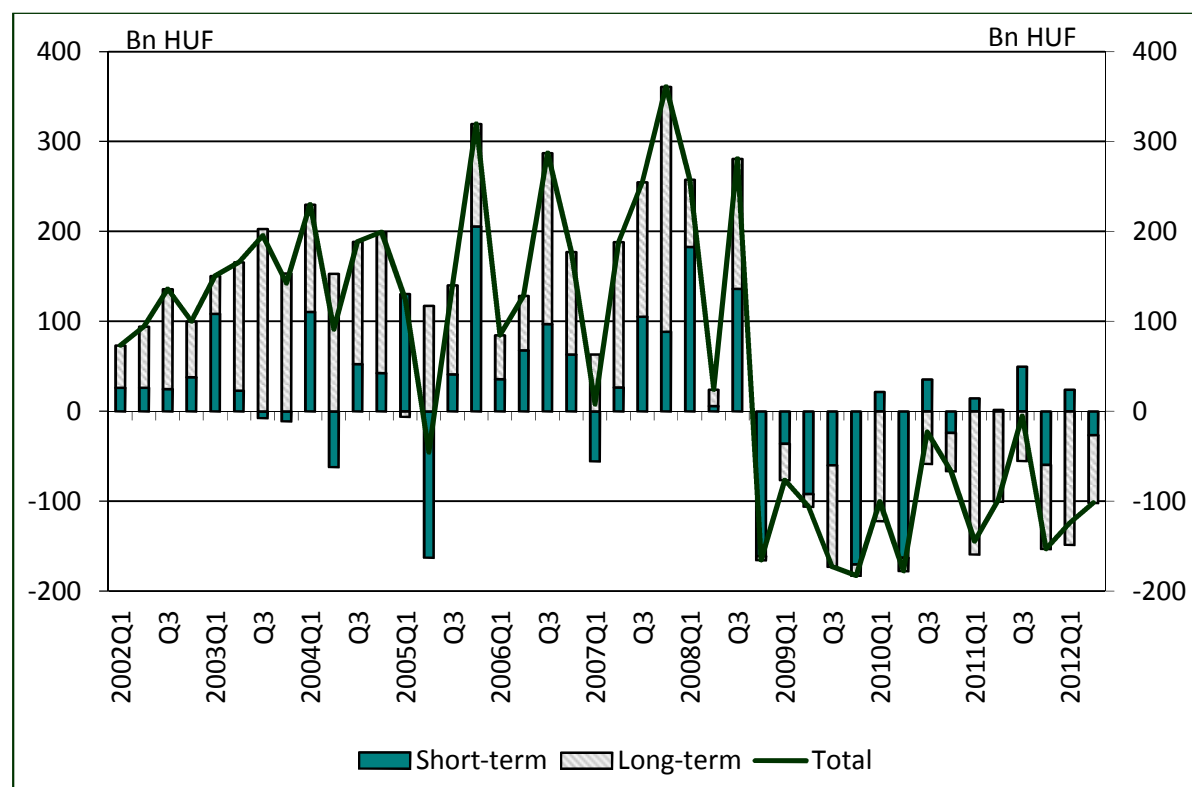
10. Corporate Lending in Hungary

The Hungarian capital market is rather undeveloped, the number of companies issuing shares and bonds is low and the majority of the bond issuers are banks (Tóth, 2007). Therefore, banks play a crucial role in financing Hungarian enterprises. Particularly, in the case of small and middle sized enterprises, owing to their low access to credit, firms finance their investments mainly by using their earnings and amortization. Besides this, credit from suppliers has also played an important role in Hungary. In 2010, the amount of supplier credit was ten times as much than the total amount of bank loans.

Notwithstanding, since the mid-1990s the total credit of Hungarian enterprises has increased (see Figure 10. 1 and 10.2) and the debt ratio of Hungarian firms has reached 40%. It should be noted that, in comparison to Germany where the large enterprises owe smaller credit volumes, in Hungary and other CEE countries large companies took out more bank loans before the turn of the century (Tóth, 2007).

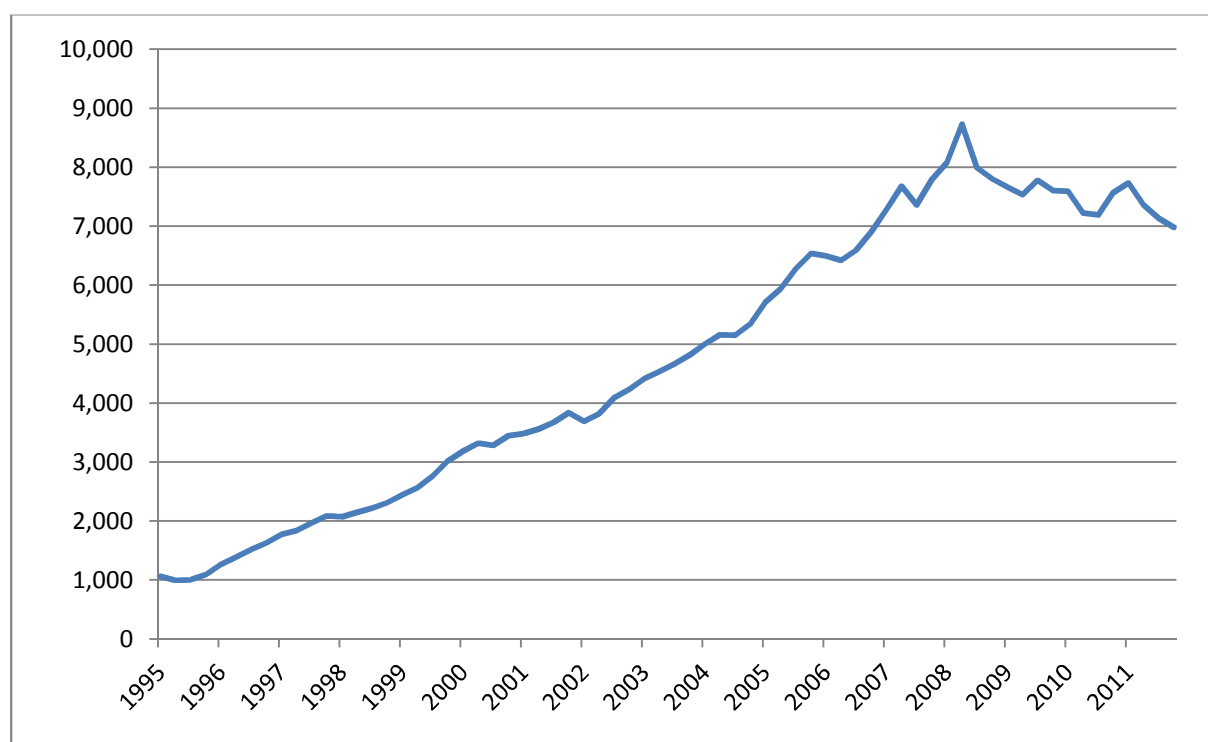
In Hungary, 99.86% of the enterprises are micro, small or middle sized (S&M) enterprises. In 2007, S&M enterprises provided 72.8% of the total workplaces in Hungary and produced 55.4% of GDP (see Antal-Pomázi, 2011). According to MNB data, between 1999 and 2004, the volume of credit to S&M enterprises quadrupled, and it increased steadily up to the onset of the financial crisis (see Figure 10.3).

Figure 10.1. Net quarterly change of bank loan volumes of non-financial corporations



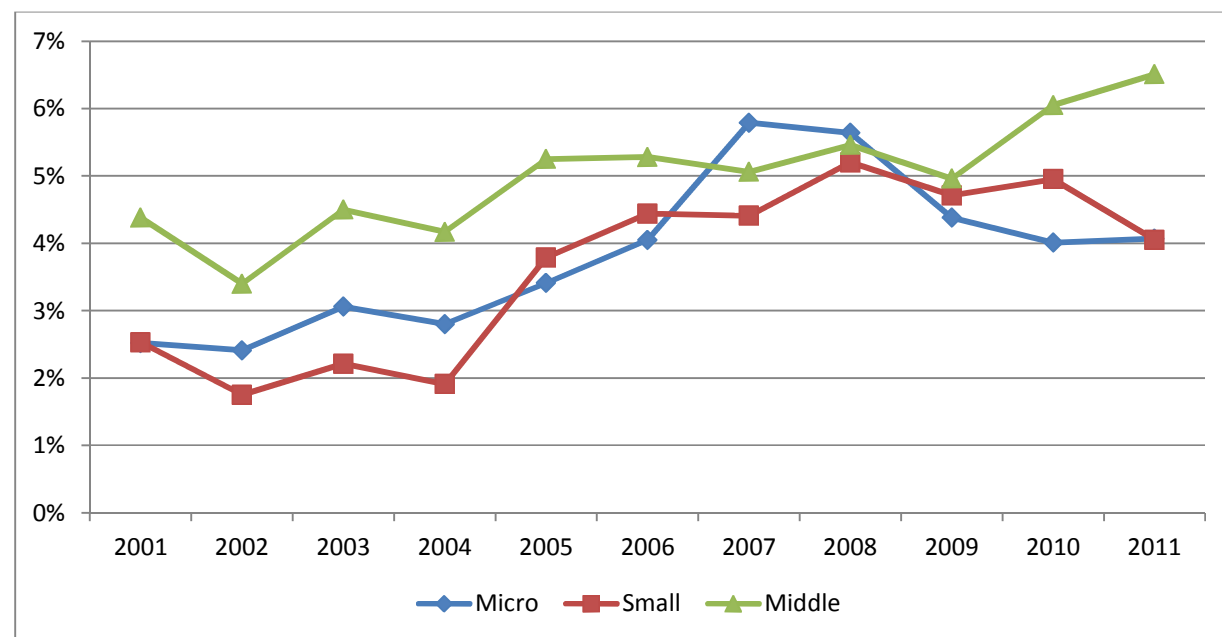
Source: MNB.

Figure 10.2. Domestic bank loans of non-financial corporations (billion forints)



Source: MNB.

Figure 10.3. Ratio of loans to micro, small and middle sized enterprises as a percentage of GDP

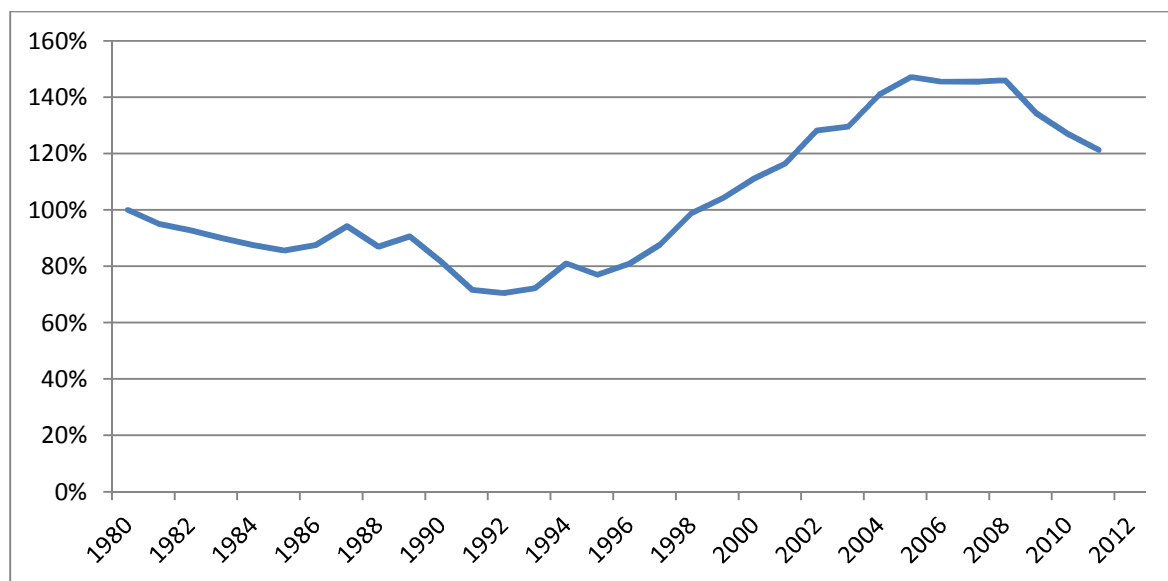


Source: PSzÁF.

10.1. The Effect of the Crisis on Lending to Firms

As a consequence of the financial crisis, lending to the corporate sector has decreased significantly, and settled at a low level. However, based on the theory of credit rationing (see Stiglitz-Weiss, 1981), and from the observation of the interest rates it cannot be deduced whether the credit shrinkage is caused by supply or demand side reasons. Sóvágó (2011) investigated the main reasons for the extremely low level of credit volume in Hungary. He found that, in the middle of 2010, the main reason for the low level of corporate borrowing was the decrease of loan supply caused by the austere lending policy of banks and the deterioration of liquidity in the banking sector, and, secondarily, the decreasing demand for loans stemming from the worsening economic outlook. Since then, owing to household savings, the liquidity of the banking sector has increased significantly in the second half of 2012, but, because of the steadily low level of investment (see Figure 10.4), demand for loans continues to be low. At the same time, as MNB (2012e) emphasizes it, the lending propensity of banks has also remained low, and the strict lending conditions, owing to the weak profitability outlook and the poor capability of credit repayment of the firms, result in credit shortage, which, to some extent, also contributes to the poor performance of the economy. The pro-cyclical behavior of the banking sector has been underpinned by model based investigations. Tamási-Világi (2011), following the approach of Uhling (2005), demonstrated that credit supply shocks did not play a dominant role in the decline of the economy during the crisis, although their impact was not negligible.

Figure 10.4. Investments in Hungary (1980=100%)



Source: MNB.

11. The Financial Crisis in Hungary⁹³

11.1 Introduction

Hungary earned its favorable position as the front-runner among the former socialist countries of Central and Eastern Europe in terms of market reforms in the 1980s when reform minded economic policymakers gradually liberalized the economy. While the country was still well positioned in the 1990s and convergence with the Western European income level and institutional quality yet seemed possible, this process clearly came to a halt in the mid-2000s. When the financial crisis hit Central and Eastern Europe in October 2008, Hungary was first to apply for a loan administered by the International Monetary Fund (IMF) (see Table 11.1 for a summary of Hungary's macroeconomic data), which indicates that the country was and has been since among the most financially vulnerable countries in Europe outside the euro area. This chapter summarizes recent developments in Hungary and gives an account of the underlying problems of the Hungarian economy brought to surface by the global financial crisis.

Table 11.1. Macroeconomic statistics for Hungary (1995-2010)

	Average 1995–2001	Average 2002–08	2009	2010
Growth rates (%)				
GDP	2.9	3.1	-6.8	1.3
Private consumption expenditure	1.7	3.2	-6.2	-2.2
General government consumption expenditure	-0.3	1.7	-0.6	-2.1
Gross fixed capital formation	5.0	3.5	-11.0	-9.7
Exports of goods and services	14.4	10.9	-10.2	14.3
Imports of goods and services	12.7	10.1	-14.8	12.8
Inflation, CPI (%)	16.2	5.4	4.0	4.7
Unemployment rate (%)	8.0	6.8	10.1	11.2
Government finances (% of GDP)				
General government net lending	-5.5	-6.9	-4.5	-4.3
General government gross debt	63.6	62.7	78.4	80.2
Current account (% of GDP)	-5.5	-7.5	-0.2	1.1
Foreign direct investment (% of GDP)	6.3	4.6	1.6	1.2

⁹³ This chapter is mainly based on EEAG (2012).

Source: OECD, Eurostat, own calculation.

11.2 Growth Performance⁹⁴

Hungary's GDP grew annually by 3.1% while the GDP of the old EU member states grew annually by 2.2% over the period of 1995-2008 (see Table 11.1). This difference in growth rates makes income convergence a difficult task, thus, this chapter provides explanations, after EEAG (2012), for the relatively low rate of growth in Hungary.

Figure 11.1 plots the evolution of the income gap for the Czech Republic, Hungary, Poland and Slovakia, the so called Visegrád Group countries, measured in GDP per capita. Similarly, figure 11.2 shows the evolution of the labor productivity gap. One major observation is that while per capita GDP growth has been virtually incessant in the peer group since 2001, Hungary's relative income has stagnated since 2005 and the country has become the poorest of the four. Another observation is that the Hungarian labor productivity gap has been mostly flat except for the period of 2000-2005 when the country closed the labor productivity gap by 8%. Slovakia, on the other hand, has closed its labor productivity gap by 25%. Finally, the income gap with old EU members is clearly smaller than the labor-productivity gap.

Figure 11.3 reveals the three components of the income gap: the worker-to-population-ratio gap, the hours-per-worker gap and the labor-productivity gap, and shows that employees in the Visegrád countries work longer hours than those in the old EU member states. This finding implies that longer hours worked play an important role in three out of the four countries in closing the income gap. However, as EEAG (2012) notes, further increases in the number of hours worked per worker are unlikely to lead to a sustained income convergence.

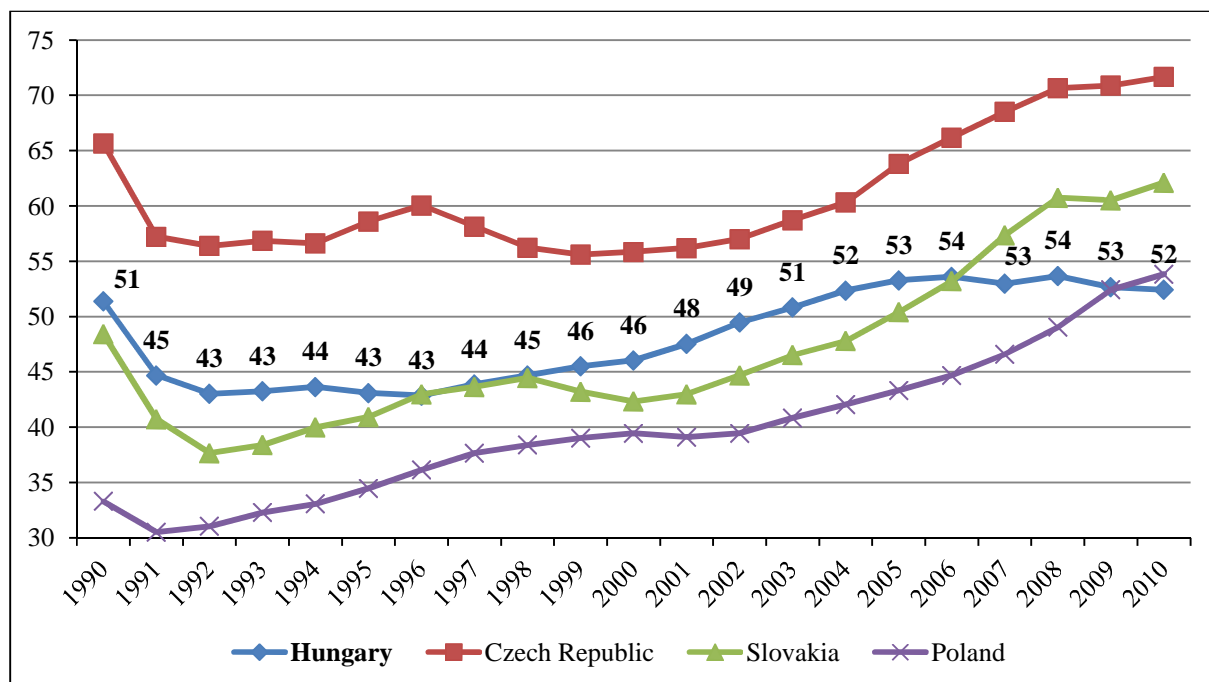
Figure 11.4 presents the results of growth accounting, offered by EEAG (2012), comparing two periods: 1995-2001 and 2002-2008. The growth rates of real GDP per hour worked are broken down into the contribution of the labor composition, into two types of capital and total factor productivity (TFP). The analysis demonstrates that

⁹⁴ Sources: OECD (2010, 2012a).

