



NATIONAL BANK OF ROMANIA

FINANCIAL STABILITY REPORT

2006

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ABBREVIATIONS

ABAR	Authority for Bank Assets Recovery
ASAR	Authority for State Assets Recovery
AV	Added Value
BET	Bucharest Exchange Trading (the Bucharest Stock Exchange index)
BLA	Banking Leasing Association
BSE	Bucharest Stock Exchange
C	Capital
CEE	Central and Eastern Europe: Bulgaria, Czech Republic, Croatia, Hungary, Poland, Romania, Slovakia, Slovenia
CPI	Consumer Price Index
D	Debts
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECB	European Central Bank
EU	European Union
EU-10	New EU Member States: Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia
EU-15	EU Member States: Austria, Belgium, Denmark, Finland, France, Greece, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, United Kingdom
EU-25	European Union, comprising the Member States in EU-10 and EU-15
FDI	Foreign Direct Investment
FED	Federal Reserve (the central bank of the United States)
GDP	Gross Domestic Product
Ic	Indebtedness costs
IC	Investment companies
ICR	Interest coverage ratio
IFC	International Finance Corporation
IMF	International Monetary Fund
ISC	Insurance Supervisory Commission
ITR	Interest to turnover ratio
LCAR	Leasing Companies Association in Romania
MoPF	Ministry of Public Finance
MRR	Minimum reserve requirements
NBR	National Bank of Romania
NBFI	Non-bank financial institutions
NIS	National Institute of Statistics

NMS-8	New EU Member States except Cyprus and Malta
NSC	National Securities Commission
NUEMBS	National Union of Employees' Mutual Benefit Societies
NUUCITS	National Union of Undertakings for the Collective Investment of Transferable Securities
PPI	Producer Price Index
ROA	Return on assets
ROE	Return on equity
SIF	Societăți de investiții cu caracter închis (Financial Investment Companies)
SMEs	Small- and medium-sized enterprises
T	Turnover

Foreword by Mr. Mugur Isărescu,

Governor of the National Bank of Romania

Price stability is, as a rule, the key responsibility of central banks. Small changes in the level of prices and small price fluctuations create favourable conditions for lasting economic growth. Considering a monetary environment as such is conducive to smooth operation of financial markets.

Moreover, central banks play a well-defined role in financial stability, broadly seen as the financial system's capability to withstand systemic shocks in the long term and without triggering major disturbances, to efficiently allocate resources across the economy, and to effectively identify and manage risks.

In accordance with its statute, the National Bank of Romania exercises several tasks regarding financial stability, via prudential supervision over banks, monitoring payment systems, ensuring immediate liquidity and acting as a lender of last resort, in exceptional circumstances, for credit institutions.

The issue of financial stability is all the more conspicuous in the case of Romania, which undergoes a far-reaching structural change involving financial liberalisation amid the catching-up with the development levels in the European Union. At this stage, Romania's special macro picture, marked by inflation and nominal interest rates higher than those prevailing on financial markets, makes the central bank face, to differing degrees, the task of ensuring price stability and financial stability (by precluding systemic risks that may arise from excessive strengthening of the exchange rate of the RON).

This is why the central bank took the initiative of presenting the general public as well as the professional public – by means of a regular report – the soundness of the financial system (institutions, markets, and infrastructure) and the factors that might affect it as a result of the system's relations with the economy, the public sector, and the external environment.

Together with the other leading publications issued by the National Bank of Romania, i.e. “Annual Report” and “Inflation Report”, the “Financial Stability Report” will contribute to providing the public with information on the central bank specific activities.

Financial stability of a small market

The concept of financial stability has not been clearly defined, nor has a generally accepted model for assessing financial system stability been devised yet. It may be asserted, on the one hand, that financial stability is manifest when there is no sign of a systemic crisis. On the other hand, seen from the perspective of its functions, a stable financial system is capable of efficiently allocating resources, both spatially and especially intertemporally, managing financial risks through adequate calibration and through self-corrective mechanisms even when affected by external shocks. Therefore, a financial system, irrespective of its size or complexity, can be viewed as stable whenever it may help enhance the economic performance and dissipate the imbalances that arise in the aftermath of significant adverse and unanticipated events¹.

In Romania, the financial system is still far from being full fledged: at end-2005, total assets of financial intermediation institutions accounted for only 53 percent of GDP, well below the levels seen in EU Member States. However, it is worth noting the increase recorded in the past three years, from 36 percent of GDP, due almost entirely to the rise in bank assets. In addition, the capital market expanded at a fairly brisk pace, with market capitalisation advancing from 10 percent of GDP in 2002 to more than 22 percent of GDP at year-end 2005. Nonetheless, it should be pointed out that the advance could not be put down to an adequate diversification of the listed shares. The large imbalance between bank assets and the assets of other financial institutions underscores both the long absence of proactive development policies in respect of alternative markets and the scant domestic funding in search of investment alternatives.

One could wonder whether there are any impending risks to financial stability in Romania – the answer is definitely no for two reasons. First, credit risk was identified and reined in by the supervisory authority, along with the improving risk management of banks, which have been reporting adequate levels of prudential indicators. Second, non-bank financial institutions carrying on lending activity cannot pose systemic risk because this market's volume is still low. Moreover, starting 2006, these entities were put under the central bank's oversight and supervisory umbrella. Finally, the households and business sectors do not pose major risks to the banking sector, even though exposure to such entities tends to increase. In fact, the fledgling financial intermediation in Romania – basically the macroeconomic upshot of the above-mentioned sectors' low indebtedness to banks – still provides a certain natural hedging to the financial system.

The year 2005 witnessed a slowdown in the growth rate of household saving amid lowering deposit rates and a stronger propensity for consumption once personal taxation loosened. This was also the result of the absence of a viable alternative to deposits, which allowed banks to set deposit rates in keeping with the imperfect competition; on the other hand, costlier foreign exchange borrowings following the hike in the reserve ratio on foreign-currency-denominated liabilities could not be offset by long-term investments in public debt financing instruments.

The explanation for weak financing via bank loans lies, to some extent, with the costs attached to domestic credit, as also illustrated by the increasing export of financial intermediation in response to central bank's measures to put a damper on credit expansion. The overriding reason for replacing bank credit by inter-corporate loans and trade arrears is the lack of bond issues due to the fact that

¹ Garry J. Schinasi, "Defining Financial Stability", IMF, WP/04/187, p. 8.

part of the domestic corporate sector is insufficiently prepared for transparency and for withstanding competition within the EU. Another demand-side explanation for such state of affairs could be the prevalence, for most of the '90s, of economic, monetary and financial instability in Romania, which brought about reluctance to bank indebtedness, an attitude that has not completely faded. On the supply side, banks' appetite for larger exposure on the retail segment increased against the backdrop of improved macroeconomic climate and keener competition on the financial services market.

The spectacular developments on the Romanian stock market are worth mentioning. The increase in market capitalisation is the direct effect of macro-stabilisation and an improved regulatory framework, but it cannot be attributed to structural transformations yet. As a result, Romania was the frontrunner in terms of stock market indices developments, ahead of other exchanges in the region such as Turkey, Bulgaria, or Croatia. Market turnover in listed and non-listed shares as well as bonds nearly trebled in the space of one year – this development should however be viewed warily for two reasons. Firstly, it may be viewed as a correction of previously underrated levels or as a sign that a correction is in the offing. Secondly, the aforementioned figure refers to growth dynamics, not to the volume or diversity of instruments subject to trading. The value of traded volumes, which accounted for little over 2 percent of GDP, is indicative of the still fledgling state of the market. This owed much to the dynamics of foreign direct investment, an alternative to domestic funding. Specifically, financing via loans granted by parent undertakings to their subordinate units is facilitated by the strong ties with the parent undertakings' banks and by its flexibility and briskness. This particular type of financing the economy reached 6 to 8 percent of GDP, almost four times as large as stock exchange financing, leaving residents little choice for investments in the local stock market. Given the circumstances, capital market is not yet prepared to cope with shocks in emergency cases, a fact proved by its inadequate reaction to the capital that flooded Romania starting with 2005.

Another impressive performance was the increase in depth of the foreign exchange market. Non-residents' sales (gross inflows) accounted for 28.5 percent of GDP in 2005 whilst outflows were almost of the same size, with the net balance standing at around EUR 1 billion. In year-on-year comparison, sales on the interbank foreign exchange market multiplied about 2.5 times, with residents' sales making up only one third. Such market turnover tested the banking system's ability to absorb the large capital inflows without generating shocks. This dynamics is above all the response of capital to the low nominal interest rates on full-fledged markets combined with the dwindling risk on the domestic market. Domestic currency volatility increased, also as a result of poor supply of investment opportunities, causing operations to be performed on a short time horizon and be confined almost entirely to trading in bank products. Furthermore, the small number of investment alternatives put most of the pressure on the exchange rate, thereby boosting its volatility. Given the high euroisation of the economy, increased volatility may entail bigger uncertainties for some operators such as domestic businesses and households.

To sum up, it may be asserted that financial stability indicators are proof that a sound and healthy system is in place, its small size and inconsistency notwithstanding. From this perspective, keeping an eye on medium-term development is imperative, as the persistence of structural disequilibria at substantially higher levels may cause system vulnerability to increase. Moreover, the subsequent financial stability reports will also include other market segments such as pension funds, derivatives and hedge funds. The latter two components will be subject to liberalisation during 2006 Q3; by then, the monetary authority is engaged in their assessment and customers are getting

increasingly familiar with them. The National Bank of Romania is interested in these components the more so as the focus of supervision in the EU will require Romania to attach particular attention to the fast-growing financial market segments, also due to the interest shown by conglomerates and cross-border groups. Last but not least, the central bank will have to take account of other exogenous risks such as natural catastrophes or epidemics.

Eugen Dijmărescu

Deputy Governor

CHAPTER 1. SUMMARY

The year 2005 saw the improvement of the Romanian financial system's ability to withstand shocks, to efficiently allocate resources to real economy, as well as to identify and manage risks. Such risks have remained benign, yet some of them are on the rise, which calls for stronger oversight in respect of financial stability: the still high inflation rate stymies long-lasting economic growth, the current account deficit persists, but is sustainable over the short term, household indebtedness expanded, and foreign-exchange-denominated corporate debt service is on the increase.