Hungary's labor productivity growth was driven in both periods by the growth of capital and, to a lesser extent, the growth in TFP. In contrast, labor productivity growth in both periods in Poland and in Slovakia, and in the second period in the Czech Republic was fuelled by TFP growth. Weak and declining TFP growth in Hungary suggests serious structural problems and seems to preclude faster productivity growth.

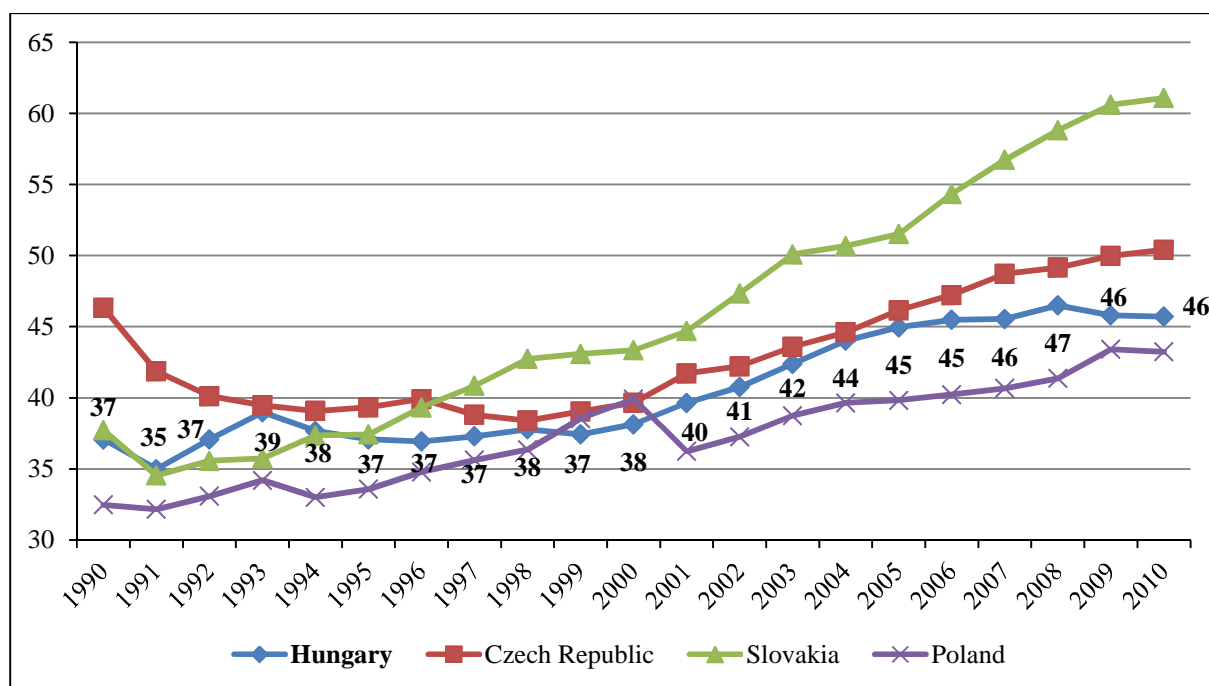
EEAG (2012) provides two possible explanations for lower Hungarian TFP growth. One source of lower TFP growth in Hungary may be sectoral change during the transition period, in which resources were allocated to sectors with low productivity growth, such as services. As illustrated in Figure 11.5, the shares of agriculture and industry (construction, manufacturing, mining and utilities) within GDP were significantly higher and the share of services significantly lower in 1990 in the Czech Republic, Hungary, Poland and Slovakia than the share that would have matched their levels of development. Whereas, in 2008 the shares of the three sectors in these countries were more or less in line with the shares implied by their level of development. Another source of lower TFP growth in Hungary can be the declining trend in investment. Figure 11.6 shows that investment grew faster in Hungary compared to the other Visegrád countries in 1995-2001, but more slowly in 2002-2008. Moreover, in 2009-2011 investments in Hungary nosedived, further dampening TFP growth.

Figure 11.1. GDP per capita at PPP in the Visegrád Group (index: EU-15=100, 1990–2010)



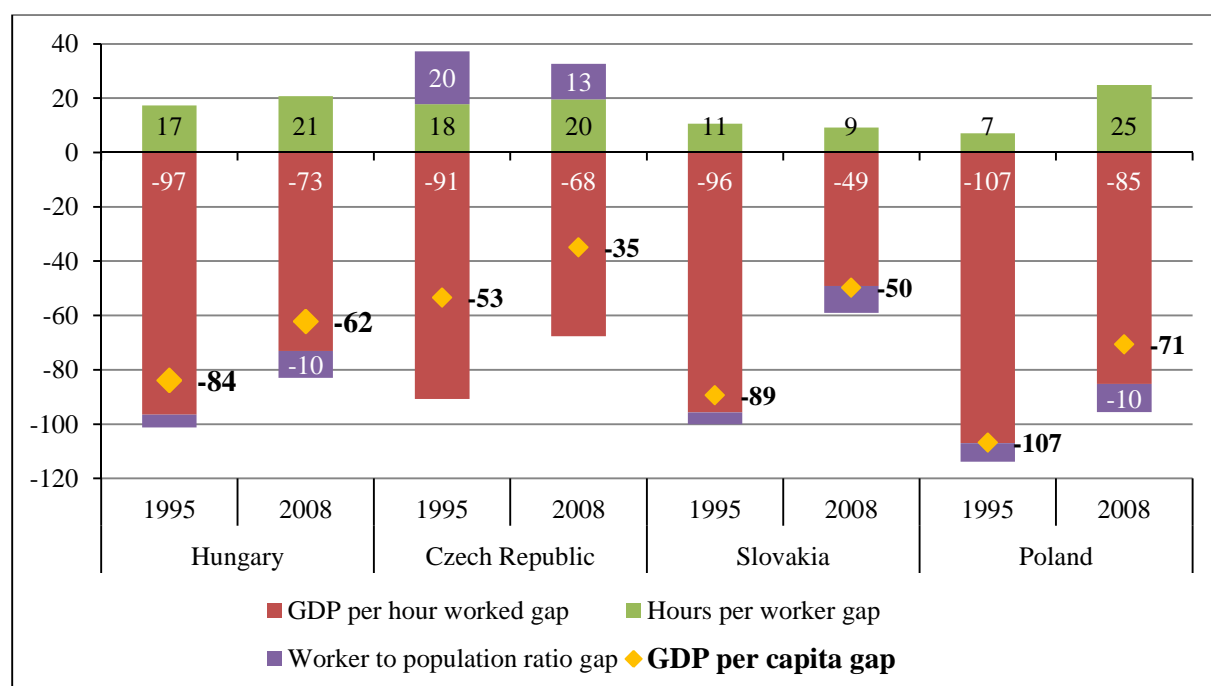
Source: Conference Board, own calculation.

Figure 11.2. GDP per hour worked at PPP in the Visegrád Group (index: EU-15=100, 1990–2010)



Source: Conference Board, own calculation.

Figure 11.3. Accounting for GDP per capita gap relative to EU-15* (1995 and 2008)

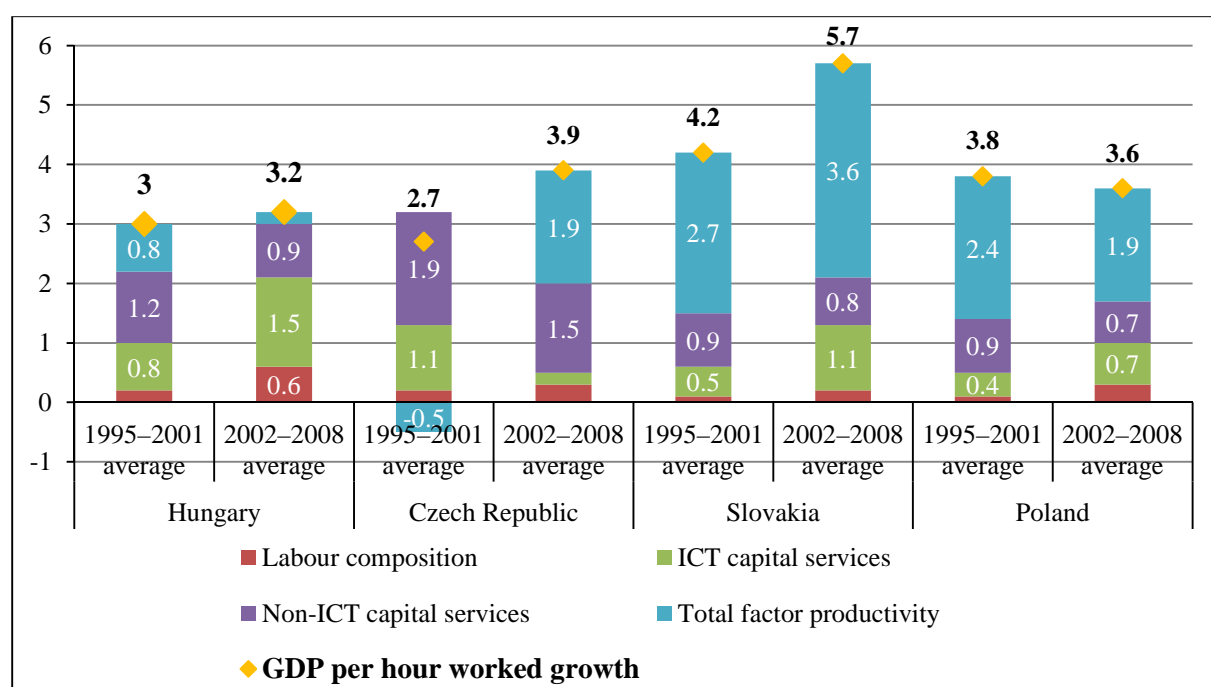


*Gaps are calculated as log differences multiplied by 100 to preserve additivity.

A negative (positive) entry in the table is equivalent to the relevant ratio being below (above) 100 percent.

Source: Conference Board, own calculation.

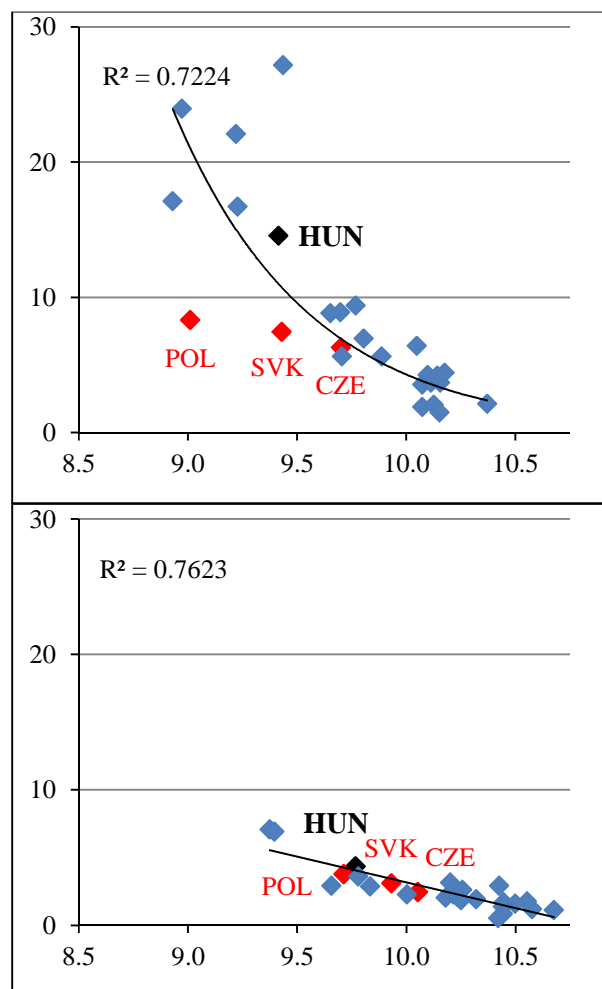
Figure 11.4. Growth accounting for the Visegrád countries in percentage points (1995–2008)



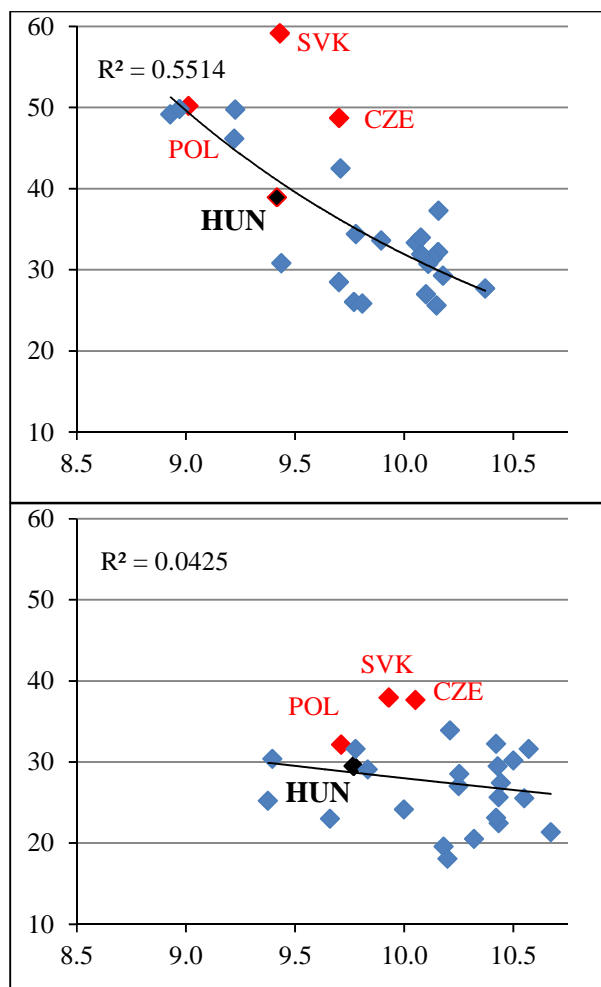
Source: Conference Board, own calculation.

Figure 11.5. Sectoral value added (percentage of GDP) and real GDP per capita (log 2005 int. dollars)

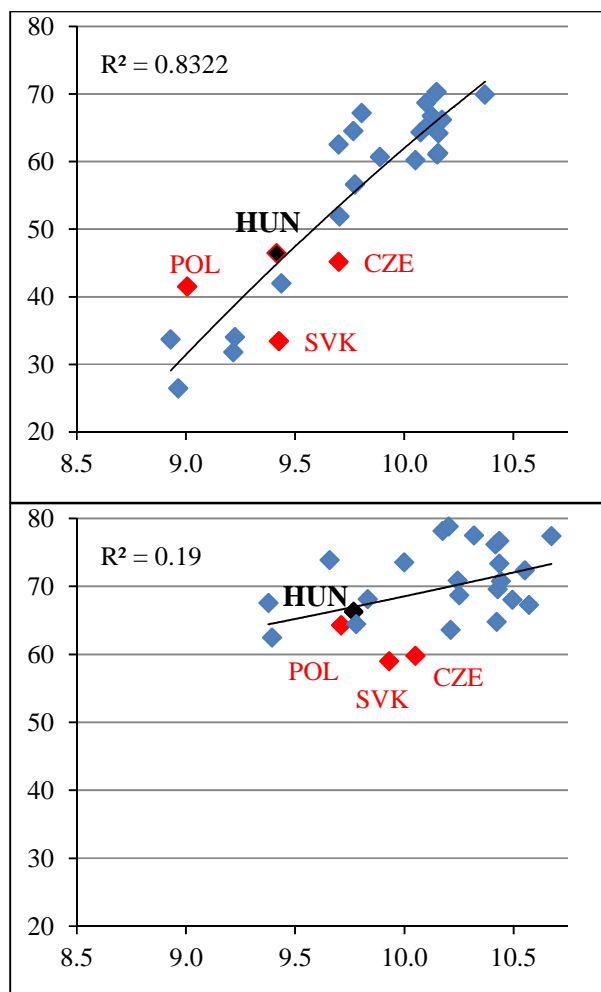
Agriculture (1990 and 2008)



Industry (1990 and 2008)

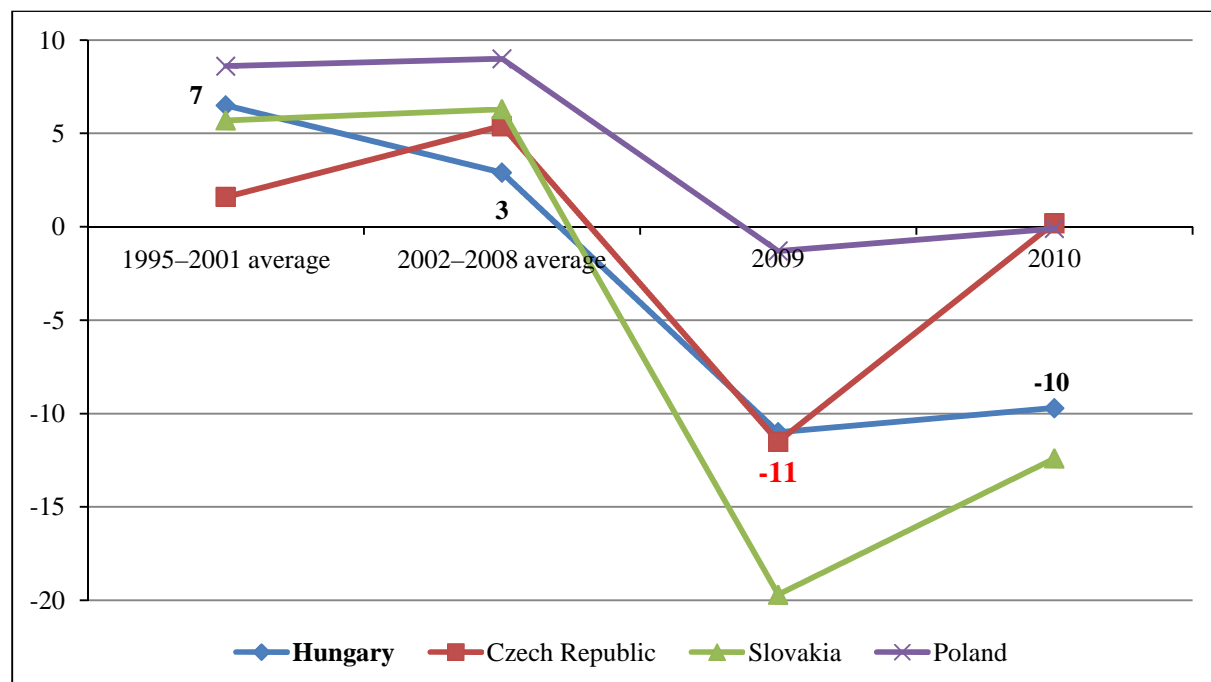


Services (1990 and 2008)



Source: IMF, own calculation.

Figure 11.6. Growth rate of real gross fixed investment in percentage points (1995–2010)



Source: Eurostat, own calculation.

11.3. Labor Market Trends⁹⁵

Hungary has a moderate unemployment rate, a relatively low participation rate and flexible labor market institutions. The Hungarian labor market is flexible, which is the result of low and declining union coverage, relatively low hiring and firing costs, easy adjustment of wages and an employment protection index which is the lowest in the region (EEAG, 2012).

Figure 11.7 and figure 11.8 show, respectively, the time series of unemployment and participation rates in the Visegrád countries. The Hungarian unemployment rate was around 7.5% between 1995 and 2008, which is relatively low in Europe. The Czech unemployment rate remained below 9% between 1993 and 2010. In Poland and Slovakia, on the other hand, unemployment increased drastically in the late 1990s, remained above 15% for several years and only dropped after 2005, after which it increased again due to the impact of the financial crisis of 2008. On the other hand, labor force participation is significantly lower in Hungary than in other Visegrád countries. Hungary's participation rate fell from 65% in 1993 to 58% in 1997 and increased back only to 62% by 2010, which is 8% lower than in the Czech Republic and in Slovakia (EEAG, 2012).

One reason for the decline in Hungary's participation rate is the transitory impact of the privatization process on labor demand. As described in Chapter 1, privatization in Hungary mostly meant the sale of corporate assets to foreign strategic investors. This led to increased competition among firms seeking higher efficiency and, consequently, a massive loss of low-skilled jobs in the economy. As can be seen in Figure 11.5, between 1990 and 1995 employment in Hungary fell by 10% and 4% in the agricultural and the industrial sector, respectively. At the same time, labor demand shifted towards skilled workers as the new shareholders invested in modern technology, which required new skills from the employees (EEAG, 2012).

This transitory impact was reinforced by a second factor that negatively affects labor supply and contributes to the low participation rate in Hungary, namely the pension

⁹⁵ Sources: OECD (2010, 2012a).

and benefit policies of successive Hungarian governments. Following 1996, the legal retirement age was gradually raised from 55 for women and 60 for men to 62 for both sexes⁹⁶, which is still relatively low by international standards. Furthermore, the option of early retirement made it possible for those with a sufficiently long employment history to retire up to three years earlier than the legal retirement age, which resulted in an average effective retirement age of about 2.5 years lower than the legal one. A further way out of the labor market was the option of retiring on health grounds and drawing disability pension, which was equivalent to a regular old age pension after 25 years of work (EEAG, 2012).

Furthermore, figure 11.9 shows that, in terms of labor force participation, Hungary ranks lowest not only in the old age group but also in the young age group of the 15-24 years old and second to last in the prime age group of the 25-54 years old. The participation rate in Hungary remains 6% lower than the median of the prime age group, which shows the smallest variation, while it is 11% and 15% lower than the median of the young and the old age group, respectively. Furthermore, Hungary's lower participation rate is mainly due to three welfare dependent subgroups, which encompass all three age groups: the low skilled, the working age population aged 50 or over and women of child-bearing age (EEAG, 2012).

One policy recommendation for Hungarian policymakers to increase the participation rate is the reduction of the tax wedge. The tax wedge is the difference between the total labor cost to the firm and take-home pay, as a share of the former. Figure 11.10 shows that the average labor tax wedge in Hungary is the second highest after Belgium among 21 EU countries, while the other Visegrád countries are behind Hungary by at least 12%. Although in 2011 the Hungarian wedge fell due to the introduction of a flat income tax rate of 16%, it increased again in 2012 due to the increase in labor related taxes levied on firms (EEAG, 2012).

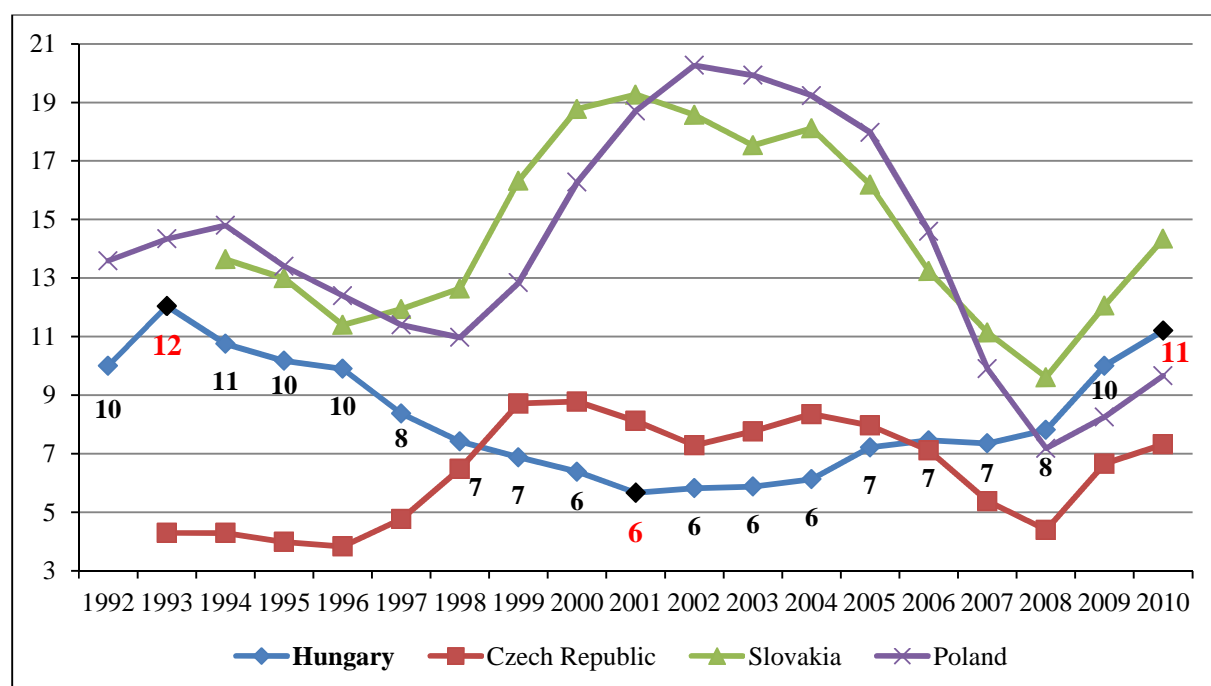
Another policy recommendation is the reduction of the minimum wage. Since the minimum wage can lower participation in the labor market through the discouraged

⁹⁶ The retirement age is 62 for men as of 2001 and for women as of 2009.

worker effect, lowering the minimum wage can possibly encourage participation. However, the effect of minimum wage on labor supply is non-standard in Hungary, as in several other Central and Eastern European countries, because the minimum wage interacts with tax evasion. Firms and workers may decide to under-report worker's earnings to avoid taxes and social security contributions and some 8% of the workers receive cash-in-hand wages in addition to their reported wages. Under such circumstances, minimum wage legislation affects the decision on how much of workers' earnings is reported⁹⁷ but has only a marginal impact on labor supply or demand and, thus, leaves labor participation mostly unchanged (EEAG, 2012).

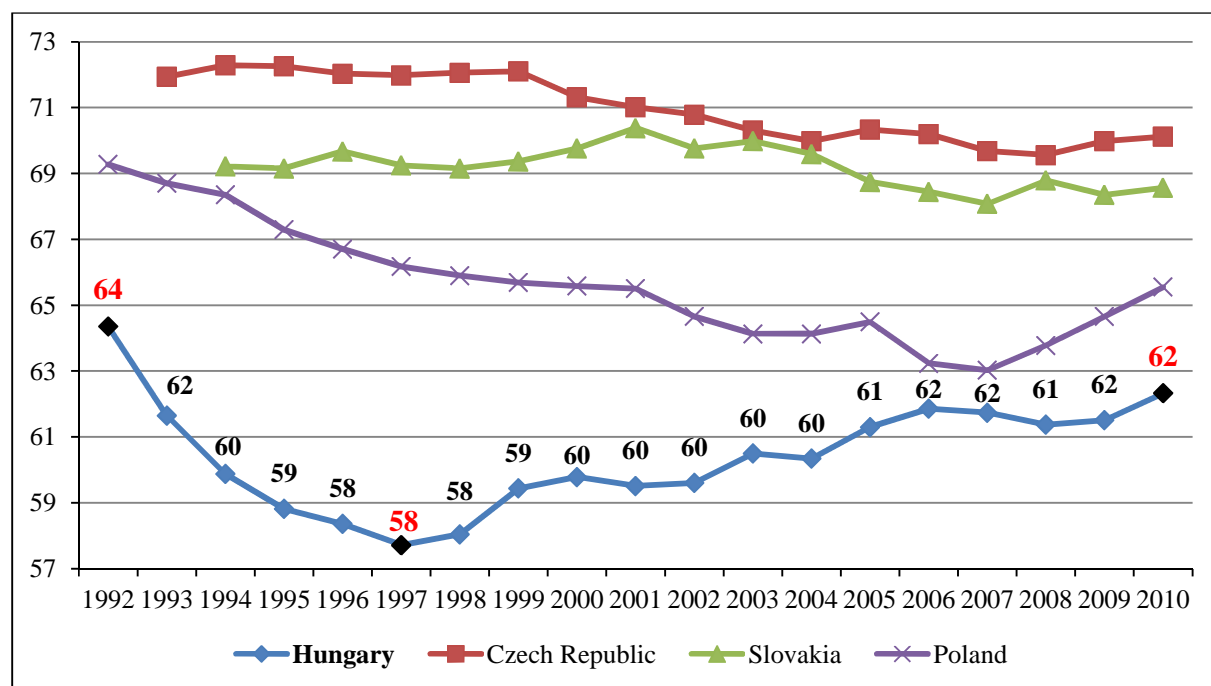
⁹⁷ Employers have to report at least the minimum wage.

Figure 11.7. Unemployment rates, 15–64 years old in percentage points (1992–2010)



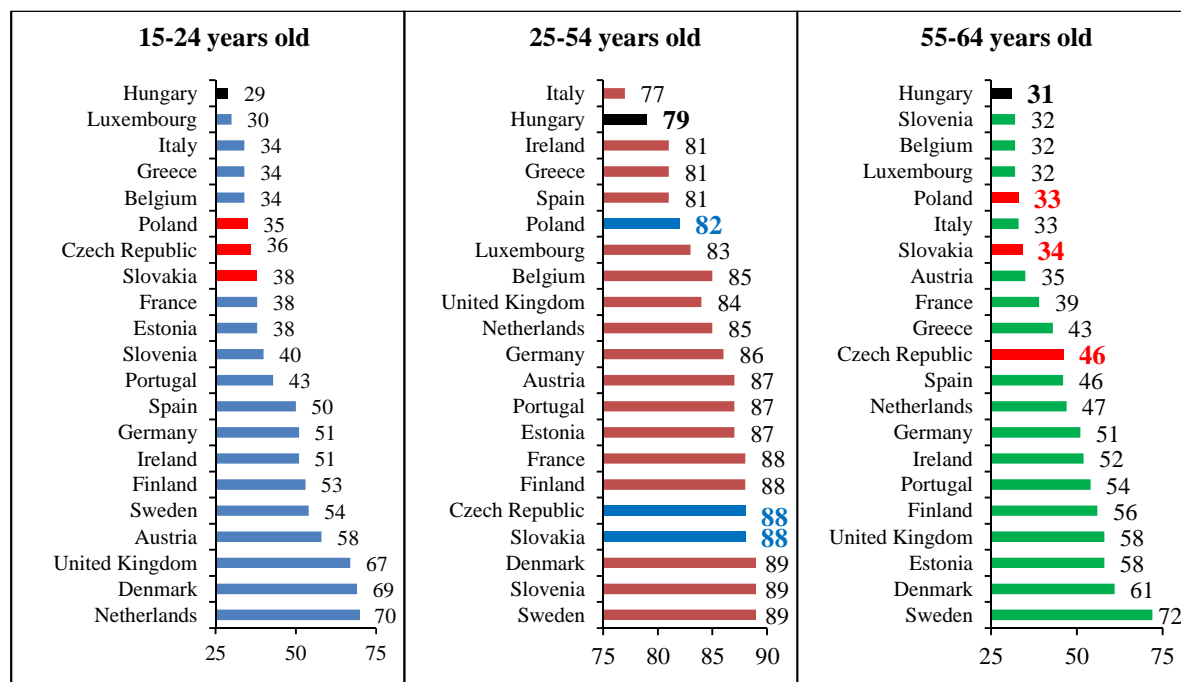
Source: OECD.

Figure 11.8. Labor force participation rates, 15–64 years old in percentage points (1992–2010)



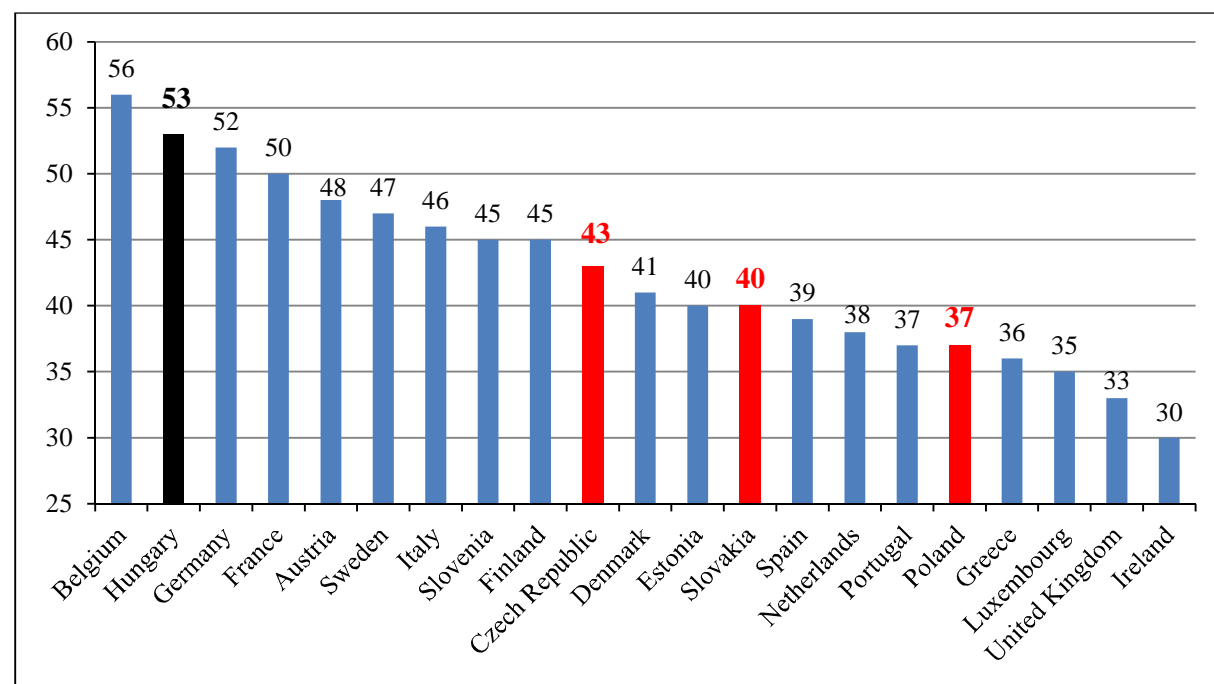
Source: OECD.

Figure 11.9. Labor force participation rates in percentage points (average of 2000–2010)



Source: OECD.

Figure 11.10. Labor tax wedges* in the European Union in percentage points (average of 2000–2008)



*Average tax wedge for a single person at 100% of average earning without children.
Source: OECD.

11.4. Fiscal Policy⁹⁸

Hungary has been subject to the Excess Deficit Procedure of the European Union ever since it joined the EU in 2004. As can be seen in figure 11.1, the general government deficit never fell below 5% of GDP between 2002 and 2007, a period that saw a rapid accumulation of public sector debt. The time series also reveals a strong election cycle in fiscal policy: after 1990 the deficit increased significantly prior to each election⁹⁹, with the exception of 2010. After the financial crisis hit Hungary in 2008 a politically weak government, pressured by financial markets and the European Commission, continued to implement the fiscal consolidation program started in 2007 but had little success in reducing the deficit or slowing the buildup of public debt (EEAG, 2012).

One reason why the Hungarian general government deficit has consistently overshot the Maastricht target of 3% is that fiscal institutions are unable to credibly commit politicians to a sustainable fiscal policy path. Following the deterioration in government finances in 2005 and 2006, the Parliament passed Act LXXV of 2008 on Cost-efficient State Management and Fiscal Responsibility (KFT). KFT established an independent Fiscal Council of three well-known economists nominated by the President of the Republic, the Governor of the central bank and the President of the State Audit Office, and confirmed by the Parliament. The council was equipped with an Office and employed experienced analysts, who helped evaluate the budget act, make forecasts and analyze whether the budget act was consistent with the principles of KFT. After winning a two thirds majority in April 2010, however, the new government established a new Fiscal Council without analysts, and narrowed its task to simply formulating an opinion on the budget act. The members of the new council are the Chair appointed by the President of the Republic, the Governor of the central bank and the President of the State Audit Office, who all work for the council on a part time basis. Without independent forecasts and analyses, the new council is unable to provide the kind of fiscal transparency that the original one was able to.

⁹⁸ Source: European Commission (2012).