The international financial and economic climate was broadly favourable to financial stability in Romania during 2005, and forecasts show that prospects for 2006 are encouraging. Italy, Germany and France (Romania's major trade partners) as well as the Netherlands and Austria (the countries holding a large weight of foreign direct investment) have reported positive outlook for economic growth in 2006. In the eurozone and the USA, the maintenance of tighter monetary policy has chiefly two consequences for financial stability in Romania, namely (i) foreign-exchange-denominated debt service will rise (the weight of medium- and long-term EUR-denominated loans to businesses in total forex loans widened to 50 percent at end-2005 from 35 percent in 2003) and (ii) part of the volatile capital flows could shift towards higher-yield EUR- and USD-denominated investments.

The oil market remains riddled with uncertainties, with expectations pointing to further price swings in the medium run. For Romania, the impact is mixed, as the negative effects on aggregate supply are partly offset by the positive effects on oil processing and hydrocarbon extraction sectors. Prices of main base metals quoted on international markets went up, entailing dire effects for the profitability of Romanian companies active in metallurgy and machinery and equipment industry.

In 2005, **Romania's macroeconomic features** were the following: resumption of moderate growth rates, slowing disinflation, wide current account deficit amid the increase in foreign direct investment. As for the policy mix, it is worth mentioning that (i) the central bank implemented direct inflation targeting amid the ongoing capital account liberalisation, (ii) income policy eased, and (iii) the authorities pursued a pro-cyclical fiscal policy. In order to spur investment, the lynchpin of sustainable economic growth, the consistent cut in inflation rate is a top priority.

Foreign perception regarding Romania's risk improved. The spread relating to bonds issued by the Romanian government on foreign markets narrowed noticeably and rating agencies assigned Romania, for the first time ever, a rating pertaining to the investment grade.

Current account deficit widened in 2005 to a record high after 1989 and forecasts for 2006 show that the current level is very likely to persist. Foreign direct investment covers deficit financing to a large extent. Special mention deserves the fact that the current account deficit has a structural nature ascribed to the high volume of investment needed in the convergence process and the restructuring of real economy. Weaker performance of domestic saving does threaten financial stability in the short term given the offsetting impact of foreign capital inflows. At corporate level, low saving calls for special attention, and pension system reform could be a remedy for this state of affairs.

Fiscal consolidation continued during 2005, the low fiscal deficit being attributed to the cut in spending as a share of GDP. This development helped curb inflation. Income policy eased, with

public-sector real wages growing faster than the economy-wide average. Introduction of the flat tax rate had a rather neutral effect on financial stability.

At aggregate level, the **corporate sector** generated moderate risks for financial stability. The favourable macroeconomic performance in the past few years and the ongoing economic restructuring caused the corporate financial standing to strengthen. A potential rise in interest rate would not jeopardise financial stability, yet a large, adverse impact deriving from exchange rate movements might trigger systemic risk. The improved corporate financial standing also materialised in lower arrears, the level of which however remains high. Moreover, particular attention should be attached to payment discipline, which is marred by the rise in the number of payment incidents and the related amounts.

Corporate costs could be adversely affected by the movements in the exchange rate, administered prices, and wage pressures. Risks to financial stability remain benign, as the indicators on likelihood of payment default for the businesses indebted at banks are, generally, more favourable than those characterising the corporate sector as a whole in Romania.

Efficiency of resource allocation is not satisfactory, yet current trends hint at an improvement. Bank loans are still seldom resorted to by the companies seeking to ensure financing, owing largely to their high costs, the lack of viable projects, large self-financing sources and looser payment discipline. The risk premium on loans narrowed, which is indicative of improved creditor perception vis-à-vis the companies' ability to safeguard debt servicing.

Foreign borrowings turned up over the last three years, whereas unsecured loans grew at a faster pace in the latter half of 2005. As a result, export of financial intermediation carrying a low degree of credit risk accounted for more than 50 percent of domestic bank loans to businesses. The explanation for this development could be the costly domestic financial intermediation.

Risks to financial stability emanating from **household sector** increased in recent years, without however posing threats to the system as a whole. The major risk is the rise in indebtedness, so that potential negative shocks on interest rate, incomes, exchange rate, or asset prices might have a dampening impact on household ability to ensure debt servicing.

In the medium and long term, expectations hint at the growth of permanent income and the prospect of EU accession feeds such anticipations as well. Aside from the actual increase in incomes, household behaviour was tailored to the bright outlook on incomes, both causing a boom in consumption in recent years.

Net wealth of households stayed on an upward trend over the past few years. Property prices soared, spurring the wealth effect or the indebtedness capacity by pledging non-financial assets as collateral. Nonetheless, low liquidity of real-estate market and the significant weight of non-financial assets in total net wealth might diminish considerably household ability to withstand a potential systemic shock.

In the short term, Romanians are expected to borrow further by contracting consumer credits in particular. In the long term, convergence will underpin mortgage credit expansion, conditional upon the increase in incomes and real-estate supply. Should supply fail to meet demand, financial stability could be jeopardised because of the upsurge in prices of such non-financial assets.

The weight of (domestic and foreign) borrowings denominated in foreign currency in total credits widened noticeably, fostered also by lower lending rates and a stronger domestic currency. In this

context, unhedged borrowers should not be overlooked, as they are far more sensitive to interest- and exchange-rate shocks.

Exposure to households of the Romanian banking sector is still very small compared with other European countries. Nevertheless, growth of indebtedness outpaced that of incomes (in anticipation of bigger incomes in the future) and could hit debt service if the current trends in incomes dynamics or in interest rates (especially on forex loans) reversed.

Financial system developed and strengthened considerably over the past few years. In terms of financial intermediation though, Romania sloped last in the group of the Central and East European countries. Its development potential is high, yet the overly swift pace of convergence might bring about some risks. The banking sector has underwent in-depth changes lately, with privatisation (foreign capital comes almost entirely from the EU) playing a paramount part. Non-bank financial institutions, albeit posting a faster growth rate, are still in an incipient stage.

Banking sector is stable, capable of withstanding significant shocks. Within the financial system, banks are prevalent. It is worth noting that the level of financial intermediation experienced a marked increase, prompting economic growth. Bank capitalisation remains well above capital requirements, quality of the loan portfolio is good, whereas liquidity and financial performance are high. The level of specific risk provisions is close to that of total debt at risk. The short-term outlook reveals no major risks to banks, and the downtrend in some stability indicators is rather associated with the banks' lending cycle. Nevertheless, the topmost concern of bank management and of the supervisory authority is further credit risk management, justified also by the likely increase in non-performing loans given the still fast-paced credit expansion.

The **non-bank financial institutions sector** displays an increasing ability to deal with systemic shocks. Rapid growth of the insurance sector over the last few years and its strengthening ties with the bank market made insurance companies play a greater part in maintaining financial stability. The performance of domestic insurance undertakings has improved amid the overall growth of the financial system. Major risks could arise from: (i) the downturn in interest rates as regards life insurance policies, (ii) increase in the maximum indemnity ceiling as regards general insurance, and (iii) occurrence of natural catastrophes such as earthquakes. There is little threat of instability in the insurance sector, as the market volume remains small compared to the real economy. Leasing companies posted the strongest advance over the past four years compared with the other financial institutions, i.e. banks and non-banks. Even though funds have been raised mostly from banks, leasing is less likely to generate systemic shocks.

Capital market witnessed the fastest expansion in the region, driven chiefly by substantial corrections in equity prices. However, the record-breaking performance was not accompanied by positive consequences such as the increase in the market's contribution to real economy financing or the diversification of the shares and instruments subject to trading. Financial depth is still shallow, the market's integration with the international exchanges is insufficient, and resource allocation is not efficient yet. The capital market is less likely to cause a shock to financial stability, as its contribution to real economy financing is still small. For this reason, the financial system is stickier and potential shocks in the banking sector could not be efficiently absorbed by the underdeveloped capital market.

Financial infrastructure, i.e. regulatory framework and payment system, also had a contribution to the maintenance of financial stability in 2005. The change in the architecture and functionality of payment system has required harmonisation with the best practices and systems existing in the EU. Implementation of the electronic payment system led to increased security and efficiency of

transactions, as well as better control over risks, credit risk in particular. The regulatory framework applicable to credit institutions was aimed at transposing the *acquis communautaire* and widely-accepted international standards into domestic legislation, thereby facilitating banking sector stability and innovation. Non-bank financial institutions performing lending activity were put under the National Bank of Romania's regulation, supervision and oversight in order to mitigate the arbitraging effect of bank regulations and to prevent risks from spreading from the banking sector to other components of the financial system. In 2006, the major regulations having an impact on financial stability refer to the following: (i) transposition of the provisions of Basel II Accord, (ii) regulation of mortgage loans and receivables securitisation, (iii) financial conglomerates, and (iv) implementation of the private pension system.

Guidelines to foster financial stability

Strengthening of payment discipline. The increase in the number and value of payment incidents reported to the National Bank of Romania is proof of the fact that payment discipline further requires special attention. The weight of amounts rejected from payment in total past-due debts to suppliers accounts for 5 percent, which implies keeping an eye on the developments in this indicator. In order to strengthen payment discipline, the central bank should contemplate the following steps: (i) to post on its website all persons that generated payment incidents and (ii) to amend the regulations so as to extend the interdiction period relative to the issuance of payment instruments for such persons.

Modification of provisioning system. While lending advanced at a brisk pace in the past few years, the weight of past-due debts in total loans narrowed. Nevertheless, this indicator might underestimate the current credit risk, since loan maturities tend to be higher, provisions are pro-cyclical and the growth rate of borrowings is substantially faster than the pace at which loans other than those falling under "standard" are recognised in the balance sheet. The level of specific risk provisions is close to that of value-at-risk calculated on the basis of default likelihood, yet the results belong to a moment in time on the upward slope of the economic cycle. For the purpose of having an accurate as possible estimate of credit risk, a provisioning system of a less pro-cyclical nature should be implemented.

Improved co-ordination of macroeconomic policies. The National Bank of Romania's ability to fight inflation all by itself is limited as a result of multiple exogenous factors such as the large weight of administered prices in the CPI, structural rigidities that beset the economy, and high euroisation. Given the circumstances, in the absence of better co-ordination between fiscal, income and monetary policies, overly heavy resort to monetary policy measures is likely to affect financial stability by means of low-risk export of financial intermediation and entail adverse effects on the external equilibrium following the overappreciation of the domestic currency.

Fast pension system reform. Convergence and restructuring of the economy call for massive investment, entailing a structural and persistent nature of the current account deficit, *ceteris paribus*, in the medium run. Public policies should focus on saving and therefore pension system reform could be a solution, even though it would have a detrimental impact on the fiscal deficit in the medium and short term. To this end, mobilising domestic savings could help as well.

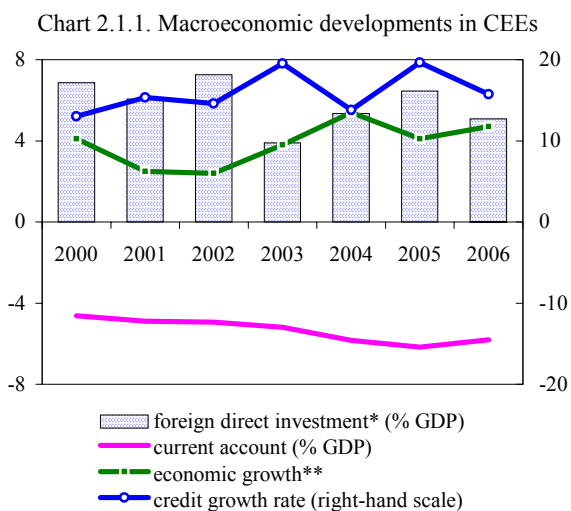
CHAPTER 2. MACROECONOMIC FRAMEWORK

2.1. International economic and financial environment

In 2005, the international economic and financial environment was generally favourable to Romanian financial stability. The risks remain benign, with particular attention being paid to EU economic growth, movements in EUR and USD interest rates and oil and base metals prices.

World economy continued to record high growth rates (above the average for the past 30 years), whilst inflation stayed on a downward course. The main challenges were: (i) wider external imbalances (larger current account deficit in the USA and growing exposures of Asian countries), (ii) low economic growth and high unemployment rate in the eurozone, (iii) overcoming deflation and boosting consumption in Japan, and (iv) higher oil prices.

Starting with 2004, the economic growth rate in the EU has exceeded 2 percent, yet uneven developments are further seen at country level. Romania's main trading partners, namely Italy, Germany and France, posted an improved economic performance. Germany is estimated to have recorded the most substantial economic development, as the forecasted economic growth rate runs at 1.5 percent (EC, 2005) amid the expansion in exports. Moreover, France and Italy are also expected to display high growth rates (up 1.9 percent and 1.3 percent respectively) (EC, 2005). Unlike Germany, whose growth hinges largely on the economic performance of its foreign trade partners and on the evolution of the single currency, the main driver of economic growth in France and Italy is domestic demand which relies mostly on the measures aimed at fighting unemployment and on the movements in energy prices. The Netherlands and Austria, the countries providing a large weight of foreign direct investment in Romania, also have favourable prospects for economic growth, owing mainly to export performance.

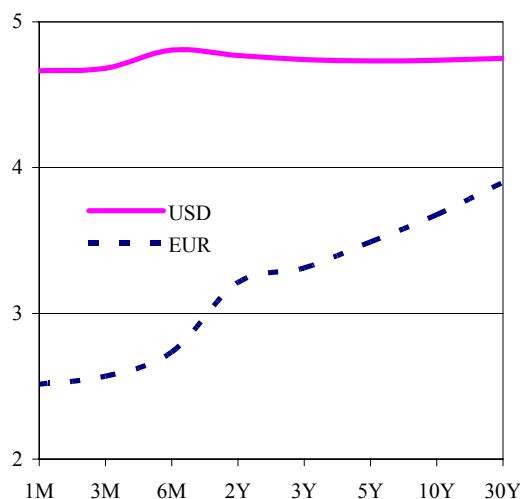


* except Hungary and Slovenia

** except Croatia and Slovenia

Source: Bloomberg; forecast for 2006

Chart 2.1.2. Structure of interest rates in the eurozone and the USA, March 2006



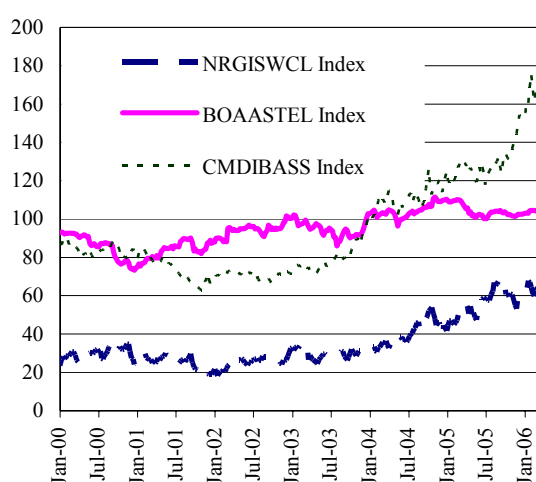
Source: Reuters

The contagion risk, which might have been induced by uneven developments in Central and Eastern European countries, was low. Economic growth and foreign direct investment are robust in CEEs. The major risks are (i) faster credit growth rate, encouraged by bank privatisation and the low level of financial intermediation and (ii) persistency of wide current account deficits (Chart 2.1.1). However, the developments are mixed due to differences between EU10 countries and the

acceding countries, with the former posting lower magnitude of such risks (except for Hungary and Slovakia). The widening of the current account deficit, particularly in acceding countries, is also attributed to the narrowing gap between those countries and the EU. The increasing capital flows ensure the financing of external deficits, but they also put pressure on monetary policy. However, the rise in interest rates by the ECB and the FED may ease such pressures.

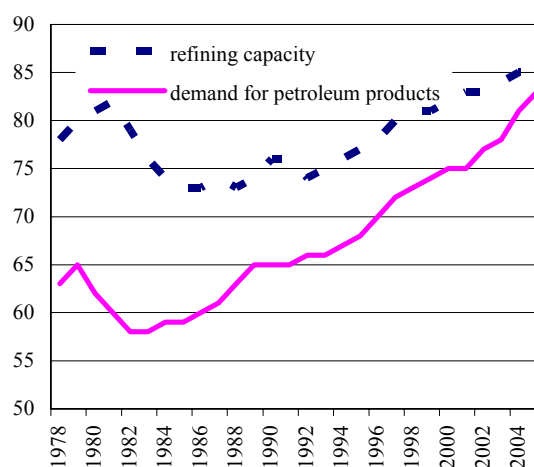
The term structure of the interest rates in the eurozone is on the rise (Chart 2.1.2) and the ECB is expected to further pursue the tightening of monetary policy. This development will have a negative impact on external debt service for non-financial institutions in Romania, as the share of medium- and long-term EUR-denominated credits increased from 35 percent in 2003 to 50 percent at end-2005.

Chart 2.1.3. Movements in prices for raw materials



Source: Bloomberg

Chart 2.1.4. Refining capacity and global demand



Source: IMF (WEO, September 2005)

Profitability of the Romanian companies in the metallurgical and the machinery and equipment industries was depressed by the increase in world prices for the major base metals (copper, zinc, aluminium) and aluminium alloys (particularly in the latter half of 2005), with prices for steel and steel products being more volatile only in the first part of the year (Chart 2.1.3).

The oil market faces further uncertainties, even though the oil price is not expected to surge. In the medium run, oil price fluctuations are estimated to continue against the backdrop of (i) heightened political tensions (in Iran and Venezuela in particular) and (ii) pick-up in world demand (USA, China), in contrast with the production and processing capacities (Chart 2.1.4). The Romanian refineries² reported a slight increase in their refining capacities, which may have a positive impact on such companies in the medium and long run, as long as prices for raw materials grow more slowly than the prices for finished products. Lingering or even larger tensions on the oil market will have a negative impact on corporate sector profitability and will determine a higher credit risk, thus entailing investors' shift towards developed economies, which are deemed to be less risky.

² Refineries play an important part in the Romanian economy, contributing by more than 5 percent to the gross value added of non-financial companies (June 2005).

2.2. Risks related to domestic macroeconomic developments

The key macroeconomic features in 2005 were the following: slower economic growth rate, persistent inflationary pressures, further wide current account deficit, higher FDI and larger short-term external debt. As concerns macroeconomic policies, the following have to be mentioned: (i) monetary policy was influenced by the contradiction between the need to continue disinflation and the impossibility to use interest rate for that purpose, against the background of capital account liberalisation, (ii) easing of income policy, and (iii) implementation of a pro-cyclical fiscal policy.

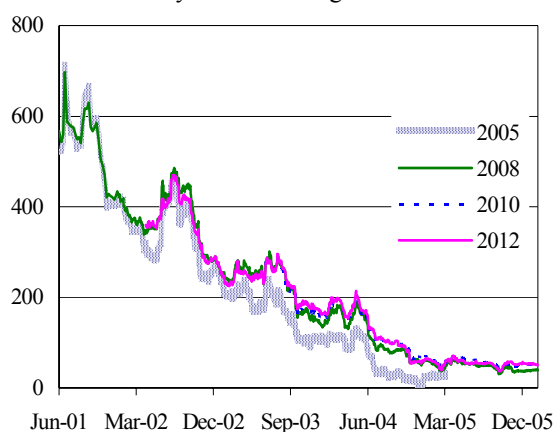
Table 2.2.1. Country risk assessment by rating agencies (year-end)

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Moody's	Ba3	B3	B3	B3	B2	B1	Ba3	Ba3	Ba1
S&P	BB-	B-	B-	B-	B	B+	BB	BB+	BBB-
Fitch	BB-	B	B-	B	B	B+	BB	BBB-	BBB-

Source: Bloomberg

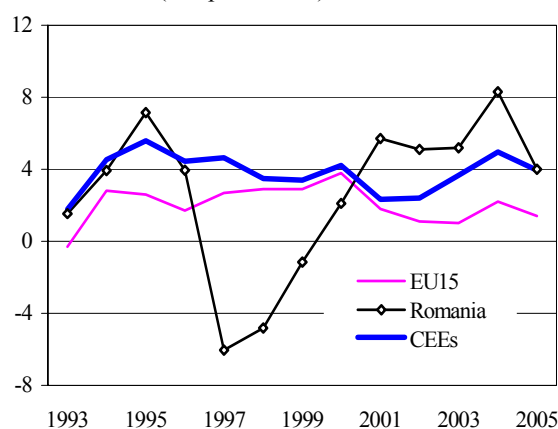
Foreign investors' sentiment on Romania's country risk improved. The spreads on bonds issued by the Romanian government on the international financial markets narrowed markedly (Chart 2.2.1), while rating agencies assigned investment grade rating for the first time ever (Table 2.2.1). The margin related to country risk included in the price of bonds issued by the Romanian government on the external markets declined considerably. Investors show an upbeat sentiment, as there is a positive difference between the risk reflected by credit ratings and that related to bond spreads. This is not specific to Romania only, but is a quasi-generalised development.