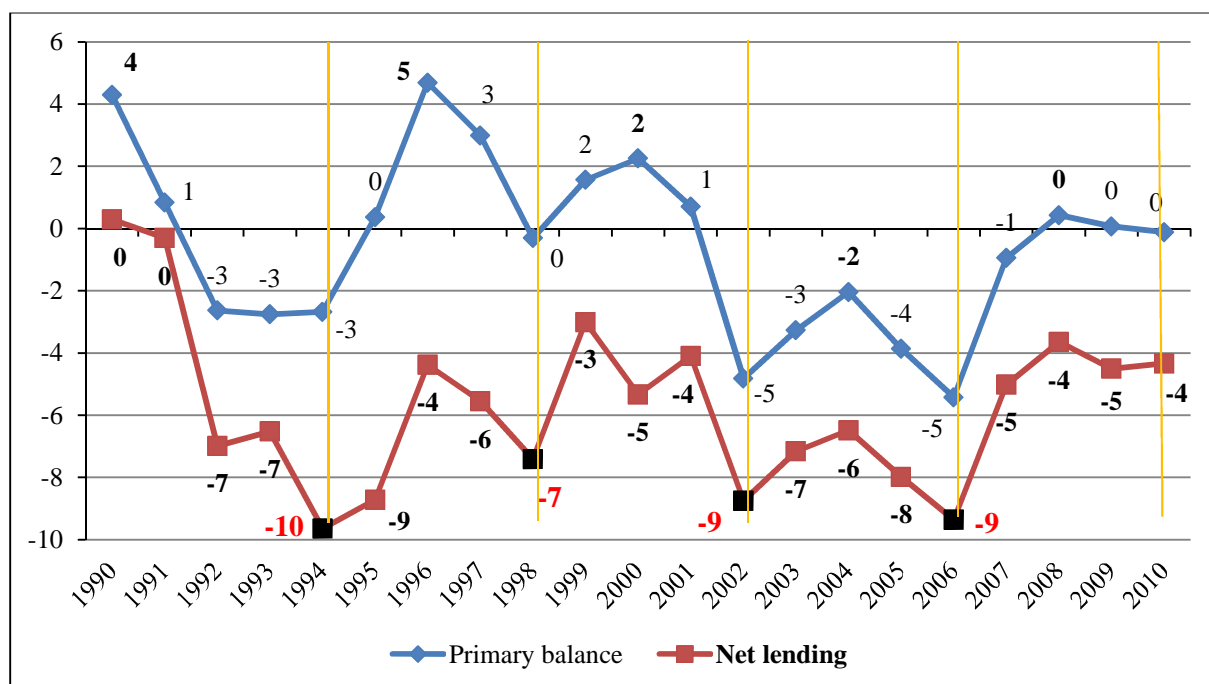
⁹⁹ Election years were 1990, 1994, 1998, 2002, 2006 and 2010.

Long term sustainability of public finances can only be insured by an independent Fiscal Council that has the necessary resources and enjoys freedom in monitoring and evaluating budget proposals (EEAG, 2012).

Furthermore, while the newly passed Fundamental Law of Hungary of 25 April, 2011 (AT) limits the debt-to-GDP ratio to 50%, the actual debt-to-GDP ratio is above 80%, as can be seen in figure 11.12. AT stipulates that the Parliament pass budget proposals that reduce the debt-to-GDP ratio, which increases fiscal credibility in itself. At the same time, AT allows for deviation from this rule in case of “a significant and enduring national economic recession” (Para 36, No. 6, AT, 2011).

The failure of the Hungarian government to successfully tackle the problem of excessive budget deficit can also be traced back to the inefficient structure of government spending which preserved the high level of government expenditure as well as the implied overall tax burden. To illustrate the relatively large size of the Hungarian government sector, figure 11.13 plots the government expenditure-to-GDP ratio against the log of per capita GDP for EU countries between 2000 and 2008. The size of the Hungarian public sector is larger than would be implied by its income level and only five EU countries had public sectors larger than Hungary’s (EEAG, 2012).

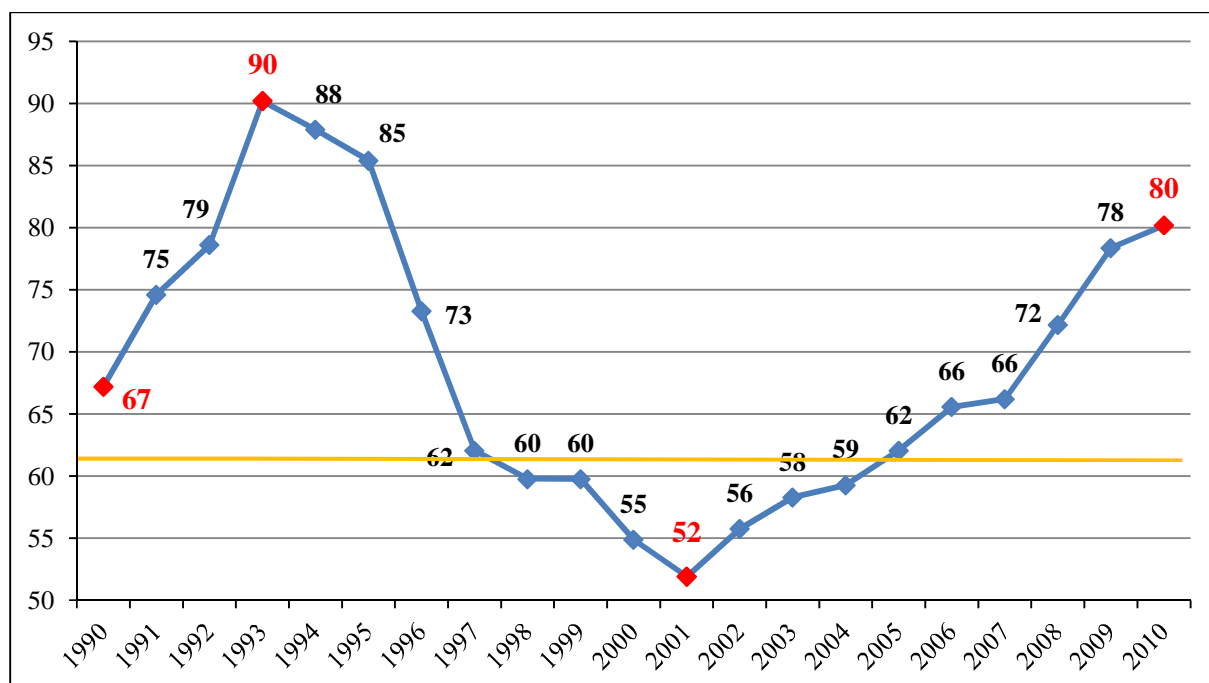
Figure 11.11. Primary balance and net lending as a percentage of GDP (1990–2010*)



*Vertical lines indicate election years.

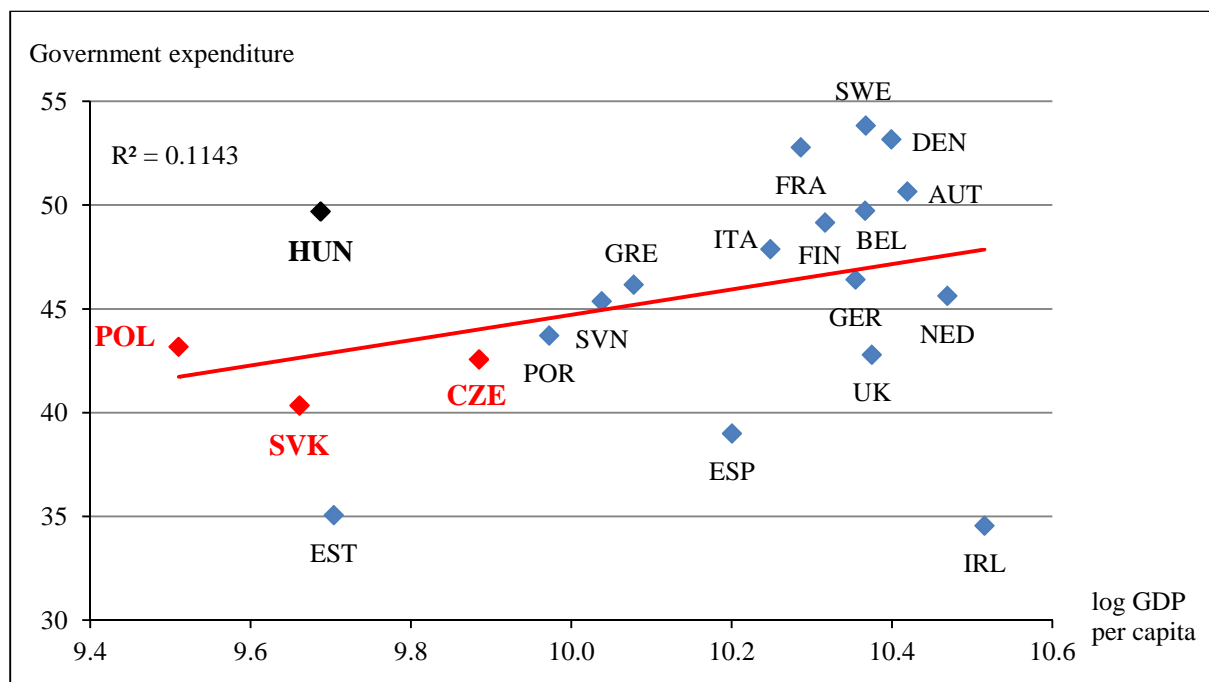
Source: Eurostat.

Figure 11.12. General government debt as a percentage of GDP (1990–2010)



Source: Eurostat.

Figure 11.13. General government expenditure (percentage of GDP) and real GDP per capita (log international dollars) (average of 2000–2008)



Source: Eurostat, OECD, own calculation.

11.5. Financial Crisis and Bail-out¹⁰⁰

Hungary was hit especially hard by the financial crisis of 2008 and requested IMF assistance in late October 2008 because of its high private and public external debt. The external debt of the private sector can be considered the contingent liability of the public sector as historical records show that governments have repeatedly bailed out private debtors in times of financial crises to maintain the stability of the financial system. However, when the government is also heavily indebted the risk of financial systemic instability rises as the state needs new external sources to bail out private debtors. Figure 11.14 plots the net external debt of a number of emerging countries including Hungary against their public debt. It shows that at the end of 2007 most emerging economies either had high external debt or high government debt whereas in Hungary both external and government debt were at elevated levels (EEAG, 2012).

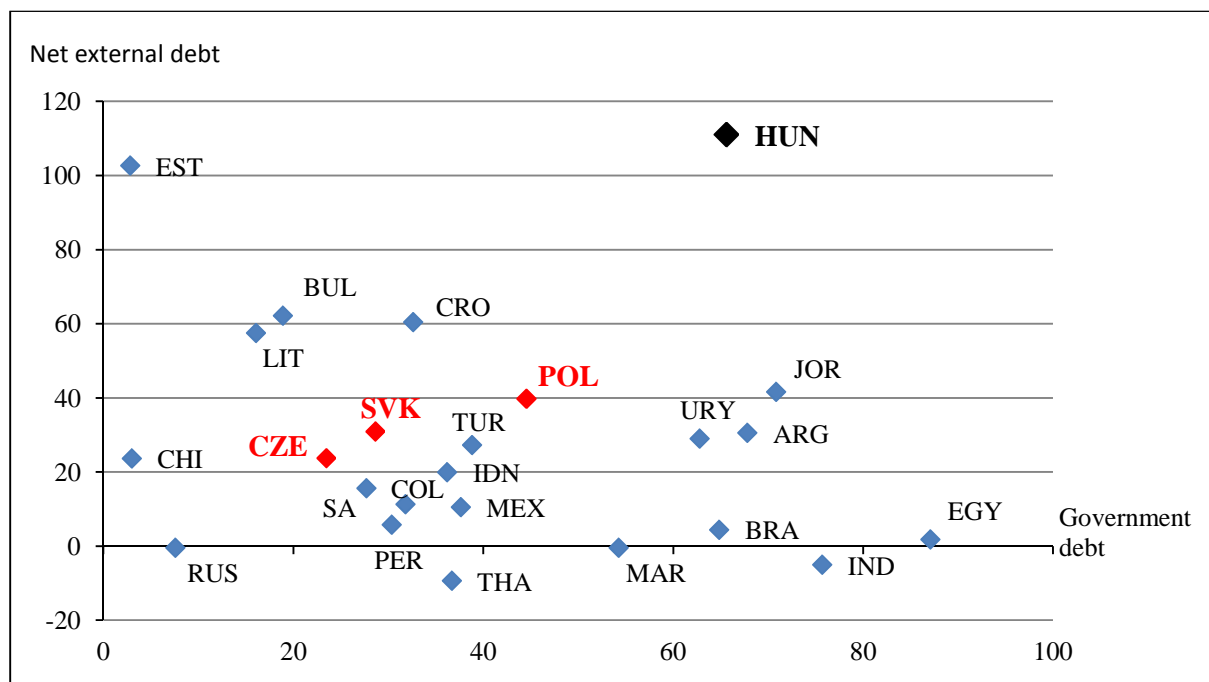
Chapter 2 gave an account on why external debt accumulated in Hungary after 2000. Newly privatized, large domestic banks received external funds at low costs from their parent banks and used these funds to offer low-cost mortgage loans to Hungarian households denominated in foreign currencies, primarily in Swiss francs. In a period of a relatively stable forint exchange rate, high forint interest rates and accommodative financial regulation, households and businesses alike were eager to borrow in foreign currency, underestimating exchange rate risk. Consequently, households, which lacked foreign currency revenues, had by 2008 accumulated a massive unhedged foreign currency position, as can be seen in figures 11.15 and 11.16. While in the Czech Republic and Slovakia foreign currency loans went mostly to corporates and did not exceed 10% of GDP, the same ratio was 30% in Hungary, with half of the credit to the private sector denominated in foreign currency. Moreover, almost 70 percent of total Hungarian household debt was denominated in foreign currency at the end of 2008 (EEAG, 2012).

¹⁰⁰ Sources: Banai et al. (2010), Király et al. (2008), Nagy-Szabó (2008), Correa et al. (2010), European Commission (2009), Gardó-Martin (2010).

One consequence of the huge foreign currency exposure was that the Hungarian private sector became increasingly exposed to exchange rate risk, increasing the vulnerability of the financial system. Figure 11.17 charts the depreciation of the domestic currency vis-à-vis the euro and the Swiss franc after September 2008 and shows that the depreciation of the forint vis-à-vis the Swiss franc between September 2008 and November 2011 reached 66%, significantly increasing monthly loan and interest installments and, consequently, the number of non-performing loans (EEAG, 2012).

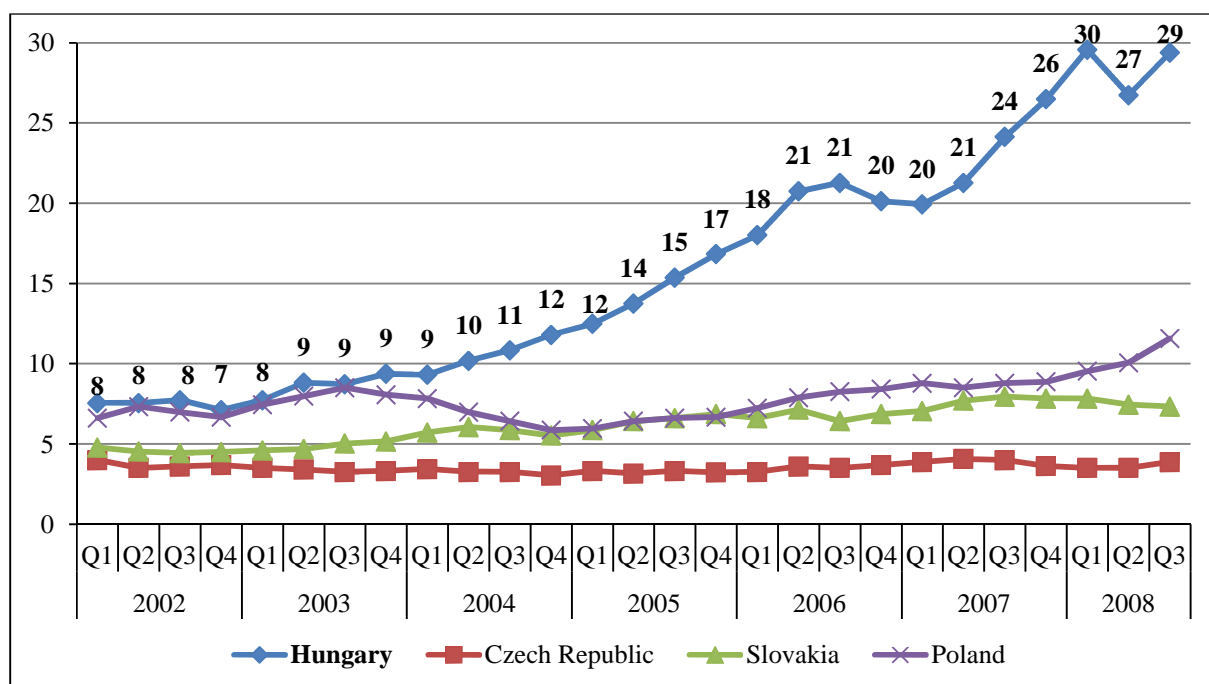
Another consequence of increasing foreign indebtedness was the appearance of rollover risk in the banking sector. Banks, which received external funds in euros, primarily lent in Swiss franc because of the higher demand for Swiss franc loans due to the lower interest rate. They made typically short term contracts in the swap market in which they swapped their euros for Swiss francs and extended typically long term mortgage loans in Swiss franc. This maturity mismatch of assets and liabilities created the need for the regular rollover of these swap contracts. However, in late 2008 the maturity of swap contracts available in a decreasingly liquid money market suddenly fell, requiring more frequent rollovers and increasing the rollover risk of the banking sector. This was further exacerbated by the rising rollover risk of the Hungarian government, which found it more difficult after September 2008 to issue new bonds to refinance the repayment of outstanding ones. All these processes eventually prompted the Hungarian government to turn to the IMF, which together with the EU Commission provided a 20 billion euro bail-out to prevent a run on Hungarian assets and the collapse of the Hungarian financial system (EEAG, 2012).

Figure 11.14. Net external debt* (percentage of GDP) and gross general government debt (percentage of GDP) in emerging markets (2007)



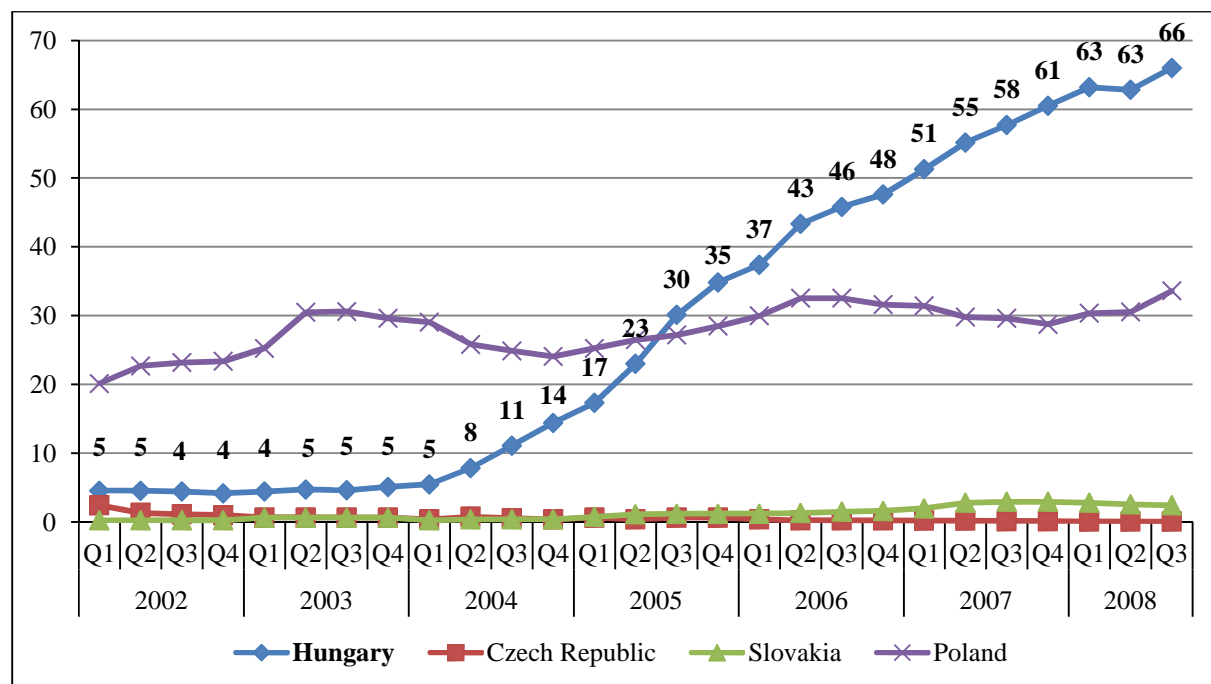
*Net external debt = gross external debt – international reserves excluding gold.
Source: World Bank, own calculation.