Chart 2.2.1. Spread in international bonds issued by the Romanian government



Source: Bloomberg

Chart 2.2.2. Economic growth rate in EU15, CEEs (except Romania) and Romania



Source: Bloomberg

Some non-resident financial undertakings issued securities denominated in domestic currency, as investments in such securities are more attractive. If the volume of *leu*-denominated securities increases substantially, a closer monitoring of its macroeconomic and prudential risks might be required.

2.2.1. Real sector

The year 2005 was the sixth successive year that witnessed economic growth. At end-2005, GDP per capita in Romania accounted for only 33 percent³ of the average for the EU. This low figure is illustrative of the fact that the structural adjustments and the attempts to bridge the gaps against the EU are far from reaching their full potential. However, the possibly weak (even slightly negative) synchronisation between Romania's economic cycle and that of EU15 (Chart 2.2.2) indicates that real convergence must be strongly bolstered by structural reforms.

Analysis of supply components showed that agriculture saw the highest volatility, while services experienced the lowest volatility. Taking into consideration the increasing contribution of services to GDP formation, the dynamics of the Romanian economy fosters financial stability.

The economic growth pattern underwent changes as compared with 2004, the gross fixed capital formation being again the fastest-growing component of aggregate demand. The annual growth rate of final consumption slowed down, which is not necessarily indicative of the easing of inflationary pressures induced by household consumption, given that the slowdown was caused by the steep decline in self-consumption due to the poor performance in agriculture. Furthermore, retail trade of goods and services was fostered by the substantial pay rises, following the introduction of the flat tax rate, the increase in gross minimum wage, the indexations for the public sector employees and the more readily available financing sources.

2.2.2. Economic policies

2.2.2.1. Price stability and financial stability

High and volatile inflation causes uncertainties to economic agents in the real sector and it affects both efficient allocation of financial resources and risk management, by having a negative impact on financial stability. The persistency of an inflation differential (and implicitly of an interest differential) may lead to the strong appreciation of domestic currency, with negative impacts on exchange rate volatility and external balance sustainability, which may entail a corrective depreciation and thus affect financial stability.

Disinflation persisted into 2005, the 12-month inflation rate falling to 8.6 percent in December, 0.7 percentage points below the 2004 figure. When the indicator is calculated as an annual average, the progress was even more manifest as it reached a single-digit figure for the first time ever in the past 15 years.

The slowdown in the growth rate of industrial producer prices (IPP) in the past years offset somewhat the substitution effect of domestic industrial goods with imported goods, generated by domestic currency appreciation. IPP was less volatile than CPI.

As concerns the monetary policy, the increase in non-government credit ranked among the key factors fuelling inflation. The need to slow down this growth rate was also associated with greater risks to financial stability (by the disrupting potential of an increasing current account deficit, excessive indebtedness or currency risk).

The analysis of the increase in non-government credit did not reveal a potentially imminent disrupting factor of credit boom, but it assumed the existence of pressures on aggregate demand and of currency risk for households (Chapter 6.2).

³ The forecasted figure is calculated in relation to the purchasing power parity.

Box 2.2.1. Prudential and monetary policy measures to contain credit growth and foster lending in domestic currency

Minimum reserve requirements

- increase to 30 percent from 25 percent in required reserve ratio on deposits in foreign exchange, while the required reserve ratio on deposits in domestic currency was left unchanged (August 2004);
- broadening of the reserve base for deposits in foreign exchange and the reduction to 16 percent in the rate on deposits in domestic currency (August 2005) in order to foster domestic currency lending;
- rise in required reserve ratio on foreign currency-denominated liabilities from 30 percent to 35 percent (January 2006) and to 40 percent (March 2006).

Prudential supervision

- February 2004: prudential regulations aimed at slowing down consumer credit growth (debt service ceiling of 30 percent of the borrower's net income, down payment, guarantees, etc.) and of mortgage credit (credit amount: 75 percent of the value of the building; guarantees: 133 percent of the credit amount; debt service ceiling of 35 percent of the net income of the borrower and his/her family);
- August 2005: additional prudential regulations on tighter requirements for households; total debt service of 40 percent of the net income of the debtor, natural person;
- September 2005: new regulations on containing credit institutions' exposure to currency risk (limiting the exposure of a credit institution to 300 percent of its own funds when granting foreign currency-denominated loans to unhedged borrowers, natural and legal persons); improvement of regulations on provisioning and loan classification taking into account the currency risk of the borrower;
- January 2006: enforcement of regulation on lending activity performed by NBFIs.

Difficulties in and results following the implementation of measures to contain credit growth

- transmission through the interest rate channel is limited by the weak financial intermediation and the small share of interest costs in the corporate operating costs;
- transmission through the credit channel is difficult to use provided that credit institutions have structural liquidity and higher-than-required capital;
- corporate leverage effect is generally low and declining;
- prudential measures on credit to households may be partly avoided through extension of maturities or through banks' additional capital;
- increased resort to lending through non-bank financial institutions;
- banks may channel some credits to the parent undertaking, while companies have ready access to lower-cost foreign financing (either from parent company or banks).

By adopting a prudent stance, the central bank took several prudential and monetary policy measures aimed at containing credit growth (increase in minimum reserve requirements in foreign exchange, increase in policy rate, rise in the volume of operations to mop up excess liquidity).

The monetary policy decisions of the central bank were often difficult to formulate given the progress in capital account liberalization against the backdrop of persistent excess demand. On the one hand, continuation of disinflation called for the tightening of interest rate policy, while, on the other hand, risk management concerning the external position would have required the cut in interest rate. Moreover, the decline in interest rate would have entailed the decrease in savings and the increase in consumption, whilst currency appreciation, which might have been followed by a corrective depreciation, would have had a negative impact on unhedged borrowers.

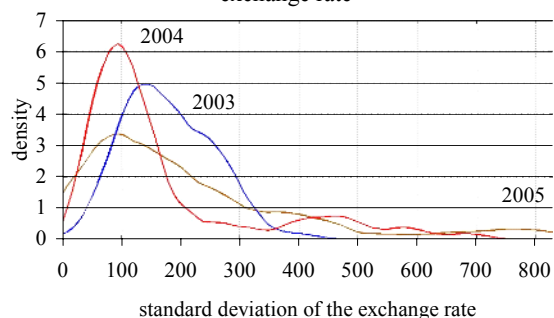
The decline in inflation over the past years led to the continuous fall in interest rates. The spreads narrowed (and implicitly financial resource allocation economy-wide grew more efficient), yet there are still relatively high costs of intermediation for households in particular. The GDP dynamics and the reference rate of the central bank ranked among the influential macroeconomic factors in spread developments, while banks' wage costs, asset profitability and non-performing loans were some of the microeconomic factors.

The real interest rates, which have an effective impact on the financial standing of bank customers, were strongly positive in the case of lending rates, but mostly negative as regards deposit rates. The still low interest rates on household deposits largely account for the moderate growth pace of savings. Another explanation lies with the households' particularly strong demand for credit. The weak performance of savings does not raise financial stability problems in the short run, taking into account the offsetting effect of capital flows, but this situation cannot persist.

2.2.2.2. Implications of exchange rate developments on financial stability

The domestic currency strengthened versus the euro. The increasing volatility, which is even higher in the case of currency appreciation, may cause instability and uncertainty particularly among some operators (domestic companies and households) which are unhedged against exchange rate fluctuations.

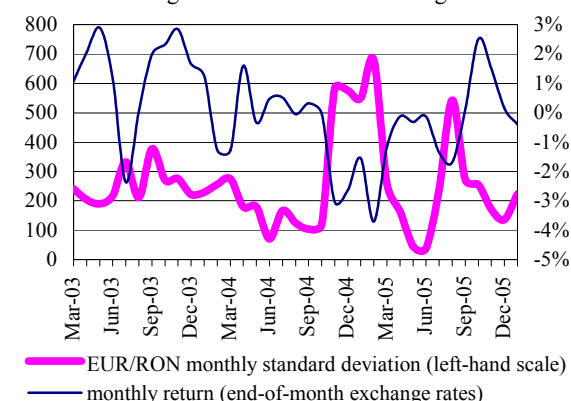
Chart 2.2.3. The estimated probability distribution of the standard deviation of the exchange rate



Note: the probability distributions were estimated based on an Epanechnikov kernel

Source: NBR calculations

Chart 2.2.4. The return and the monthly change in the EUR/RON exchange rate



Source: NBR

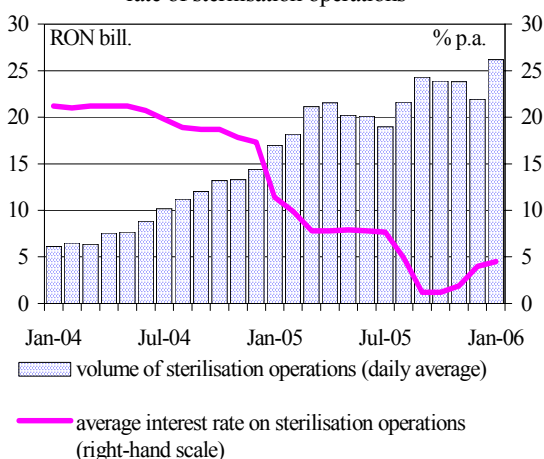
While during 2003 the development of the nominal EUR/RON exchange rate featured generally nominal depreciation, the domestic currency followed an appreciation trend in both nominal and real terms starting with the latter half of 2004. Some measures adopted in 2004 and 2005 also made a contribution to the dynamics and volatility of the exchange rate, as follows: (i) 3 November 2004 – the NBR Board decided to pursue a more flexible exchange rate of the domestic currency by limiting the central bank's intervention in the forex market, (ii) 11 April 2005 – liberalisation of

non-residents access to *leu*-denominated deposits and (iii) 8 August 2005 – shift to inflation targeting.

The still high returns, as compared with those at the international level, entailed large capital inflows, also given the above-mentioned liberalisation measures, which put higher pressures on domestic currency appreciation. Furthermore, other factors such as remittances from abroad (which are seasonal and follow a sharp upward trend) contributed to the domestic currency strengthening.

In 2005, the volatility of the EUR/RON exchange rate was higher, while its range was wider as compared with the prior years. The monetary authority allowed higher volatility, which was due to the aforementioned monetary policy decisions. In addition, except for a single sub-period (June 2004 – April 2005), the intervention of the monetary authority did not affect the conditional volatility of the exchange rate. Moreover, the exchange rate featured higher volatility in the case of currency appreciation than in that of currency depreciation (Charts 2.2.3 and 2.2.4).

Chart 2.2.5. Volume (average daily stock) and average rate of sterilisation operations

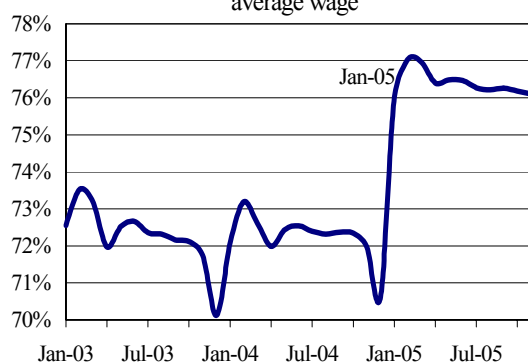


Source: NBR

efforts, may generate massive capital inflows and overestimated financial market prices, thus exposing the economy to sudden stops.

- (ii) A lower level of sterilisation might entail domestic currency depreciation, on the one hand, with negative effects on the value of foreign exchange-denominated liabilities of companies and households, and might cause the flare-up in inflation, on the other, leading to a higher propensity for less liquid investments in the banking sector.

Chart 2.2.6. Share of net average wage in gross average wage



Source: NIS and NBR

The volume of funds raised from the money market was considerably high (Chart 2.2.5).

The cost of mopping-up operations increased. The rise in the interest rate and the currency appreciation are the factors which may generate, in 2006, a similar development of cost. The factors which may slow down this increase are the higher resort to the deposit facility and the narrowing spread between domestic and international interest rates.

The sterilisation operations may affect the banking sector through the following channels:

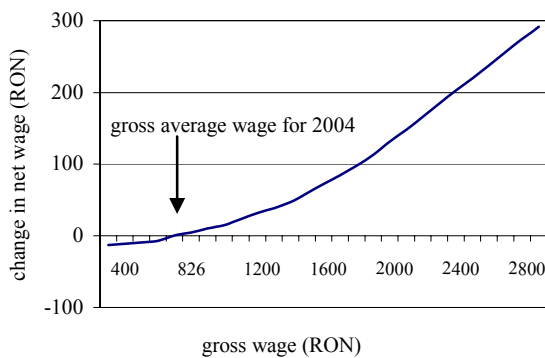
- (i) Persistency of expectations concerning the future appreciation of the domestic currency, even amid sustained sterilisation efforts, may generate massive capital inflows and overestimated financial market prices, thus exposing the economy to sudden stops.
- (ii) A lower level of sterilisation might entail domestic currency depreciation, on the one hand, with negative effects on the value of foreign exchange-denominated liabilities of companies and households, and might cause the flare-up in inflation, on the other, leading to a higher propensity for less liquid investments in the banking sector.

2.2.2.3. Fiscal policy and income policy

Fiscal consolidation continued during 2005 as well, the lower-than-projected deficit resulting again from the narrower share of expenditures in GDP, given that the share of revenues remained unchanged. The effect of the introduction of the flat tax rate on financial stability was relatively neutral.

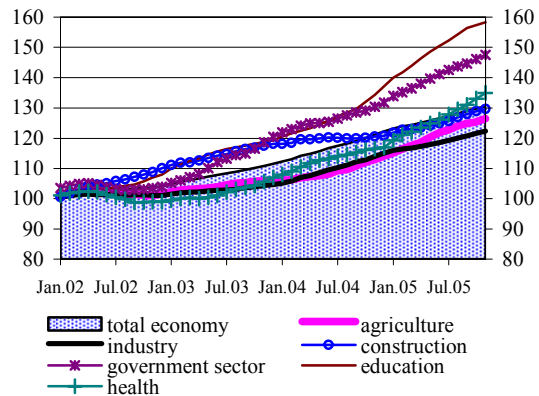
The aggregate disposable income increased following the introduction of the flat tax rate (Chart 2.2.6), but the distribution of the growth rate was uneven (Chart 2.2.7), favouring high-income individuals. Thus, fiscal reform did not entail the rise in consumer credit or indebtedness. In contrast, the rise in gross wage and particularly the pay rises to public-sector employees may have led to such developments (Chart 2.2.8).

Chart 2.2.7. Change in net wage (flat tax rate vs. progressive tax system used until 2004) for an employee with 10 years in service and one dependant



Source: NIS and NBR calculations

Chart 2.2.8. Development in real gross wage, 12-month moving average, Dec. 2001=100



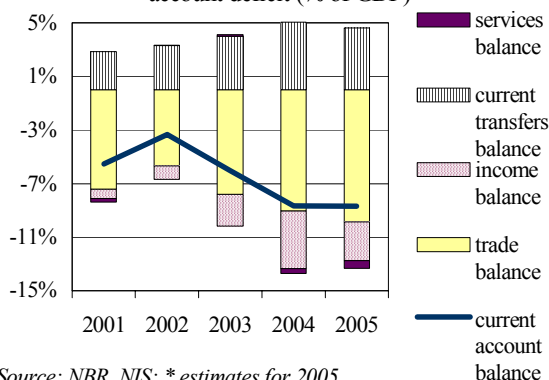
Source: NIS and NBR calculations; constant prices

2.2.3. External balance

In 2005, Romania's current account deficit stood at 8.7 percent of GDP (Chart 2.2.9), a figure which is higher than the average for 1994-2004, yet the sustainability level stays high. Romania's current account deficit posted an average level in 2005 as compared with the deficit recorded by CEEs and the Baltic countries.

All the three main components contributed to the current account dynamics over the latest period. The worsening of trade balance was due to the swifter increase in imports. Exports stayed on an uptrend in 2005, their growth rate being similar to that recorded in 2004, albeit the currency appreciation. Behind this development stood the performance of both export and import⁴ operations

Chart 2.2.9. Level and 12-month structure of current account deficit (% of GDP)*



Source: NBR, NIS; * estimates for 2005

by the same economic agents and/or the increase in productivity that could cover partly the negative impact of currency appreciation.

As regards the value added of exports, the growth rate of consumer goods lagged behind that of intermediate goods. The dynamics of consumer goods might also be the result of the exporters' shift towards the domestic market. The share of intermediate goods in imports (given the increase in all import categories) was lower than the shares of capital and consumer goods.

⁴ In 2001-2005, intra-industry indices recorded high and relatively flat values, except for transport means which posted decreasing values (owing mainly to faster increase in imports in the past two years).

The direct impact is favourable in the medium run in the case of current transfers balance, taking into account the increasing positive influence of remittances from Romanians working abroad. The share of remittances from abroad⁵ in GDP stood at 2.4 percent in 2004 and 4.5 percent in 2005. Negative effects may arise from the use of the respective amounts, a survey indicating a possible negative impact on trade balance and real estate sector⁶ due to stronger demand.

Considered as the balance of savings and investment, Romania's current account deficit is illustrative of the private sector decisions as concerns external financing of investment projects which are in excess of the national savings. In 2005, Romania's gross saving rate was below the average for the other countries in the region, while investment as a share of GDP recorded a comparative average level. The downtrend in saving was manifest as far back as 2002 against the backdrop of stronger consumption and the negative real interest rate for certain time periods.

Economic convergence and restructuring require large investment at both public and private levels. *Caeteris paribus*, such processes induce in the medium run the structural and persistent character of the current account deficit.

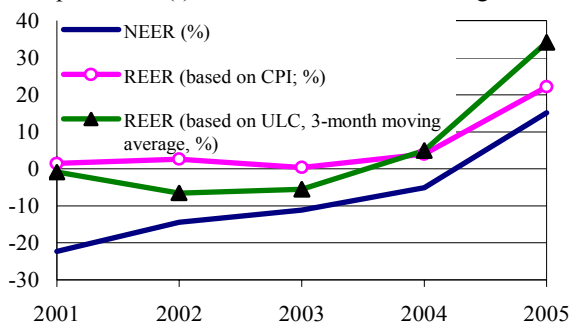
⁵ Calculated as the amount of remittances of Romanians working abroad to residents (credit) and incomes from contracts concluded for less than one year (credit).

⁶ According to a survey conducted in 2005 by the Open Society Foundation on a representative sample for Romania's urban population, remittances from abroad are used to cover current household expenses (53 percent of respondents), to purchase household appliances (24 percent), to take care of children (22 percent), to build a house (10 percent) and to purchase a motorcar (10 percent). Only 4 percent of the respondents use the money to start a business. On the other hand, such investments may be considered as private investment in infrastructure, thus supplementing the scarce public investment made for this purpose and contributing to faster achievement of real convergence.

Box 2.2.2. External competitiveness

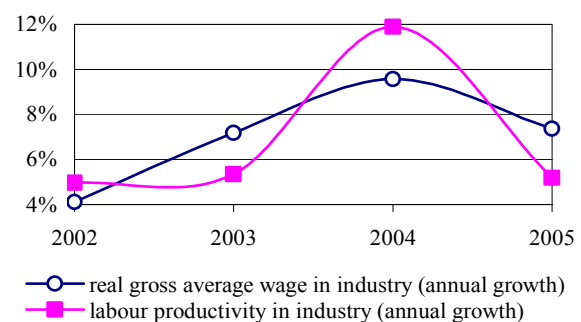
The integration of the national economy in the world economy saw a slight setback as compared with 2004. The conclusion relies on the analysis of productivity composite indices calculated internationally (including factors that are relevant in terms of national productivity, such as value added, ULC, and capital). According to “Growth Competitiveness Index” calculated by the World Economic Forum, in 2005, Romania ranked 67th among 117 countries, behind EU25 Member States, Bulgaria (58) and Turkey (66), dropping 4 places after climbing 12 places in 2004 as compared with 2003. The survey prepared by the Institute for Management Development showed that Romania ranked 55th (compared with 54th in 2004) among 60 regions and countries, Poland being the only laggard (not including Bulgaria).