Figure 11.15. Foreign currency loans of the private sector in percentage of GDP (2002–2008)



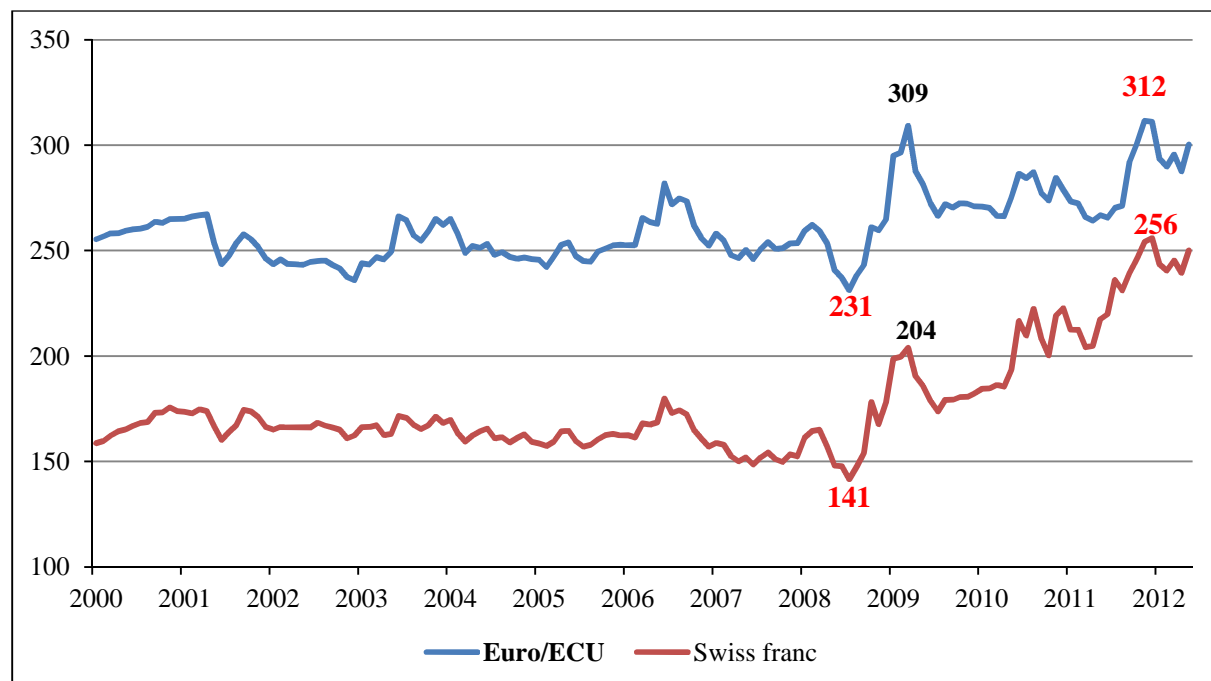
Source: National central banks, own calculation.

Figure 11.16. Foreign currency loans of households in percentage of household debt (2002–2008)



Source: National central banks, own calculation.

Figure 11.17. Average monthly exchange rate of the Hungarian currency



Source: MNB.

11.6. Recent Policy Measures¹⁰¹

The new government, which won the election in 2010, took a number of policy measures considered unusual in developed countries. Some of these measures aimed to increase the revenue side of the budget. On the one hand, the government introduced exceptional taxes on, mostly foreign owned, companies in the financial, telecommunication and retail trade sector. Chapter 5 discusses the impact on the profitability of the bank tax, which was based on past assets and was significantly higher than similar taxes in Europe. On the other hand, the government cut the corporate tax rate for small and medium sized businesses to boost investment, and introduced a flat tax rate of 16% on personal income to increase household consumption. In an auxiliary step to finance the tax cut, the government nationalized private pension funds in early 2011. To increase revenues further the government later announced an increase in the rate of the value added tax from 25% to 27%, in the social security contribution paid by businesses as well as in other taxes (EEAG, 2012).

The government also aimed to remedy the problems caused by the large foreign exchange exposure of households, taking several steps, as discussed in Chapter 6. In short, it first introduced a temporary moratorium on the repossession of real estate whose owners had defaulted on their mortgage payments. Then it also enacted legislation in September 2011 that allowed debtors to repay their loan at a preferential exchange rate, with the gap defined by the difference between the market exchange rate and the discounted exchange rate to be financed entirely by the banks. Later, in mid-December 2011, the government and the banks agreed on additional steps, the cost of which was shared by the government and the banks. Banks appear to have adjusted their business strategies to these measures successfully by reducing their balance sheets, that is, by withholding lending. The resulting slow or even negative credit growth, however, is likely to dampen economic growth (EEAG, 2012).

¹⁰¹ Sources: IMF (2011a, 2011b, 2012b), Gereben et al. (2011).

Hungary's CDS spread increased after mid-2011 (see Chapter 2) because investors in the fixed income market considered these fiscal consolidation measures to be either unsuitable to bring deficits and public debt under control or even outright harmful. Hungarian government bonds were perceived to be increasingly risky investment, which was reflected in the rating agency Moody's downgrading Hungarian government bonds below investment grade on November 25, 2011, followed by a downgrade by Standard & Poor's on December 22, 2011. One of the major problems with the government measures was the negative impact of the introduction of a flat tax rate on the net income and consumption of low income, high-propensity-to-consume households whose tax rate increased after the reform¹⁰². Secondly, the new taxes on the financial sector threatened to deepen the unfolding recession by increasing the cost of lending. Finally, nationalizing private pension funds, as well as the arbitrary invalidation of some terms in the private contracts made between private individuals and commercial banks by the government increased the risk of investment in Hungary and undermined property rights (EEAG, 2012).

¹⁰² Before the reform minimum wage was tax-free in Hungary.

12. The Monetary Policy Context

12.1. Monetary Policy Before 2001

The National Bank of Hungary (MNB) was established in 1924 by Act V of 1924 following the dissolution of the Austro-Hungarian Monarchy. The law was almost a mirror translation of the Austrian central bank law and was enacted on the initiative of the League of Nations, which funded Hungary's stabilization program. The new central bank's main goal was to eliminate post-World War I hyperinflation and stabilize the economy. The shares of the central bank were subscribed by private individuals and the law outright forbade the monetary financing of the budget deficit. MNB contributed a great deal to the recovery of the Hungarian economy between the two world wars as well as to the ending of the second, world record holder, period of hyperinflation in 1945-46¹⁰³.

After its nationalization in 1946 MNB became a state-owned bank and monetary policy was to accommodate the operation of the planned economy. According to its special status from 1948, MNB was both a central and a commercial bank and also belonged the state administration. Its status was slightly modified later in § 3.2 of Decree XXXVI of 1967. According to this law, MNB operated under the supervision of the Government, its Governor was appointed by the so called Council of President and its Deputy Governors were appointed by the Council of Ministers (both under the control of the ruling communist party).

Between 1985 and 1991, MNB's status slowly transformed from that of a state institution supervised by the government to that of a modern central bank of a two-tier banking system. Up until 1991 MNB had been conducting a monetary policy based on three tools: the stock and interest rate of refinancing loans and the reserve rate¹⁰⁴. Although MNB used all of these tools in this period to restrict the corporate lending dynamics of commercial banks, its tools were ineffective as corporations did

¹⁰³ Forint was introduced as a new currency in August 1946 to end the period of hyperinflation.

¹⁰⁴ MNB's right to set all types of interest rates was abolished in 1986 and corporate lending rates were gradually liberalized until 1989. Deposit rates were centrally set until 1989 (Balatoni, 2008).

not yet face a hard budget constraint. MNB's base rate, which later became its main monetary policy tool, was first set in 1989 (Balatoni, 2008).

Between 1991 and 2001, MNB gradually gained back most of the independence it lost at the time of its nationalization in 1946. Karádi (1999) defines full independence as consisting of instrumental, personal and financial independence. Act LX of 1991 on the National Bank of Hungary was the first attempt to create the independence of the central bank but full independence was warranted only by the enactment of Act LVIII of 2001 on the National Bank of Hungary. In the 1991 law, MNB's main task was yet to support the government's economic policy but it was already entitled to set the base rate and the reserve rate independently. Importantly, decisions on the exchange rate regime were to be made jointly. As a result, MNB's Governor worked to accommodate fiscal policy and, as a part of that effort, MNB financed a significant portion of the government deficit. In accordance with requests of the European Union the renewed central bank law in 1994 further distanced MNB from the government and created its financial independence by ending central bank financing of the budget deficit. The personal independence of MNB's Governor, however, was still not fully ensured. This was reflected by two consecutive attempts of Governors to resign (1994, 2000) due to an alleged lack of cooperation and confidence on the government's side. Since MNB's primary goal in this period was the support of the government's economic policy, cooperation between the fiscal and monetary branches worked well only when the Minister of Finance and the Governor of the central bank came from the same spectrum of the political arena.

12.1.1. Exchange rate policy until 2001

12.1.1.1. Adjustable peg

An important element of monetary policymaking contained in the first act on the central bank was the stipulation that the government and the central bank would make joint exchange rate policy decisions. Up until March 1995, it meant the maintenance of a fixed exchange rate regime with the value of forint pegged to a

currency basket¹⁰⁵. While the nominal exchange rate was fixed for an undetermined period, there were 23 devaluations between January 1990 and March 1995. Exchange rate policy in this period was used to decrease the current account deficit by helping exports through devaluation. The fixed exchange rate regime gave full discretion into the hands of policymakers, which made their decisions most unpredictable at the same time. Discrete and unexpected devaluations had a negative impact on domestic inflation, thus, increasing inflation volatility increased the inflation risk premium in the yields of Hungarian assets. This was the main reason why government bonds were issued with short maturities and variable interest rates in this period.

12.1.1.2. Crawling peg

On March 13, 1995 the government and the central bank decided to devalue the forint for the last time by 9% and simultaneously reformed the exchange rate regime by introducing the crawling peg system. At the same time the new system introduced a floatation band of the euro-forint exchange rate of $\pm 2.25\%$ around the parity, which was set as the value of the forint against a basket of currencies¹⁰⁶. Under crawling peg, forint was devalued on a monthly basis by a pre-announced rate. The new system was clearly a transitional one and aimed to anchor inflation expectations. The monthly rate of devaluation was gradually reduced.

As a result of the new regime, the nominal exchange rate moved as foreseen, which increased the predictability of the exchange rate and that of inflation, as well. However, other problems arose. For one, real appreciation of the domestic currency was building up and reached a critical level by the end of the decade. This was mainly due to a constant and strong demand for the domestic currency caused by the inflow of capital through privatization and greenfield investments. Another consequence of privatization was the gradual restructuring of the economy, which boosted productivity growth. For another, inflation was stuck above 10% due to the

¹⁰⁵ The basket included 11 currencies, which, on March 14, 1991, decreased to 9. On December 9, 1991, the basket was simplified to include US dollar and ECU in 50-50%. ECU was replaced later in 1993 by Deutsche mark.

¹⁰⁶ This basket included US dollar and ECU in 30% and 70%, respectively. In 1997, ECU was replaced by Deutsche mark and in 1999 by euro. As of January 1, 2000, the basket only contains euro.

constant inflationary effect of the crawling peg. By 2000, it was clear for most economists that the regime has to be reformed in a way that will decrease inflationary expectations and prepare the Hungarian financial system for the adoption of the common European currency.

12.2. Inflation Targeting

The new legislative background of the Hungarian inflation targeting monetary policy regime was created in three key steps. First, on May 3rd, 2001, MNB MC and the government jointly decided to widen the floatation band of the euro-forint exchange rate from $\pm 2.25\%$ to $\pm 15\%$ as of May 4th. In a related move on August 21, 2001, the MC decided to abolish the crawling devaluation of the floatation band (0.2%/month at that time) as of October 1, 2001. Second, MNB MC decided to introduce the IT regime on its meeting on June 12th, 2001. Third, the new Act LVIII on the National Bank of Hungary came into effect on July 13th, 2001, providing MNB full operational and personal independence in its efforts to achieve and maintain price stability. Smooth progress into the new regime was facilitated further by the total liberalization of capital flows on June 15th, 2001, which allowed foreigners to conduct all sorts of securities transactions in Hungary including transactions in the short-maturity segment of the fixed income market or provide foreign currency loans.

According to the initial agreement on the IT mechanism, the MNB and the government would set the official inflation target and MNB was aiming to realize this target using its monetary policy tools. The most important of its tools was the base rate, which, from July 13, 2001, was the interest rate paid to commercial banks on the amount placed in two-week MNB deposits with the central bank. The role of the two-week MNB deposit was taken by two-week MNB bill on January 10, 2007.

As attested in Figure 12.1, the target was first the year-on-year December CPI inflation rate in the following two-year-period. After the MC meeting that decided on the introduction of IT on June 12, 2001, the Governor announced that MNB would forecast CPI inflation 6 quarters ahead and should these forecasts fall out of the $\pm 1\%$ range of the point target, MNB would be prompted to use its monetary policy tools to

bring inflation back within the targeted range. Later, the range of these inflation forecasts was generalized to be 5 to 8 quarters ahead. MNB's inflation forecasts were to be published in the regular Inflation Report, due to be released every three months. The first of these reports was published on August 1, 2001, and its foreword mentioned 2% as the medium-term inflation target, notwithstanding the fact that the official point targets were 7% for December 2001 and 4.5% for December 2002. Allusion to this 2%-figure disappeared from the foreword as of November 19, 2002. Later, following an agreement of the government and the central bank, a new medium-term inflation target replaced the system of point targets, from 2007. This new medium-term target of 3% – with the same $\pm 1\%$ tolerance band as for the point targets – was announced on August 22, 2005 and also published in the Inflation Report of the same day.

The foreword of the early Inflation Reports explicitly stated that the inflation forecasts included in the report were based on the assumptions of the members of the Monetary Council concerning the exogenous factors determining inflation. Most important of all, these exogenous assumptions were made about the future price of crude oil and the future euro and dollar exchange rates, changes in which have major impact on the Hungarian inflation rate. In the Inflation Report of November 17, 2003, the MC backed out from behind these exogenous assumptions: the foreword of this Inflation Report stated that the assumptions were those of the experts of the Economics Department of MNB. In the Inflation Report of May 17, 2004, MC's responsibility was further clarified in the text of the foreword stating that the opinion of the Economics Department is not necessarily shared by the MC or MNB.

The first Governor of the central bank in the new IT regime was Zsigmond Járαι, the former Minister of Finance and the mastermind of the new central bank legislation, who was appointed as of March 1, 2001 for a six-year term. The Monetary Council, the most important decision-making body of the central bank in charge of conducting monetary policy, consisted of eight members in the beginning, all of whom were required to be full-time employees of the central bank. The council operated with 7 to 9 members until early 2005, but the central bank act was

amended as of December 29, 2004 to include four more outside members. As a result, the number of MC members increased to 13 on March 1, 2005 by four new members appointed by the Prime Minister. On March 1, 2007, András Simor was appointed as new Governor. Due to his efforts, the new central bank act stated that the number of MC members is to be in the range 5 to 7.

In the beginning, Monetary Council meetings – all of them rate-setting meetings – were scheduled biweekly, sometimes tri-weekly with decisions being announced at 16:00. The time of the announcement of decisions was brought forward on December 2, 2002 to 14:00. The council introduced a new schedule from July 5, 2004 with non-interest-rate-setting meetings in between decision meetings. From this date on, there was one rate-setting meeting per month followed by a non-interest-rate-setting meeting to make the total annual number of decision meetings 12. This schedule has been overridden in certain cases: e.g. extraordinary decision meetings were still convened by the Governor, and on one instance, on December 8, 2008, a rate decision was made on a non-decision meeting. Nevertheless, the schedule of MC meetings in general became more regular after 2004, increasing the predictability of rate decisions.

In an effort to increase the transparency of the central bank's decision-making process, the council decided to regularly publish the minutes of its meetings. These minutes would include the excerpted version of what was said and voted on in the meeting with explicitly mentioning which member voted for which alternative. The first minutes was that of the meeting on December 20, 2004, published on January 14, 2005. Generally, these minutes would be published on the third Friday following the MC meeting in question, but still before the following rate-setting meeting.

12.2.1. Monetary Policy Transmission Mechanism

Although the Hungarian monetary authority has followed an inflation targeting regime since 2001 formally independently of the government, the main goal of price stability has from time to time come into conflict with the implicit goal of managing

the exchange rate of the forint against the euro¹⁰⁷. Until March 2008, when the parity together with the floatation band of forint was abolished, MNB also had the obligation of keeping the exchange rate of forint within the fluctuation band. In order to meet the objective of keeping the exchange rate of the local currency within the band, MNB used its main monetary policy tool, manipulating the base rate. When the forint was considered to be too strong by the central bank, it would eventually lower the base rate to discourage foreign investors from buying Hungarian assets and cause the exchange rate to depreciate, and vice versa. However, sometimes meeting the goal of price stability would have required just the opposite action from the central bank, thus creating an irresolvable internal conflict within monetary policy. It manifested itself clearly a number of times. One of these times was January 2003, when forint was strengthening on the back of growing enthusiasm for Hungarian assets fuelled by the EU accession and threatened to leave the band on the strong end (see Figure 12.6). MNB prevented that from happening by cutting the base rate drastically, despite the fact that the medium term inflation forecast of the time indicated that inflation would likely exceed the central bank's inflation target in 2003 and 2004, as it finally did.