Chart 2.2.10. Annual rate of appreciation (+)/depreciation (-) of the real effective exchange rate



Source: IMF (2006)

Chart 2.2.11. Development of real gross average wage (deflated by CPI) vs. productivity in industry

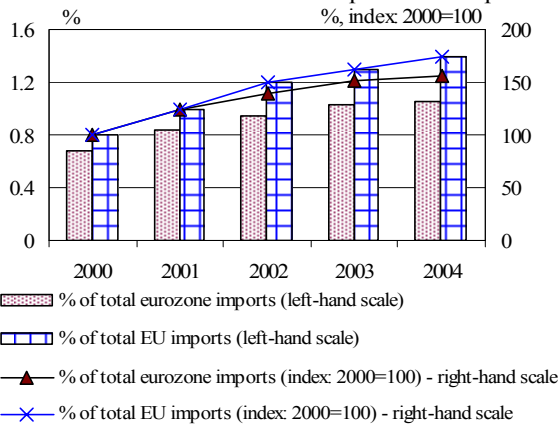


Source: NIS and NBR

The real effective exchange rate (REER) is one of the most frequently resorted to indicators reflecting external competitiveness. In 2005, REER appreciated, which had a negative impact on external competitiveness (Chart 2.2.10).

Pay rises contributed to the appreciation to a larger extent of REER calculated based on ULC. The contribution of domestic inflation to the real appreciation, when referring to the real effective exchange rate calculated based on CPI, was lower and was largely based on the liberalisation of administered prices and partially on the rise in world oil price, while external inflation offset appreciation only marginally (although EU inflation was on the rise, overshooting the ECB target of 2 percent, also as a result of fluctuations in prices for petroleum products). The REER development is largely accounted for by the nominal appreciation of the domestic currency against both the EUR and the USD (more than 10 percent) in 2005 compared with 2004. The growth rate of productivity in industry, albeit still positive, reverted in 2005 to a level below the growth rate of real gross average wage in the same sector (Chart 2.2.11).

Chart 2.2.12. Share of Romanian exports in EU imports



Source: Eurostat and own calculations

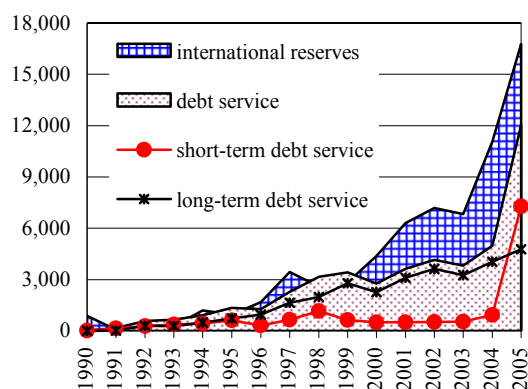
The share of Romanian exports to EU in total EU imports kept moving ahead in 2000-2004, although their growth rate in 2004 compared with 2003 was lower than in the previous periods (Chart 2.2.12). This is due to the lower growth rate of productivity as well as to the nominal appreciation of the leu, taking into account that export earnings are chiefly expressed in euro. Moreover, although within the EU, the Member States of the eurozone are the main market to which exports are oriented, the growth rate of exports to the EU is higher than that in the eurozone, reflecting the rise in exports to EU10.

Financing of the current account deficit ensures its sustainability in the short run. The widening of the deficit was accompanied by the twofold increase of FDI in 2005, which exceeded EUR 5 billion, with direct loans (loans from parent undertakings to subordinated units) being the fastest-growing component.

Foreign exchange reserves strengthened, the currency composition changing so as to better reflect the short-term debt and trade composition. The high level of foreign exchange reserves is illustrative of a low liquidity risk, ensuring full coverage of external debt service ratio (Chart 2.2.13).

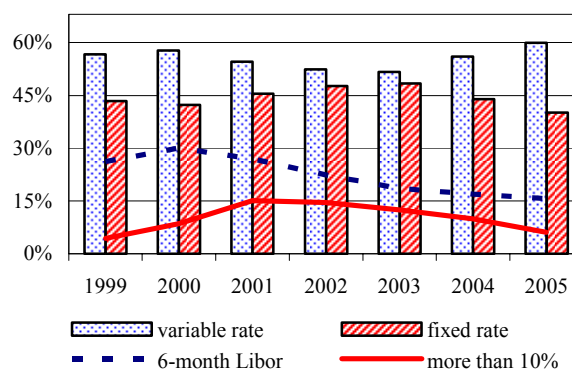
Romania's external debt followed an upward trend. Short-term external debt has widened substantially starting with 2003, posting growth rates of more than 70 percent in the past two years. Nevertheless, external debt stays at a low level, below that of CEE countries. The risk of financing medium- and long-term debt decreased. Although floating-interest loans continued to hold a large share, the exposure to US dollars and euros has diversified credit risk. Fixed-rate loans and loans with interest rate of more than 10 percent have been on a downtrend since 2003 (Chart 2.2.14), owing to the improvement in sovereign rating as well.

Chart 2.2.13. International reserves and debt service (EUR mill.)



Source: NBR

Chart 2.2.14. Medium- and long-term debt composition (in relation to the type of interest rate)



Source: NBR

Total external debt of the banking sector consists broadly of loans from other banks, while banks' short-term debt includes mainly non-residents' deposits, as a result of the positive interest rate differential provided by the Romanian banking sector. The sustainability of the short-term government debt does not pose any risks, owing to its extremely low level.

CHAPTER 3. COMPANIES AND HOUSEHOLDS

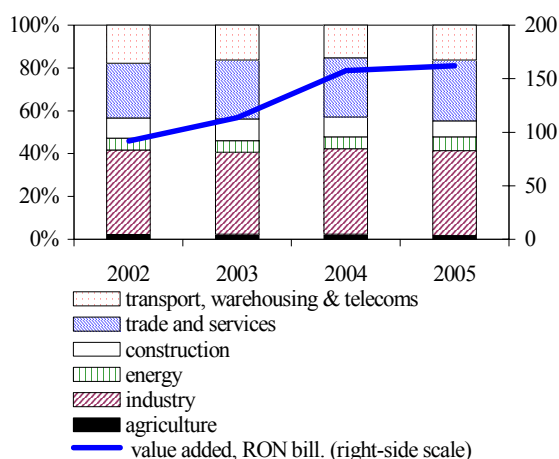
3.1. Risks generated by non-financial companies⁷

At the aggregate level, the Romanian companies posed low risks to financial stability. The favourable macroeconomic developments in the past years and the further restructuring of the economy led to the consolidation of companies' financial standing. Loans to such debtors may gain ground in the period ahead as well. A possible shock induced by the interest rate would not raise significant problems, yet sizeable movements in the exchange rate might trigger some systemic effects.

3.1.1. Companies' ability to face a systemic shock

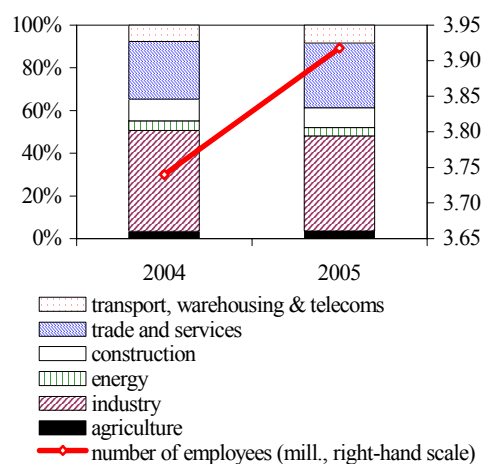
Companies may impair financial stability via two channels: (a) the direct channel (debt service default has a detrimental impact on creditors' balance sheets) and (b) the indirect channel (the difficulties in the real economy leading to: (i) high probability of default for companies and (ii) rise in unemployment rate, which will depress employees' ability to repay debts).

Chart 3.1.1. Corporate value added by sector



Source: MoPF, NBR calculations

Chart 3.1.2. Number of corporate employees by sector



Source: MoPF, NBR calculations

Credit institutions' exposure by company is concentrated in (i) industry and (ii) services and trade (Table 3.1.1). The value added of these sectors accounts for roughly 70 percent of total value added, engaging more than 70 percent of total active labour force (Charts 3.1.1 and 3.1.2). Although the share of value added in industry remained relatively steady, the share of domestic loans channelled into industry shrank to the detriment of trade and services.

Table 3.1.1. Domestic loans to companies

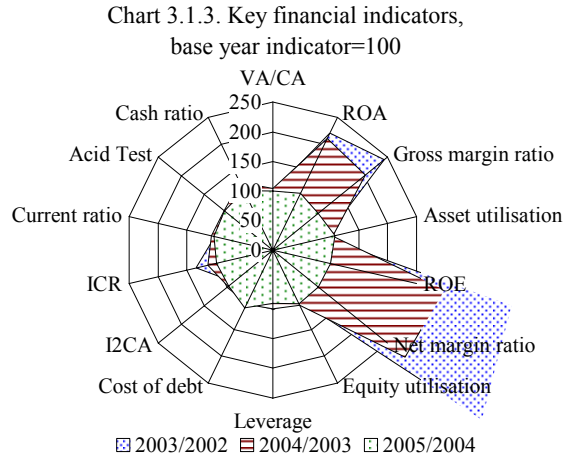
Year	Total companies (RON bill.)	Agriculture	Industry	Energy	Construction	Trade services	Transport, warehousing, telecommunications	%
2004	25.31	3.6	45.3	4.7	5.5	35.3	5.6	
2005	28.33	3.4	40.9	3.2	6.7	39.2	6.6	

Source: NBR calculations

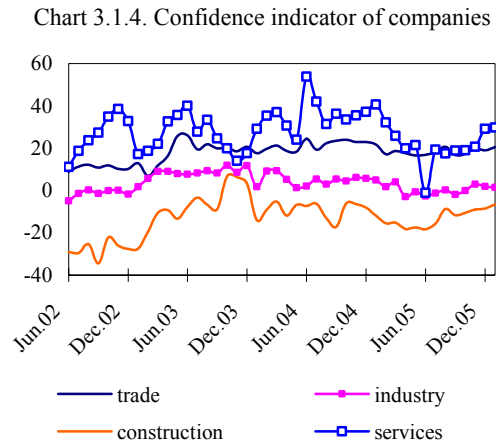
⁷ The figures for 2005 provided by the MoPF were calculated based on annualised calculations, starting with the values recorded in June 2005.

For simplification reasons, the concept of "companies" stands for "non-financial companies" in this chapter.

Companies' financial standing strengthened over the past years, which heightened their ability to absorb a systemic shock. The rise in profitability and liquidity was associated with the decline in indebtedness, along with an improved ability to cover interest costs (Chart 3.1.3).