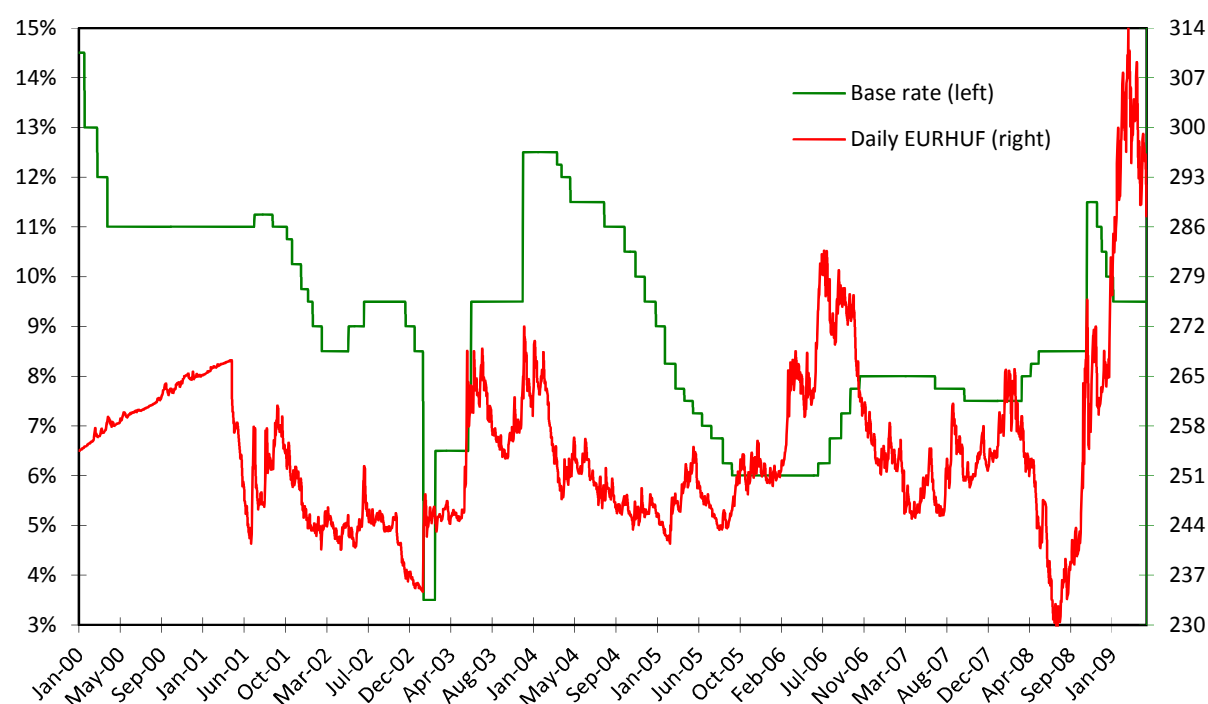
Notwithstanding this internal conflict, which was resolved by the abolition of the band in 2008, we can continue to consider even after 2008, after Vonnák (2007), the exchange rate of the forint against the euro to be the single most important element of the Hungarian monetary transmission mechanism, more important in meeting the goal of price stability than the interest rate channel and the expectations channel¹⁰⁸. Vonnák (2005) estimated, using a structural vector auto regression model, that a 50 basis point hike in the base rate increases the exchange rate by 1 per cent in Hungary, exerting a downward pressure on import prices and driving down inflation. In Vonnák (2010), it is estimated that an average monetary policy shock caused by a 30-40 basis point rate hike reduces the inflation rate by 0.1% within two years.

¹⁰⁷ MNB even communicated a so called implicit band until 2005, which was more narrow than the official band of $\pm 15\%$ around the parity. Investors discerned information as to the future change of the base rate by following MNB Governor's comments of whether the exchange rate is within or out of the implicit band.

¹⁰⁸ Because of the wide access of the population to foreign exchange denominated loans, the interest rate channel itself also exerts an impact on inflation through its impact on the exchange rate.

Similarly, the results of Pellényi (2012) indicate that a 0.2-0.3% hike in the inflation rate within a year-and-a-half after a 50 basis point base rate cut. These results suggest that although formally the base rate is the central bank's most important monetary policy tool to reach the goal of low inflation, its pass-through effect continues to be transferred by the intermediate target of the euro forint exchange rate.

Figure 12.1. MNB base rate and the euro forint (EURHUF) exchange rate (2000-2009)

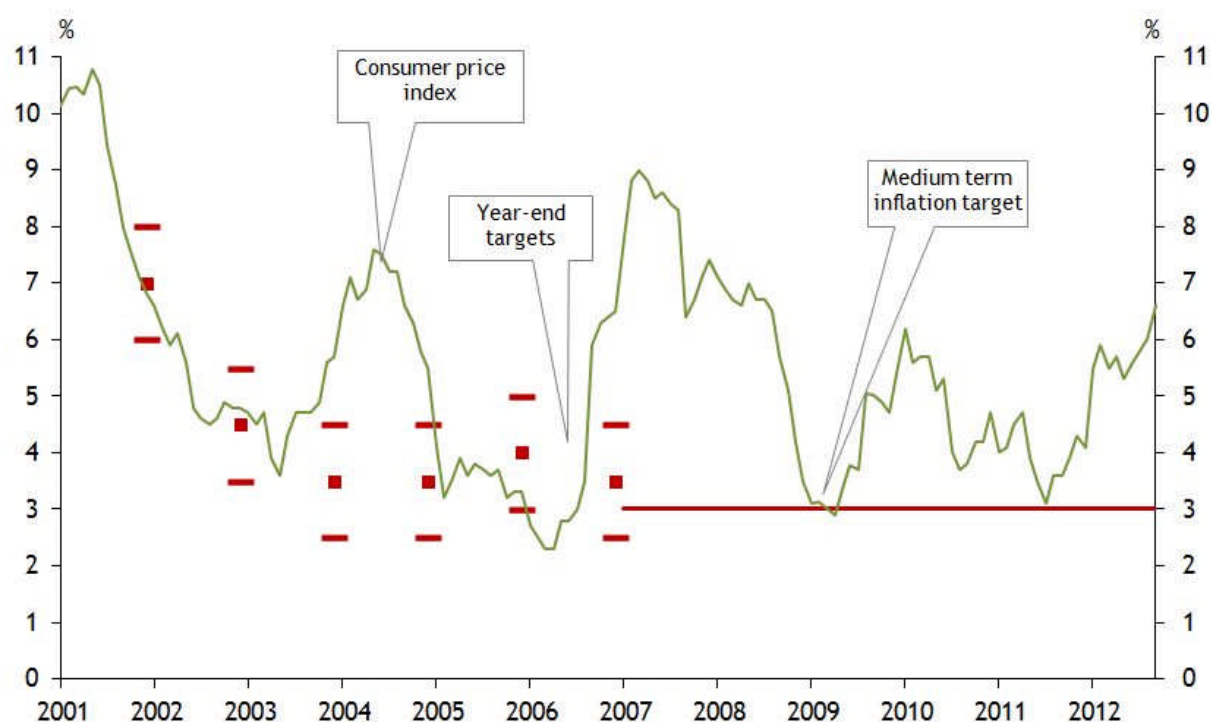


Source: MNB.

12.2.2. Containing Inflation

It is apparent from Figure 12.2 that the inflation target – which is set together by MNB and the Ministry of Finance – was missed in three (2003, 2004, 2006) out of the six years (2001-2006) with year-end point targets and stayed out of the medium term target range for most of 2007, 2008, 2010 and 2012.

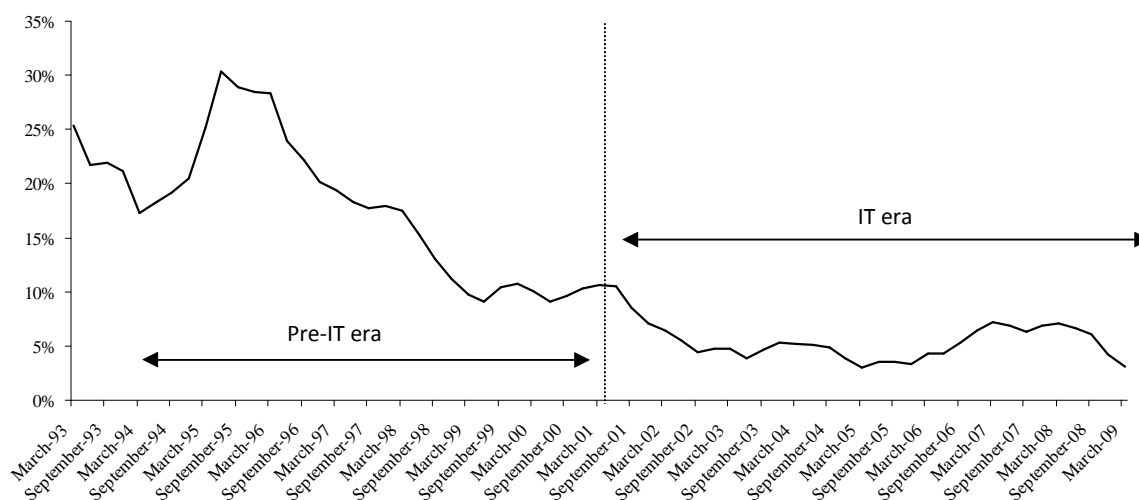
Figure 12.2. The inflation target and actual inflation rates



Source: MNB.

Since the Hungarian headline CPI inflation target is a common nominal target of the monetary and fiscal policy, and the target can only be attained through the coordination of the monetary and fiscal sides, the simple fact that the target was missed in a majority of the cases so far tells little about the credibility of the IT regime. To investigate MNB's responsibility in this issue, it is necessary to narrow the analysis. First, we look at a simple comparative statistical overview of the period before and after the introduction of IT in June 2001 using a seasonally adjusted inflation measure, which filters out the impact of tax rate changes. We opted for using the measure of VAICPI computed by the Central Statistical Office (KSH). Clearly, it was most often the exogenous changes in VAT, excise and other tax rates by fiscal policy that deterred the headline CPI inflation rate from the target. Filtering out tax rate changes from the headline CPI inflation measure better shows just how much MNB contributed to lowering and/or stabilizing the inflation rate. It can be seen from Figure 12.3 that VAICPI became lower and less volatile in the IT era compared with the pre-IT era.

Figure 12.3. Seasonally adjusted quarterly average change of year-on-year VAICPI



Source: Szikszai (2011).

For a detailed comparison of the two periods of similar length, Table 12.1 presents the fundamental statistics.

Table 12.1. VAICPI dynamics in the pre-IT and the IT era

	Q1 1993-Q2 2001	Q3 2001-Q1 2009
Number of observations	34	31
Average*	17.75%	5.24%
Standard Deviation*	6.46%	1.4%
Coefficient of Variation*	36.37%	26.64%
Persistence	0.8464	0.8553
Range	21.23%	5.55%
Minimum	9.1%	2.98%
Maximum	30.33%	8.54%

*Obviously, these parameters are meaningless if VAICPI inflation turns out to be non-stationary.

Source: Szikszai (2011).

All relevant statistics point to a more subdued inflation dynamics after the introduction of IT, as attested by the VAICPI measure. The volatility and average of inflation subsided, along with their ratio, the coefficient of variation. The range, maximum and minimum all decreased substantially. The only exception is the persistence of inflation, which is the extent to which the average inflation rate of the previous quarter determines the average inflation rate of the following quarter. The fact is that slightly higher inflation persistence is even desirable in a generally lower

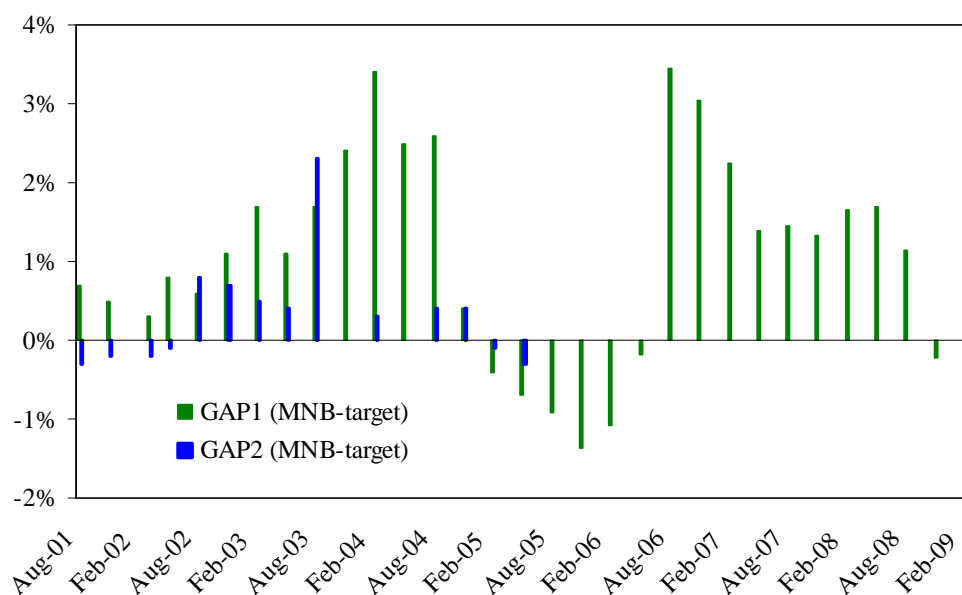
inflation environment, which characterizes the IT period vis-à-vis the pre-IT era. Therefore, it does not alter the overall perception that, from a static point of view, inflation was harnessed in following the introduction of IT.

12.2.3. Managing Market Expectations

In his evaluation of the success of the Swedish inflation-targeting regime, Svensson (2009) approaches the issue by comparing inflation expectations with the relevant inflation targets. First, he says that the “credibility of an inflation-targeting regime is usually measured by the proximity of private-sector inflation expectations for different time horizons to the inflation target” (Svensson, 2009, p. 15). Then, he adds, that it is equally important to analyze how well inflation expectations (private inflation forecasts) correspond to the inflation forecasts of the central bank. In both cases, the closer the expectations are to the target or the forecast of the central bank, the higher the credibility of monetary policy. Going further, Svensson (2009) also deals with more forward-looking issues such as the correspondence between market expectations regarding the future policy rate and the central bank’s policy-rate path before and after interest rate decisions. His approach is mainly intuitive and lies in the graphic illustration of the above relations. In this study, we provide some graphic evidence on the credibility of the Hungarian IT regime, based on Svensson (2009).

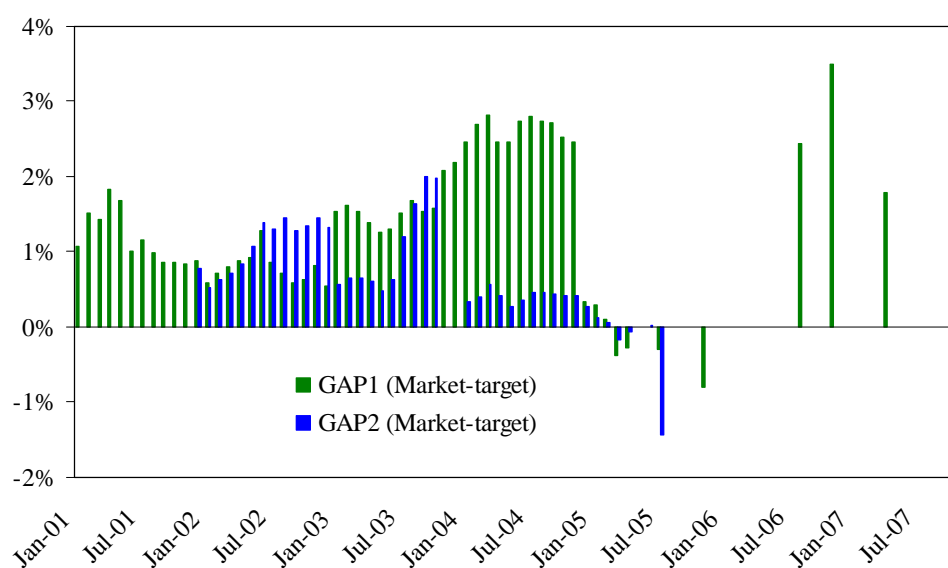
We present two charts of the central bank’s inflation forecasts and the market’s inflation expectations compared with the actual official inflation target. In Figure 12.4, we show the gap between MNB’s CPI forecasts and the respective CPI targets. In Figure 12.5, we illustrate the same gap between the market’s CPI forecasts and the respective CPI targets.

Figure 12.4. The gap between MNB's CPI forecast and the respective CPI target¹⁰⁹



Source: Szikszai (2011).

Figure 12.5. The gap between the market's CPI forecast and the respective CPI target¹¹⁰



Source: Szikszai (2011).

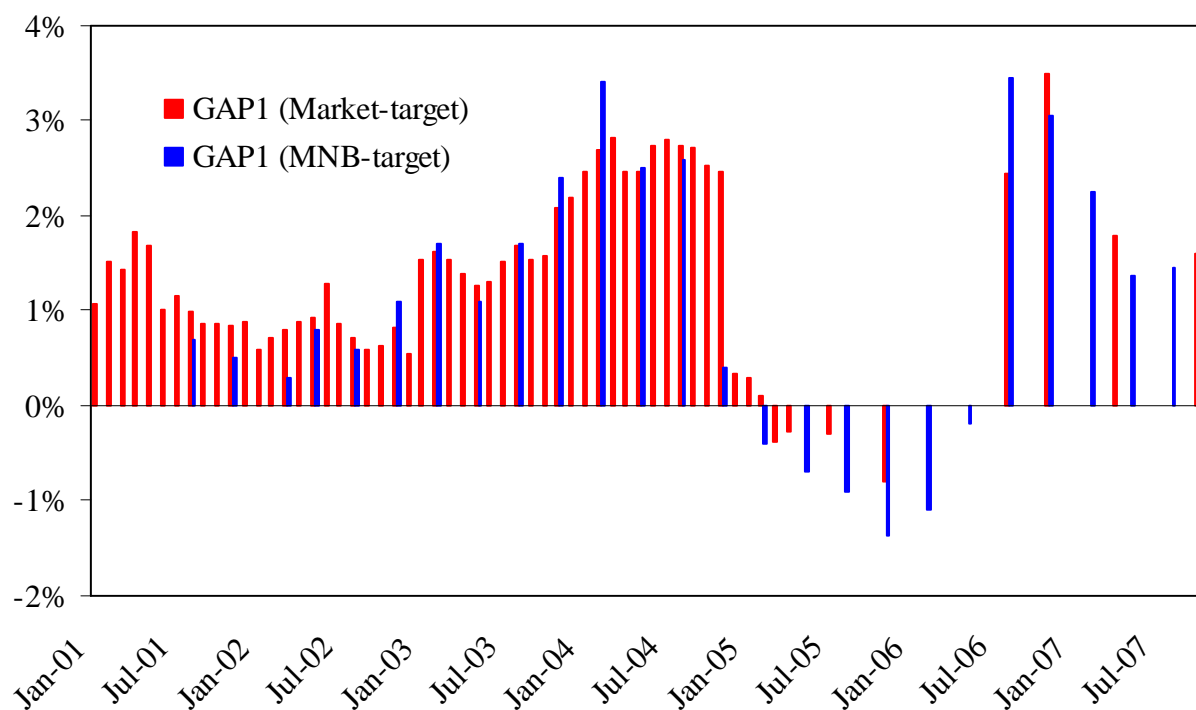
¹⁰⁹ GAP1 represents the difference between MNB's CPI forecast and the respective CPI target that is closer in time, while GAP2 represents the gap between MNB' forecast and the respective CPI target that is further away in time. Note that, in August 2005, MNB announced the switch to a medium term CPI target of 3% as of 2007, which is why the curve of the GAP2 discontinues in August 2005.