Source: MoPF, NBR calculations



Source: NIS, European Commission

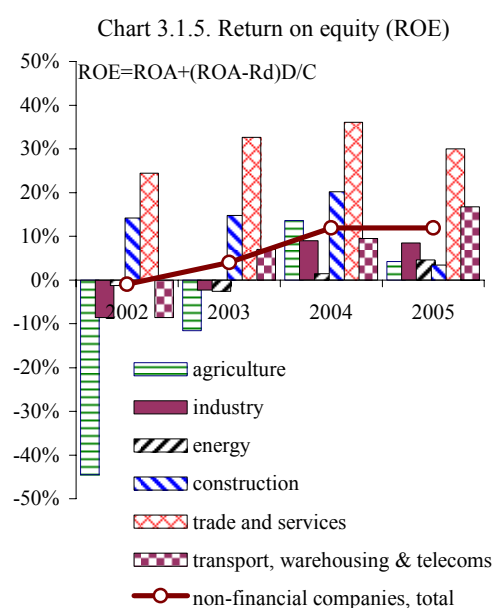
The share of newly-established companies in total companies increased somewhat in the past three years to nearly 16 percent in 2005. The number of companies subject to winding-up proceedings surged by 472 percent in the period under review; this development was not necessarily due to a larger number of companies going bankrupt but to companies' tendency to be subject to divestiture. The number of companies subject to winding-up proceedings, on which the banking sector⁸ had large exposures, lowered from 898 at end-2003 to 767 January through October 2005, whilst overdue payments decreased.

Despite the considerable improvement in corporate financial performance, managers' confidence indicator on economic activity remained broadly unchanged (Chart 3.1.4). This may be attributed to managers' traditional views or to their stronger risk aversion as regards future economic developments.

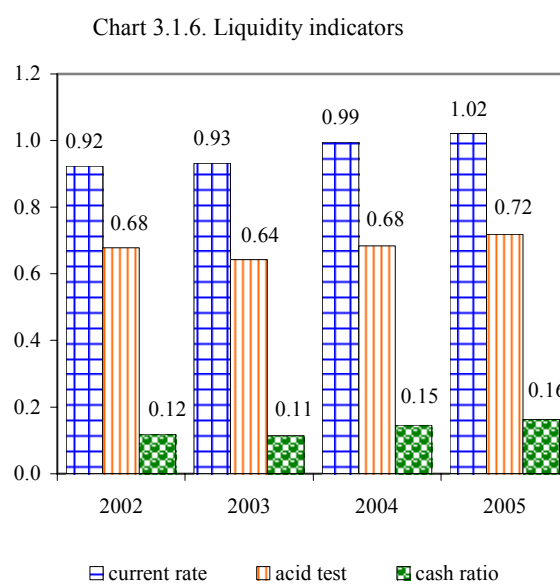
3.1.1.1. Corporate profitability and liquidity

At the aggregate level, the 2003 and 2004 economic performance materialised in the substantial increase in profitability which was reflected by (i) a higher efficiency of production factors (improvement of net margin ratio) and (ii) a growth of asset and capital turnover.

⁸ The value of exposures to the companies subject to winding-up proceedings accounted for merely 0.2 percent of total loans granted to non-financial companies in 2005.



Source: MoPF, NBR calculations



Source: MoPF, NBR calculations

In 2005, the profitability level remained relatively constant as compared with 2004, while liquidity indicators improved. Behind the rise in return on equity (ROE) (Chart 3.1.5) stood the wider spread between the return on assets and indebtedness cost, given the fact that the debt to equity ratio remained relatively constant (Table 3.1.2). Corporations⁹ make a far more significant contribution to overall profitability.

Table 3.1.2. Components of return on equity

	ROA (%)				Indebtedness cost (%)				Leverage = D/C			
	2002	2003	2004	2005	2002	2003	2004	2005	2002	2003	2004	2005
Total companies	1.06	2.34	4.91	5.25	2.02	1.56	1.59	1.73	2.11	2.13	2.11	1.90
Corporations	0.97	0.74	3.49	4.11	0.30	1.68	1.54	1.33	1.00	1.10	1.73	1.74
SMEs	4.71	6.35	8.38	6.64	1.74	1.86	1.92	1.86	4.81	4.17	3.88	3.51
Export companies*	...	0.04	4.68	3.57	...	1.60	1.90	1.90	...	2.00	1.61	1.65

* Companies whose exports earnings account for more than 20 percent of their turnover.

Source: MoPF and NBR calculations

The return on equity (ROE) of the services, trade, transport, warehousing and telecommunications sectors follows an upward trend due to the increased efficiency of production factors and the relatively low financing costs. In construction and agriculture, ROE decreased considerably in 2005 versus 2004 (by 17 percentage points and 11 percentage points respectively), owing to the lower efficiency of asset use, given the decline in indebtedness. The impact on financial stability through the direct channel is weak, as the exposure of the banking sector to these economic sectors is low.

The corporate liquidity increased in the period under review. In terms of financial stability, lower liquidity constraints have positive effects (it enhances companies' ability to deal with a systemic shock) inasmuch as their liquidity management is no longer faulty.

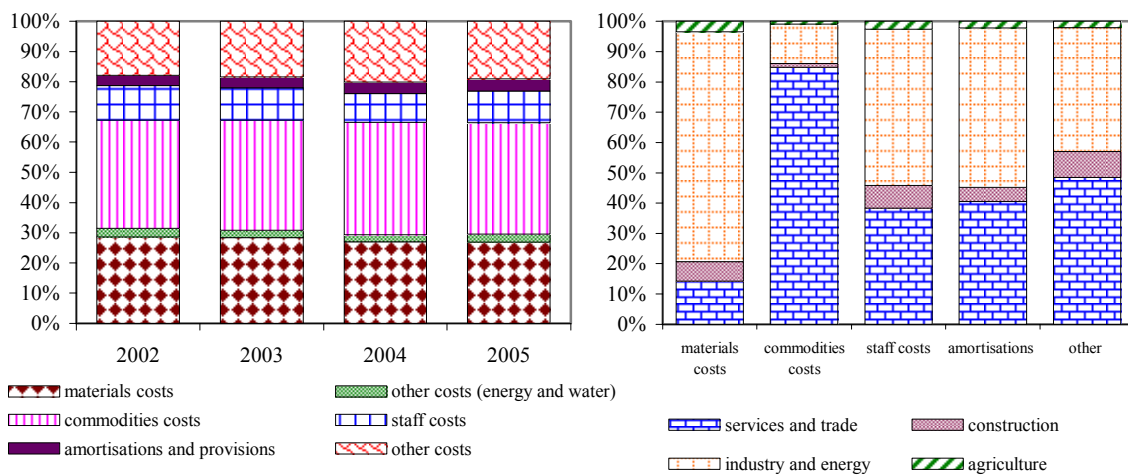
⁹ Corporations are companies whose turnover exceeds the equivalent of EUR 8 million. SMEs are companies whose turnover is lower than the equivalent of EUR 8 million and which have less than 250 employees. The definition of SMEs was modified in late January 2006, as the turnover ceiling was raised to the equivalent of EUR 50 million. The definition change does not affect the analysis results as the number of companies whose turnover equals the equivalent of EUR 8-50 million is small.

In 2005, current assets covered current debts, whilst the most liquid assets (cash in hand and balances with banks, and short-term financial investments) accounted for 16 percent of current liabilities (Chart 3.1.6). Corporations are more liquid than small- and medium-sized enterprises¹⁰ (SMEs). This may be attributed to the more limited access of the SMEs to bank resources and their maintaining far lower levels of liquidity in order to increase profitability. As sectoral level, the most liquid companies are those in the energy and transport and telecommunications sectors, while the companies in agriculture and industry are the least liquid.

3.1.1.2. Cost analysis

At present, the greatest shocks to corporate costs may arise from developments in the exchange rate, administered prices and wage pressures. When the negative effects of a potential shock generated by the above-mentioned factors cannot feed through into prices, the ability to cover debt service may be hampered.

Chart 3.1.7. Structure of operating costs



Source: MoPF, NBR calculations

The exchange rate has a substantial impact on corporate costs¹¹. In 2005, the share of imports of raw materials and intermediate goods in total material costs ran at nearly 57 percent, following an upward path in the past years. Imports of consumer goods hold a relatively steady share (10 percent) in total commodities costs. Utility expenses (energy and water) at the aggregate level hold a low share in total operating costs (2.6 percent in 2005), with exporters recording the highest figure (5.7 percent in 2005, on the rise in the past years). The alignment of administered prices to those in the EU will put pressure on such costs. Staff costs make up nearly 10 percent of total operating costs, a relatively steady share in the period under review (Chart 3.1.7). Staff costs include wage costs and social security costs, accounting for 8 percent and 2.6 percent respectively of total operating costs. Commodities and raw material costs hold the largest share of total expenses (more than 60 percent). In terms of capital formation, amortisation costs make up 4 percent at the aggregate level, increasing slightly in the past years.

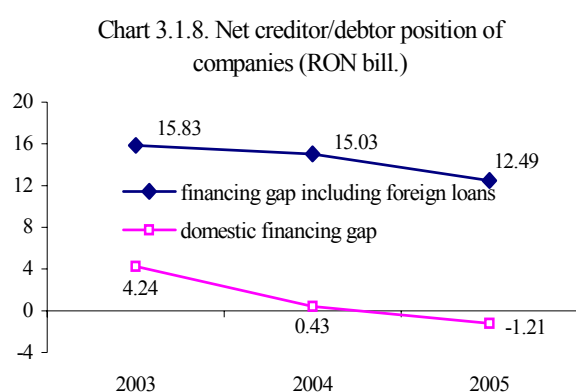
¹⁰ Generally, corporations enjoy lower liquidity than small-sized enterprises, which is attributable to the corporations' ready access to external funds (bank loans, bond issues).

¹¹ The effect of an adverse shock on the exchange rate might be significantly lower, as intra-industry indices post high and relatively constant values (Chapter 2).

The potential shocks on costs are transmitted unevenly in the economy. Industry accounts for 66 percent of utility expenses, which represents 4.9 percent of total operating costs of this sector. Industry holds more than 50 percent of total staff costs. At corporate level, companies in the energy and industry sectors hold the largest share of raw material costs in total costs. The share of staff costs is slightly higher than in the case of SMEs. Exporters hold the largest share of utility expenses in total operating costs, this share increasing slightly in the past years. Raw material and material costs account for the largest share in total operating costs of exporters (51 percent in 2005).