¹¹⁰ Market expectations are discerned from CPI surveys of analyst by Reuters as they appeared in MNB's Inflation reports on www.mnb.hu.

These charts suggest that neither MNB's forecasts nor market expectations were anchored to the official CPI target, and the gap between the forecasts and the target very rarely dropped below 1%. This portrays the ineffectiveness of the CPI target itself, in orienting market expectations. This is, however, – as suggested by historical and narrative evidence (Szikszai, 2011) – more likely to have been a result of the lack of coordination between the two branches of economic policy in fighting inflation and not the low level of credibility of the central bank itself. In fact, in another chart in Figure 12.6, we show that the gap between MNB forecasts and the inflation target and that between market expectations and the inflation target moved very closely in the observed period – their correlation coefficient being 0.88¹¹¹. This is important because, as Svensson (2009) points out, “the degree of correspondence between inflation expectations and the central bank's inflation forecasts then becomes a measure of how credible the central bank's inflation forecasts and analyses are” (Svensson, 2009, p. 16.). So, in short, the picture seems controversial: the official CPI target had little to no effect on the markets CPI expectations, while market expectations were close to MNB's CPI forecasts.

¹¹¹ The correlation coefficient of MNB's and the market's forecasts – not that of the gap between the forecasts and the target – is 0.76, somewhat lower.

Figure 12.6. The correspondence between the market's and MNB's CPI forecasts as compared to the target



Source: Szikszai (2011).

12.3. Monetary Policy Before and During the Crisis (2001-2009)

The simple analysis of financial and communication variables provides an opportunity to define sub-periods of inflation targeting monetary policy until 2009. Based on financial variables such as the logarithm of the daily change of the EURHUF exchange rate, the daily change of the term spread (between the yields of the 3-month treasury bill and the 10-year government bond) and a communication variable, the average of the standardized values of Governor comments (+: hawkish, -: dovish), we can distinguish 7 sub-periods within the period of inflation targeting until April 2009 (see more on methodology in Szikszai, 2011). We define the sub-periods in Table 12.2 as follows.

Table 12.2. Sub-periods in monetary policy (2001-2009)

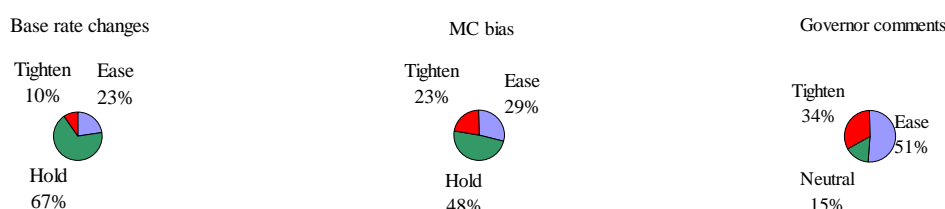
Sub-period	Date	Mean of			Standard deviation of		
		Ln(EURHUF) changes	Term spread changes	Governor comments	Ln(EURHUF) changes	Term spread changes	Governor comments
Honeymoon	2001.07.11 - 2002.10.18	0,0146%	0,0061%	-0,17	0,4572%	0,1168%	0,49
Turbulence	2002.10.21 - 2003.11.28	-0,0280%	-0,0161%	0,20	0,6052%	0,2734%	0,49
Loosening	2003.12.01 - 2005.09.19	0,0163%	0,0220%	0,26	0,4296%	0,2665%	0,43
Tightening	2005.09.20 - 2006.10.24	-0,0233%	-0,0152%	0,83	0,5891%	0,1230%	0,18
Transition	2006.10.25 - 2008.02.25	0,0034%	-0,0003%	-0,06	0,4748%	0,0851%	0,59
Pre-crisis	2008.02.26 - 2008.09.15	0,0468%	-0,0100%	0,47	0,6412%	0,1845%	0,66
Crisis	2008.09.16 - 2009.04.30	-0,1086%	-0,0180%	0,22	1,3957%	0,4359%	0,59

Source: Szikszai (2011).

Below, we bolster this division of the period with the findings of the historical and narrative analysis and statistics of the base rate decision and central bank communication.

“Honeymoon”: July 11, 2001 – October 18, 2002

Figure 12.7. Distribution of base rate changes, MC bias and Governor comments in the “Honeymoon” sub-period

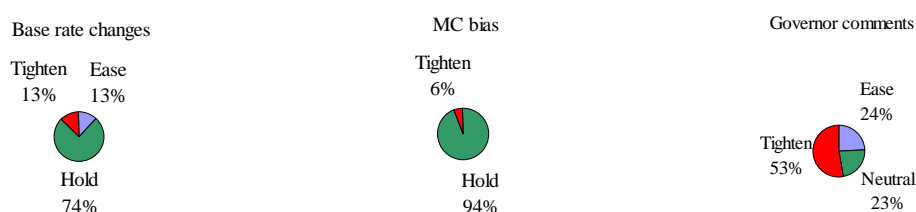


Source: Szikszai (2011).

The “Honeymoon” sub-period lasts from the first rate decision after the introduction of the IT regime to the Irish referendum on the Nice accord allowing for EU enlargement. This period includes the inauguration of a new government, which increased the already stretched budget finances by fulfilling its ambitious election promises. The deterioration of the budget and current account balances started in this period – as seen in Appendix 1. The base rate first fell to 8.5% then rose back to 9.5% as the central bank began offsetting the inflationary effects of fiscal policy with interest rate increases. The Governor changed his rhetoric markedly after the elections from a dovish to a hawkish one. In the 10 months preceding the elections, he made 28 dovish comments and 10 hawkish ones, while in the remaining 5 months he made 8 dovish comments and 14 hawkish ones.

“Turbulence”: October 21, 2002 – November 28, 2003

Figure 12.8. Distribution of base rate changes, MC bias and Governor comments in the “Turbulence” sub-period



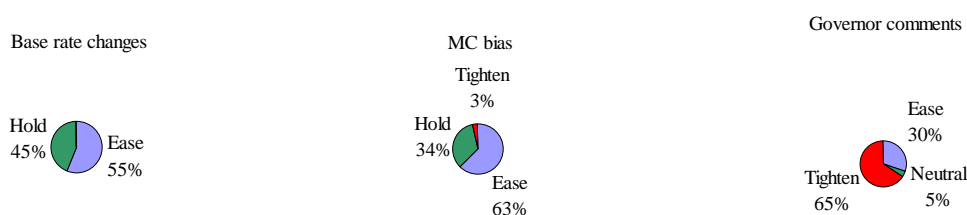
Source: Szikszai (2011).

The “Turbulence” sub-period lasts from the date of the Irish referendum to the last in the series of massive rate hikes aimed to halt the weakening of the forint and the decline in bond prices. The result of the Irish referendum lowered the risk premium priced in the assets of the accession countries such as Hungary and raised expectations of Hungary’s early joining the European Monetary Union. The lower risk aversion of investors in Hungary ushered in a new era of monetary policymaking. This era was marked by the overwhelming presence of speculative investors in the domestic bond and currency markets. These speculators brought considerable uncertainty and volatility into the central bank’s decision-making process, which had to accomplish the double mission of reducing inflation by strengthening the forint’s

exchange rate against the euro while maintaining the floatation band of the exchange rate. A number of foreign investors, who reckoned that the exchange rate will sooner or later leave the band, started to speculate on the abolition of the floatation band. In the meantime, the government set out to depreciate the forint in an effort to help exporters face a global economic slowdown. This struggle of conflicting economic policy – and political – interests manifested itself in unforeseen market turmoil and a series of crises in the domestic currency and bond markets. In the meantime, the base rate first fell to 6.5% – in fact, to 3.5%, as the availability of the two-week deposit was restricted – then rose to 12.5%. Interestingly, the Governor’s communication was dominated by hawkish comments despite the fact that there were exactly as many rate hikes as rate cuts in this sub-period.

“Easing”: December 1, 2003 – September 19, 2005

Figure 12.9. Distribution of base rate changes, MC bias and Governor comments in the “Easing” sub-period



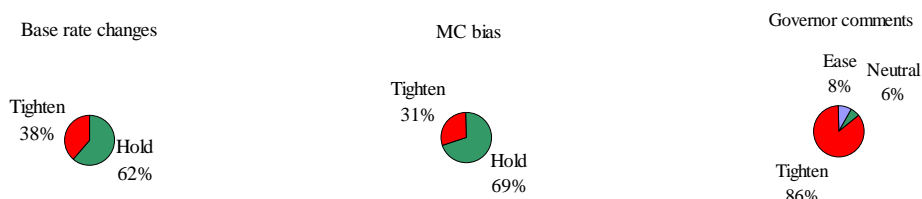
Source: Szikszai (2011).

The “Easing” sub-period begins with the end of the tightening cycle of the previous sub-period. It might as well be dubbed the “period of cold war” between fiscal and monetary policy. Despite the Governor’s mostly hawkish rhetoric, MNB decreased the base rate gradually to 6% until the end of this sub-period, showing that the conflicts between policymakers, which surfaced in the previous period, lingered on. Fiscal policy was restrictive in words but missed the targeted budget deficit figure each year. In the meantime, monetary policy was on an easing path, which was supported by the new MC members appointed by Prime Minister Gyurcsány. No wonder the inflation target was missed in both 2003 and 2004. The euro convergence path laid down earlier was seriously endangered by the lack of real coordination in

economic policy. More problems resurfaced in September 2005, when news were leaked on the government's false accounting policy unveiled by Eurostat, leading to a significant increase of budget deficit targets. The Eurostat affair, together with an increase in global risk aversion, finally ended the easing cycle. Heightening uncertainty over Hungary's euro convergence resulted in higher volatility of domestic financial asset prices. On the other hand, this sub-period brought with it a clarification of the rules of the IT regime, including the introduction of monthly rate-setting meetings, the Minutes and the new medium-term inflation target. These reforms of the Hungarian IT regime made it comparable – at least in its design – to the IT regimes of advanced economies.

“Tightening”: September 20, 2005 – October 24, 2006

Figure 12.10. Distribution of base rate changes, MC bias and Governor comments in the “Tightening” sub-period



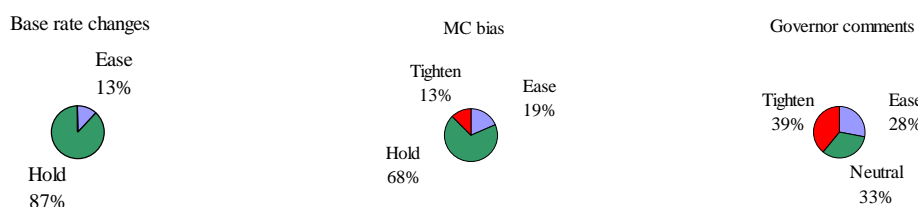
Source: Szikszai (2011).

In the “Tightening” sub-period, which might as well be dubbed the “time of sobering”, MNB raised the base rate back to 8%, trying to halt the weakening of the forint against the euro. The tightening cycle was evident in both the communication of MC and the Governor. Inflation was climbing higher on the back of higher oil and food prices, while the problem of the budget deficit was addressed by the reelected cabinet, which vowed to fix government finances to get the country back on the euro convergence path. The government's work was made increasingly difficult by the outbreak of nationwide demonstrations and riots after the leakage of the Prime Minister's Balatonöszöd speech, which revealed internal conflicts in the party of the governing socialists (MSzP). These demonstrations prompted a short-lived

government crisis, bringing uncertainty and slightly increasing the risk premium on Hungarian assets.

“Transition”: October 25, 2006 – February 25, 2008

Figure 12.11. Distribution of base rate changes, MC bias and Governor comments in the “Transition” sub-period

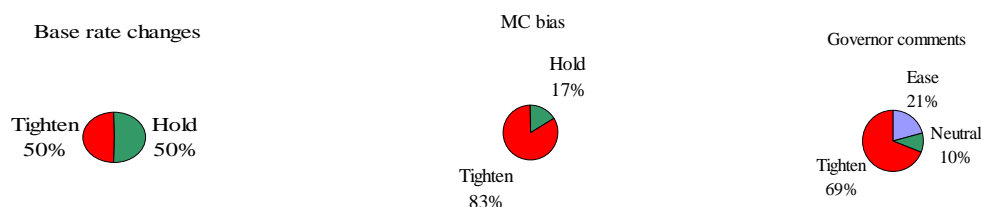


Source: Szikszai (2011).

In the “Transition” sub-period, the markets prepared for and slowly got accustomed to the incoming Governor, András Simor, who became head of the central bank in March 2007. Although budget concerns were calmed by the fiscal austerity package of the reelected government, the base rate changed only slightly from 8% to 7.5% over the period. This was because the measures aimed to shore up the revenue side of the budget were considered inflationary, while international energy prices kept rising. Moreover, global risk aversion increased as a result of the slowly unwinding US subprime mortgage crisis, increasing both the sovereign and the currency risk premium in Hungarian bond yields. These concerns are reflected in the more balanced rhetoric of both the old and the new Governor. The end of this sub-period was marked with the long-awaited decision to abolish the exchange rate floatation band. This decision created brand new conditions for conducting monetary policy, at least formally resolving the conflict between the exchange rate regime and IT.

“Pre-crisis”: February 26, 2008 – September 15, 2008

Figure 12.12. Distribution of base rate changes, MC bias and Governor comments in the “Pre-crisis” sub-period

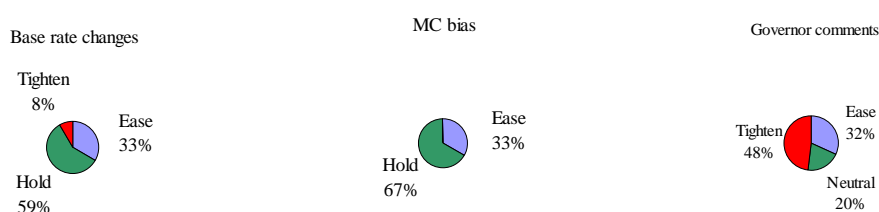


Source: Szikszai (2011).

The “Pre-crisis” sub-period is the shortest one, bringing with it stubborn inflation expectations reflected in core and wage inflation figures, a slight increase in the base rate to 8.5%. The period ended abruptly in the collapse of Lehman Brothers and the takeover of Merrill Lynch. Both MC and Governor communication reflect this tightening stance of monetary policy in this sub-period. Forint reached its all-time high at 229.11 against the euro on July 18, providing evidence that abolishing the exchange rate band was a good decision.

“Crisis”: September 16, 2008 – April 30, 2009

Figure 12.13. Distribution of base rate changes, MC bias and Governor comments in the “Crisis” sub-period



Source: Szikszai (2011).

Although there was only one rate hike in the “Crisis” sub-period, the base rate was still 100 basis points higher by the end. The heightening global risk aversion turned into a full-fledged liquidity crisis, prompting a massive capital withdrawal from Hungarian assets beginning with October 2008. This capital flight and the resulting weak forint limited the scope for a substantial easing of monetary policy, although it

became increasingly clear that inflation concerns are a thing of the past and a global recession is unfolding. The cautious stance of the Governor – reflected in his more hawkish rhetoric – was proven right when forint exchange rate plummeted to a record low against the euro at 316.00 on March 6, 2009.

12.3.1. Monetary policy decisions (July 2001 – April 2009)

In the following short summary, we provide a more profound historical background to the analysis of monetary policy in Hungary. We list the most important monetary policy decisions from 2001 to 2009 (ending with the financial crisis) together with the most likely explanations why the decisions were made, as discerned from the MC communiqués or Governor comments. We also list the most important non-MC events and comments that were related to or influenced monetary policymaking. In red are the extraordinary decisions and in italics are important non-MC events and comments affecting or concerning monetary policy. The wide boundaries indicate the end of the sub-periods as defined previously.

Table 12.3. Monetary policy events in 2001

Date	Event	Background
17:07, February 5	Governor-elect Járαι says less frequent and larger interest rate changes are needed in the future instead of the current practice of 25-50-basis-point (bps) changes.	-
14:51, March 28	The Minister of Finance and the newly appointed Governor outline the new central bank legislation.	The main goal is to increase MNB's independence in conducting monetary policy.
19:12, May 3	The Central Bank Council and the government jointly decide to widen the euro-forint exchange rate floatation band to $\pm 15\%$.	Intention to adjust the existing exchange rate regime to the new IT regime.
16:20, June 11	The Governor says there is no need for an exchange rate target and currency intervention.	An effort to allay concerns on the inherent contradiction between the exchange rate band and the IT regime.
18:14, June 12	The Central Bank Council decides to introduce Inflation Targeting, will forecast inflation 6 quarters ahead and offset any effect causing inflation to deviate from the target by more than 1%.	-
<i>June 15</i>	<i>Total liberalization of foreign currency transactions is effective.</i>	<i>Allows foreign investors to purchase short-maturity government papers.</i>

14:13, July 13	"Technical" increase of the interest rate from 11% to 11.25%.	The base rate became the interest rate paid by MNB on the two-week deposit.
16:00, July 23	The Monetary Council convenes for the first time.	-
16:00, August 21	MNB decides in agreement with the government to abolish the crawling peg as of October 1.	The monthly devaluation of the middle of the floatation band was a source of inflation.
16:00, September 10	MC decreases base rate by 25 bps to 11% with immediate effect.	ECB decreased its rate earlier by 25 bps to 4.25%.
16:00, October 24	MC decreases base rate by 25 bps to 10.75%.	Global monetary easing, domestic disinflation.
10:14, November 12	MC decreases base rate by 50 bps to 10.25% on an extraordinary meeting.	Rate cuts of ECB, Fed and BoE, strong forint, disinflation.
16:00, December 10	MC decreases base rate by 50 bps to 9.75%; narrows the overnight interest rate corridor by 100 bps from 2.5% to 1.5%.	Strong forint, domestic disinflation; interbank interest rates were too volatile.

Source: Szikszai (2011).

Table 12.4. Monetary policy events in 2002

Date	Event	Background
16:00, January 7	MC decreases base rate by 25 bps to 9.5%.	Domestic disinflation, stable forint exchange rate.
16:00, January 21	MC decreases base rate by 50 bps to 9%.	Domestic disinflation.
16:00, February 18	MC decreases base rate by 50 bps to 8.5%; decreases reserve rate to 5% from August 1 and increases interest rate paid on mandatory reserves to 4.75% from September 1.	Domestic disinflation, strong forint, lower risk premium on domestic assets; EU-conform regulations.
16:00, May 21	MC increases base rate by 50 bps to 9%.	High April inflation, and inflation pressures posed by high oil prices, expected fiscal expansion of the newly elected government and wage growth.
18:11, June 7	<i>The government gives approval to its 100-day program including a 50%-wage-raise to 600 thousand public servants.</i>	<i>The government says this will not increase the budget deficit, the MNB Governor opines that no further monetary policy restriction is needed.</i>
16:00, June 24	Narrows the overnight interest rate corridor by 50 bps from 1.5% to 1% as of September 1.	MC emphasizes the need to preserve accumulated credibility by conducting anti-cyclical (restrictive) fiscal policy.
16:00, July 8	MC raises base rate by 50 bps to 9.5%	Weakening forint, higher risk premium, higher expected growth in 2003
16:00, October 14	MC decides to hold rates.	<i>European Commission calls the IT regime and MNB's communication transparent and successful in narrowing the gap between the market's inflation expectations and the official target.</i>
18:40, October 21	<i>Irish state TV (RTE) announces that 62.89% of the voters voted for the ratification of the Nice accord.</i>	<i>The last hurdle to the eastern expansion of the EU is gone, Hungary can join.</i>
16:00, October 28	MNB and the government set the December 2004 inflation target of $3.5 \pm 1\%$.	Necessary to bring down 2006-end inflation to the Maastricht level.
16:00,	MC decreases base rate by 50	Forint strengthening on the back

November 18	bps to 9%	of the Irish referendum on EU expansion, expected fall in risk premium.
16:00, November 25	MC brings the time of decision announcements forward from 16:00 to 14:00; the time of publication of Inflation Reports will also be 14:00.	The Governor will speak of the MC decision and the content of the actual Inflation Report at the same time beginning with 14:00.
14:00, December 16	MC decreases base rate by 50 bps to 8.5%	Strengthening forint, ECB's rate cut and the Copenhagen deal on the conditions of joining the EU.

Source: Szikszai (2011).

Table 12.5. Monetary policy events in 2003

Date	Event	Background
16:05, January 15	MC decreases base rate by 100 bps to 7.5%	Strong forint testing the lower bound of the floatation band, massive intervention against the forint in foreign exchange markets.
16:30, January 16	MC decreases base rate by 100 bps to 6.5%; limits the availability of the 2-week deposit from January 21, widens the O/N interest rate corridor to $\pm 3\%$.	Massive speculation of 5 billion euros against the floatation band, forint temporarily strengthening out of the band.
14:00, January 27	MC accepts MC member Gábor Oblath's resignation; MNB announces no results for its euro auction.	Oblath resigned after the speculation attack against the band; MNB wanted to sell some of the 5 billion euros it purchased in the intervention.
14:00, February 24	MC restores the availability of the 2-week deposit as well as the O/N interest rate corridor of $\pm 1\%$.	2/3 of the speculative capital left the country, but the attack exposed the contradictions between the exchange rate band, fiscal policy and the IT regime.
13:15, March 10	The Minister of Finance and the Governor agree on low inflation, Governor urges cooperation.	Need to show investors signs of cooperation in economic policymaking to fend off further attacks.
14:00, April 28	MC holds base rate at 6.5%.	MC thinks that the December 2003 target of 4.5% will not be met because of high wage inflation and fiscal expansion.
14:00, May 26	MNB ends quiet intervention after the speculative attack; the Bank realized a profit of 42 billion forints in the first 5 months as a result of the attack.	The Governor says MNB's credibility increased after the Bank's quick and appropriate reaction to the speculative attack.
13:41, June 4	MC and the government jointly decide to shift the middle of the euro-forint floatation band by 2.26% to 282.36 forints.	The government intends to improve the competitiveness of Hungarian exporters by deliberately weakening the forint.
14:00, June 10	MC raises base rate by 100 bps to 7.5%.	Weakening forint.
9:00, June 19	MC increases base rate by 200 bps to 9.5%.	Weakening forint.
July 16	Government announces its	An attempt to reassure investors

	<i>intention of adopting the euro on January 1, 2008.</i>	<i>about Hungary's euro convergence.</i>
14:00, August 4	MC holds base rate at 9.5%.	MC calls for cooperation of government and MNB in lowering inflation and emphasizes a candid evaluation of the situation by the government.
16:00, October 20	MNB and the government agree that the inflation target for December 2005 is $4\pm 1\%$.	Accounts for the expected first-round inflationary effects of the announced indirect tax rate increases in 2004.
14:00, November 17	MC holds base rate at 9.5%.	MC says it will not offset the one-off effects of tax-induced price increases in 2004 as these do not endanger the 2005-end inflation target.
9:00, November 28	MC raises base rate by 300 bps to 12.5%	High budget and current account deficit in 2003 weakened the forint and caused an increase in fixed income yields. Public and private savings are encouraged.

Source: Szikszai (2011).

Table 12.6. Monetary policy events in 2004

Date	Event	Background
15:01, January 7	<i>Minister of Finance Csaba László is dismissed.</i>	<i>Conflict with Governor Járαι.</i>
9:00, January 16	<i>December 2003 inflation rate (5.7%) is out of the target range of 3.5±1%.</i>	<i>MC could not offset the inflationary effect of the higher-than-expected budget deficit, household consumption and wage inflation with rate increases. (MC release, 14:00, January 19)</i>
11:33, February 16	<i>New Minister of Finance Tibor Draskovics expects that euro adoption will be postponed to 2010.</i>	<i>Budget deficit and inflation need to be decreased to the Maastricht level.</i>
14:00, March 22	MC decreases base rate by 25 bps to 12.25%.	Favorable global environment, improving exports, slowing consumption, lower budget deficit, lower risk premium.
14:00, April 5	MC decreases base rate by 25 bps to 12%.	Lower risk premium, smaller budget deficit.
14:00, May 3	MC decreases base rate by 50 bps to 11.5%; pays the same interest on mandatory reserves.	Lower risk premium; EU-conform regulation.
14:00, May 17	In the foreword of the Inflation Report, it is stated that the opinion of the Economics Department is not necessarily shared by the MC or MNB.	MC's refuses to take responsibility for exogenous assumptions in the inflation forecasts..
14:00, July 5	MC introduces the practice of non-interest-rate-setting meetings on the first scheduled meeting each month.	Holding interest-rate-setting meetings only once a month is the international practice.
14:00, August 16	MC decreases base rate by 50 bps to 11%.	Increasing global risk appetite increases after rate hikes in the US, inflation will probably drop to 6% in 2004.
17:27, August 19	<i>Prime Minister Péter Medgyessy sends his ultimatum to SzDSz, MSzP's coalition partner.</i>	<i>He wants to resign from his post as Prime Minister in the coalition government because of .</i>
19:20, August 25	<i>MSzP congress votes Ferenc Gyurcsány as new PM.</i>	<i>SzDSz and financial markets prefer him to Péter Kiss.</i>
14:00, October 18	MC decreases base rate by 50 bps to 10.5%.	Incessant disinflation, strong forint.

14:00, November 2	MNB and the government set the December 2006 target to $3.5 \pm 1\%$.	Euro convergence.
14:00, November 22	MC decreases base rate by 50 bps to 10%; Minister of Finance informs MC members on the upcoming amendments to the central bank act.	Lowering inflation, strong global risk appetite, lower domestic demand, slowing wage inflation; Prime Minister is looking for a way to counterbalance Governor's dominance in MC decisions.
14:00, December 6	MC decides to publish the Minutes of rate setting meetings beginning with the meeting of December 20. The minutes will include the voting count, a summary of MC's evaluation of the situation, the alternative proposals and the arguments made (anonymously).	The aim is to improve transparency and predictability of interest rate decisions.
15:11, December 20	<i>President Ferenc Mád1 endorses new legislation – voted by Parliament on December 14 – increasing the number of MC members from 9 to 13, giving the PM the right to appoint 4 new MC members.</i>	<i>PM has now more indirect say in conducting monetary policy.</i>
14:00, December 20	MC decreases base rate by 50 bps to 9.5%.	Declining inflation, strong global risk appetite, falling government bond yields, strong forint.

Source: Szikszai (2011).

Table 12.7. Monetary policy events in 2005

Date	Event	Background
9:00, January 18	<i>December 2004 inflation rate (5.5%) is out of the target range of 3.5±1%.</i>	<i>MC could not offset the first-round inflationary effect of the indirect (VAT) tax rate increases but could tame second-round effects on inflation expectations. (MC release, 14:00, January 24)</i>
14:00, January 24	MC decreases base rate by 50 bps to 9%.	Low inflation expectations in the 2004 wage figures.
14:00, February 21	MC decreases base rate by 75 bps to 8.25%.	Strong global risk appetite, slack labor market, steady disinflation.
13:33, February 25	President Mádl inaugurates MC members newly appointed by PM Gyurcsány.	New members are expected to loosen monetary policy.
14:00, March 29	MC decreases base rate by 50 bps to 7.75%.	Strong forint and competition, slowing consumption and wage growth, slower expected GDP-growth.
14:00, April 25	MC decreases base rate by 25 bps to 7.5%.	Strong forint, low core inflation rate in March.
14:00, May 23	MC decreases base rate by 25 bps to 7.25%; Governor asserts that the IT regime has worked well.	Low core and wage inflation, slowing domestic demand, slack labor market, fall in global oil price; exchange rate still the strongest channel of monetary transmission, but strengthening credibility might increase the role of expectations (Járai, 15:00, May 23, portfolio.hu).
14:00, June 20	MC decreases base rate by 25 bps to 7%.	Benign inflation outlook, slowing consumption, slack labor market, low wage inflation, favorable global environment.
14:00, July 18	MC decreases base rate by 25 bps to 6.75%.	Low inflation expectations and core inflation.
July 25	In an interview to daily Világgazdaság, the Governor asserts that the principal role of reducing inflation has shifted from a strong forint exchange rate to decreasing expectations of future inflation.	Manipulating the exchange rate through interest rate changes in order to lower inflation is a very costly endeavor, especially if fiscal policy ignores the jointly set inflation target.
14:00,	MC decreases base rate by 50	Benign inflation outlook, strong

August 22	bps to 6.25%; MNB and government announce the new medium-term inflation target of $3\pm 1\%$, MNB will offset inflation risks – except fiscal policy – on the horizon of 5-8 quarters ahead.	global risk appetite; MNB intends to distance itself of the inflationary effects of fiscal policy.
8:41, September 16	<i>Daily Világgazdaság writes of Eurostat's imminent demand of the revision of Hungarian budget figures.</i>	<i>This reduces Hungary's chances of joining the euro zone by 2010.</i>
14:00, September 19	MC decreases base rate by 25 bps to 6%.	Benign inflation outlook, strong global risk appetite.
14:48, September 28	<i>Minister of Finance János Veres announces the revision of the budget deficit figures expected for 2005 (6.1% from 3.6%) and 2006 (4.7% from 2.9%).</i>	<i>Because of Eurostat's decision, revenues from the outsourced motorway management company ÁAK cannot be accounted in the central budget.</i>
7:34, October 3	<i>PM Gyurcsány hints at the postponement of euro adoption to after 2010.</i>	<i>It would require huge sacrifices.</i>

Source: Szikszai (2011).

Table 12.8. Monetary policy events in 2006

Date	Event	Background
11:43, June 10	<i>Head of the re-elected government presents his package of reforms in taxes and subsidies: 15% VAT to rise to 20%, simplified entrepreneur (EVA) tax to 25%, household gas prices to rise by 30%, electricity by 10%, bank deposits to be taxed at 20%, gas price subsidies to be reduced.</i>	<i>IMF earlier estimated the 2006 budget deficit to be 10% of GDP, and criticized Hungarian state finances saying that the continuous overshoot of the budget deficit targets undermines economic stability and the outlook for growth.</i>
14:00, June 19	MC increases base rate by 25 bps to 6.25%.	Inflationary risks of fiscal policy, worsening inflation outlook, deteriorating global environment.
14:00, July 24	MC increases base rate by 50 bps to 6.75%.	Inflation pressures of expected tax increases in 2007, worsening inflation outlook, deteriorating global environment.
14:00, August 28	MC increases base rate by 50 bps to 7.25%.	Inflation pressures of expected regulated price increases in 2007.
12:58, August 31	<i>The government finalizes the Convergence Program.</i>	<i>The new program increases tax and social security revenues and cuts subsidies to bring down the budget deficit, and, for the first time, does not specify a target date for the adoption of the euro.</i>
16:10, September 17	<i>The Öszöd speech is leaked to the press with the PM's confession that the government has done nothing for the last 4 years and has been lying for the past 1.5.</i>	<i>Protesters and the opposition parties demand the PM's resignation.</i>
14:00,	MC increases base rate by 50 bps	Weak forint, worsening inflation

September 25	to 7.75%.	outlook, political instability.
14:00, October 24	MC increases base rate by 25 bps to 8%.	Risk of fiscal consolidation.

Source: Szikszai (2011).

Table 12.9. Monetary policy events in 2007

Date	Event	Background
January 10	MNB's two-week deposit is renamed MNB-bill.	
16:20, March 1	President László Sólyom inaugurates András Simor as Governor.	PM Gyurcsány appointed a candidate acceptable for both coalition partners and financial markets.
14:00, June 25	MC decreases base rate by 25 bps to 7.75%.	Lower core inflation, lay-offs in services.
14:00, September 24	MC decreases base rate by 25 bps to 7.50%.	Improving inflation outlook, lower-than-potential GDP, better country risk profile.
10:34, December 20	The Governor and the PM meet.	This is the first of three consecutive meetings (2.: January 9, 2008, 3.: February 20, 2008) on which the partners supposedly discuss the abolition of the exchange rate band.

Source: Szikszai (2011).

Table 12.10. Monetary policy events in 2008

Date	Event	Background
14:00, February 25	MNB and the government decide to abolish the EURHUF exchange rate floatation band as of February 26.	The new exchange rate regime insures that MNB's primary goal is price stability.
14:00, March 31	MC raises base rate by 50 bps to 8%.	Increasing energy costs, wages and higher global risk aversion as a result of the subprime mortgage crisis.
14:00, April 28	MC raises base rate by 25 bps to 8.25%.	Higher-than-expected wage inflation, risks of cost-push inflation.
14:00, May 26	MC raises base rate by 25 bps to 8.5%.	Slower-than-expected disinflation because of stubborn wage inflation, deteriorating global environment.
14:42, August 25	MNB and the government agree to keep the medium-term inflation target at $3 \pm 1\%$ for the next three years.	Short-run deviations are overlooked but inflation has to return in the tolerance band in the medium term.
September 15	The leading U.S. investment bank Lehman Brothers files for bankruptcy and brokerage Merrill Lynch is taken over by Bank of America	Lehman's collapse accelerates the spread of the global financial crisis, prompting a capital flight from emerging economies such as Hungary.
9:26, October 10	<i>CEE currencies start to weaken against the euro, prompting regional Governors to calm speculation.</i>	<i>Capital flight from most CEE countries causes domestic currencies to fall, encouraging speculation against these currencies.</i>
8:57, October 16	MNB secures a 5-billion-euro loan from the ECB.	The goal is to provide commercial banks with foreign currency through swap contracts.
14:00, October 16	MC expands the range of short-term financing instruments by introducing a weekly fixed rate tender for the two-week maturity and a regular variable rate tender for the six-month maturity.	The goal is to increase liquidity on the government bond market by expanding the supply side.
11:00, October 22	MC increases base rate by 300 bps to 11.5% and reduces the overnight corridor around the	Plummeting forint exchange rate threatens financial stability.

	base rate to ± 50 bps.	
8:11, October 29	IMF, World Bank and the European Union provide Hungary with 20 billion euros in a joint loan package, and ask to reduce budget deficit to 2.6% of GDP in return.	<i>The goal is to prevent further speculative attacks on forint and simultaneously usher the government towards fiscal adjustment.</i>
14:00, November 24	MC decreases base rate by 50 bps to 11%.	Imminent global recession and the fall of energy and food prices are likely to push inflation below 3%, correction of the earlier 300-bp rate hike.
14:00, December 8	MC decreases base rate by 50 bps to 10.5% on a non-rate-setting meeting.	Global rate cuts, lower country risk premium after the loan package.
14:00, December 22	MC decreases base rate by 50 bps to 10%.	Global and domestic recession lowers inflation.

Source: Szikszai (2011).

Table 12.11. Monetary policy events in 2009 (up to April)

Date	Event	Background
14:00, January 19	MC decreases base rate by 50 bps to 9.5%; MNB publishes its assessment of why the medium-term inflation target was missed in 2006, 2007 and 2008.	Imminent recession is likely to keep inflation low; MNB blames the 2006-2007 overshoot on fiscal shocks (indirect tax and regulated price increases) and the 2008 miss on soaring global energy and food prices.
16:14, March 8	Governor calls extraordinary meetings on March 6 and 8, followed by a statement on the use of the entire arsenal of policy tools if necessary to maintain financial stability.	Forint weakens on March 6 to record low (316) against the euro.

Source: Szikszai (2011).

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Appendix

Code of Conduct (2009)

The Code of Conduct was developed by the Association to enhance the fair behavior of public financial institutions in lending to their customers. 13 banks joined to the Code of Conduct, representing more than 90% of total retail lending.

The basic disciplines applied:

- principle of transparency means that financial institutes shall improve transparency and access to the necessary information in retail lending;
- principle of rules means that the signatory creditors record the content and process of their good practice in accordance with the laws and decrees in effect;
- principle of symmetry means that, if the terms and conditions improve for the customers then these changes should be applied for their benefit, and the interest rate, fees or costs can unilaterally be reduced not only raised.

The Code of Conduct regulates in the context of retail lending:

- the general standards for responsible lending;
- the general principles of the creditors' behavior before contracting;
- the rules on unilateral changes in the contractual terms under maturity;
- the applicable procedures in case of difficulty in customer payments;
- the principles of responsible creditor behavior before and during implementation procedures.

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THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?'

THE PARTNERS IN THE CONSORTIUM ARE:

Participant Number	Participant organisation name	Country
1 (Coordinator)	University of Leeds	UK
2	University of Siena	Italy
3	School of Oriental and African Studies	UK
4	Fondation Nationale des Sciences Politiques	France
5	Pour la Solidarite, Brussels	Belgium
6	Poznan University of Economics	Poland
7	Tallin University of Technology	Estonia
8	Berlin School of Economics and Law	Germany
9	Centre for Social Studies, University of Coimbra	Portugal
10	University of Pannonia, Veszprem	Hungary
11	National and Kapodistrian University of Athens	Greece
12	Middle East Technical University, Ankara	Turkey
13	Lund University	Sweden
14	University of Witwatersrand	South Africa
15	University of the Basque Country, Bilbao	Spain

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