3.1.1.3. Shock transmission channels

Shocks transmitted via the interest rate and bank credit channels have adverse effects through: (i) the worsening of both profit and loss account (driven by the increase in interest costs) and the leverage effect, and (ii) the decline in the value of assets (and of collateral, implicitly).



Source: MoPF, NBR calculations

The increase in the interest rate would not raise significant problems for the Romanian companies in terms of indebtedness as (i) financing via bank credit is weak, (ii) the share of interest costs in total expenses is low, (iii) the lever effect poses no problems (Table 3.1.2), and (iv) the liquidity constraints eased over the past years. Economic agents actually turned into net creditors in 2005 (Chart 3.1.8), so that bank deposits may offset the effect of the change in interest rates on contracted loans.

The net creditor position may be largely attributed to: (i) enhanced self-financing ability of companies amid the favourable macroeconomic framework, (ii) increased financing through capital and liabilities other bank liabilities, (iii) initiation of interest rate differential arbitrage operations (by contracting external debts and placing the amounts into domestic currency-denominated deposits), (iv) the impact of legal constraints on auction participation (companies are required to hold considerable amounts in collateral deposits), (v) steeper rise in financing from European funds, and (vi) a more significant part of intangible fixed assets in companies' balance sheets (Table 3.1.3), which requires the existence of liquid assets. In contrast, the net creditor position of non-financial companies may indicate a potential misallocation of resources. However, on a further analysis, if loans from foreign banks are added up in the calculation of the net creditor/debtor position, the result will be a net debtor position for companies, which is nonetheless decreasing. Tangible assets have significant values in the balance sheet (Table 3.1.3), yet their share is slowly narrowing in favour of intangible assets (investment in technology, certificates, franchises). The higher interest rate affects the value of tangible assets as well as that of collateral, so that the real value of assets and the ability of companies to access bank resources may decrease.

Table 3.1.3. Balance sheet items of non-financial companies

	2002	2003	2004	%	
				2005*	2005*
				a)	b)
Total assets (2+7)	100	100	100	100	100
<i>Non-financial assets (3 +6)</i>	62.6	61.8	60.8	64.2	67.36
Tangible assets (4+5)	60.4	60.7	58.9	58.6	60.57
- Tangible fixed assets	48.4	45.7	43.4	45.6	48.18
- Stocks	12	15	15.5	13.1	12.39
Intangible fixed assets	2.2	2.2	3.3	5.6	6.8
<i>Financial assets (8+9+10+11+12)</i>	37.3	38.22	39.16	35.79	32.64
Cash in hand and balances with banks	5	4.1	5.1	6.4	5.52
Financial fixed assets	4.1	5	5.1	4.8	5.23
Short-term financial investments	0.9	0.7	0.8	0.8	0.61
Claims	26.1	26.2	25.7	22.8	20.33
Prepayments	1.2	1.1	1.1	1.1	0.95
Total liabilities (14+15)	100	100	100	100	100
<i>Capital and reserves</i>	32.1	31.9	32.1	34.5	40.29
<i>Total debts (16+18+21+22+23)</i>	67.9	68.1	67.9	65.5	59.71
External private debt:	-	6.65	5.94	5.78	6.4
- o/w external bank loans	-	3.06	3	2.96	4.31
Domestic bank loans:	-	5.2	5.2	6.1	8.45
- o/w domestic loans in RON	-	1.99	1.8	2.3	2.96
- domestic loans in foreign exchange	-	3.21	3.4	3.8	5.49
Other debts**	64.6	56.25	56.76	53.62	40.39
Deferred income	1.1	1.4	1.6	2.2	2.29
Risks, provisions	2.2	0.7	1.5	1.7	2.17

* a) figures for all companies, b) figures of companies which took loans from domestic banks.

** in 2002, this heading included domestic loans and external private debt, in addition to trade credits, arrears and bonds.

Source: MoPF, NBR calculations

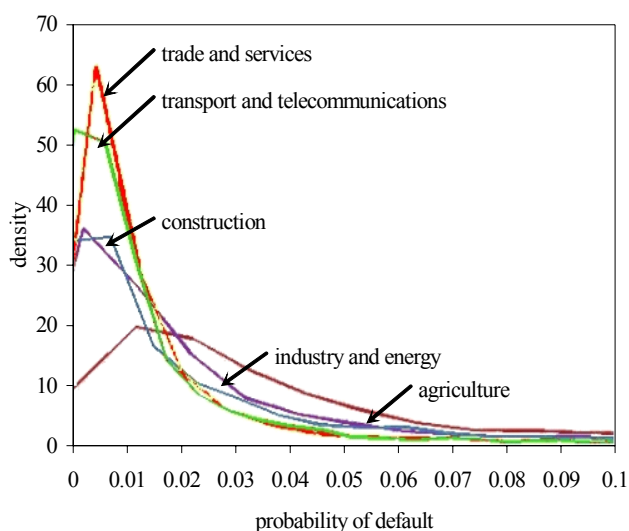
The shocks transmitted through the exchange rate channel may be considerable as a result of the increase in corporate indebtedness in foreign exchange, as well as of the high level of euroisation of the Romanian economy. On the one hand, the large number of EU-based investors mitigates this risk, as they are hedged against the RON/EUR volatility. On the other hand, the share of external private

debt and domestic loans in foreign exchange is relatively high (approximately 14 percent of total debts in 2005), so that a considerable shock to the exchange rate (leading to depreciation) may generate adverse systemic effects.

3.1.1.4. Companies' ability to repay bank loans

The worsening of financial stability by the companies through the direct channel is anticipated by the increased probability of default and materialises into failure to pay the debt service. According to Basel II Accord, a default occurs when a debtor registers more than 90-day overdue payment (technical default).

Chart 3.1.9. Probability of default by sector as at 30 June 2005



Source: NBR calculations

At sectoral level, probability of default (calculated by using a logit model) is higher in agriculture, while the default is less likely to be experienced by companies in services and trade sectors (Chart 3.1.9, Table 3.1.4). The higher rate of bankruptcy in agriculture may be attributed to (i) decline in labour productivity due mainly to excessive property fragmentation (structural factor) and (ii) exposure of agriculture to seasonal factors.

As at 30 June 2005, credit institutions held specific credit risk provisions in amount of RON 549.4 million, a figure similar to total debt at risk. These figures must be taken cautiously as they refer to a time period on the upward path of the economic cycle.

Table 3.1.4. Value of average probability of default by sector as at 30 June 2005

	Average probability (%)	Domestic bank loans (RON mill.)	Debt at risk (RON mill.)
Total	2.23	26,123.53	582.55
Agriculture	5.51	904.48	49.83
Industry and energy	3.34	12,647.78	422.43
Construction	2.74	1,389.57	38.07
Services, trade, transport and telecommunications	1.51	11,181.69	168.84

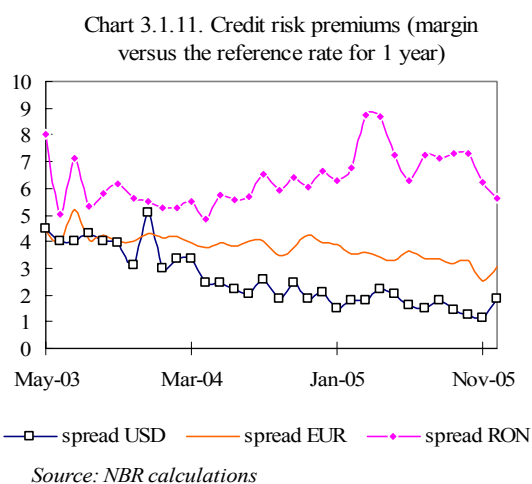
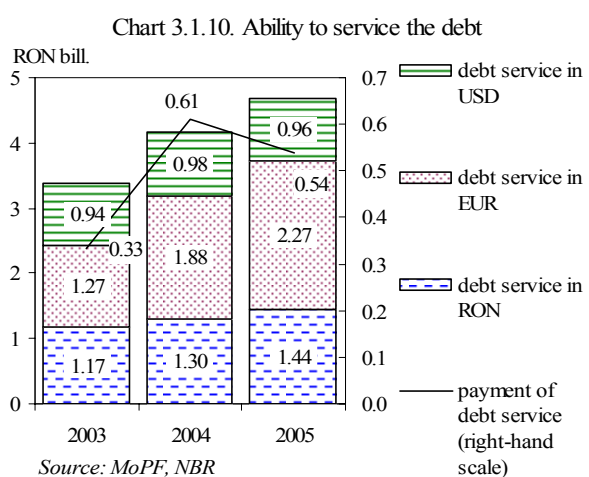
Source: NBR calculations

Table 3.1.5. Determinants of probability of default

	Total companies	Debtor companies to the banking sector
Profit ratio (gross margin rate)	6.36%	7.67%
Asset utilisation ratio	0.49	0.48
Turnover growth rate	2.8%	2.48%
Rate of overdue payments	18.66%	14%
Indebtedness	1.90	1.48

Source: NBR calculations

Debt at risk is concentrated in industry due to (i) probability of default higher than in other sectors (qualitative factor) and (ii) large exposure of the banking sector to industry (quantitative factor).



In the case of companies that borrow from banks, (i) an improved profit ratio, asset utilisation ratio, turnover growth rate and ability to pay interest act towards lowering the probability of default, while (ii) a high overdue payment ratio and indebtedness are factors that increase payment default risk. The above-mentioned ratios relative to debtor companies have generally fared better than those related to companies in Romania (Table 3.1.5 and Chart 3.1.10), so that risks to financial stability remain benign. Moreover, investor perception of companies' ability to service the debt has also improved, as reflected by the drop in credit risk premiums (Chart 3.1.11).

3.1.2. Efficiency of financial resource allocation in economy

The efficiency of financial resource allocation to companies is far from being satisfactory, but there is a tendency for improvement. Despite the fact that the Romanian banking sector features excess liquidity and holds capital larger than the minimum requirements, companies use bank credit to cover their financing needs only to a small extent. This may be attributed to: (i) increase in costs of domestic intermediation (also following the measures taken by the central bank in order to contain credit growth), (ii) companies' large resources, which allow them to resort to bank lending only marginally, and (iii) lack of viable projects to be financed.

Table 3.1.6. Share of financing sources in total financing sources by sector and size (stock)

	Own funds		Domestic bank loans		Private external financing		Other debts*	
	2004	2005	2004	2005	2004	2005	2004	2005
Agriculture	14.6	24.7	7.7	7.5	6.6	6.2	71.2	61.7
Industry and energy	43.2	43.4	5.6	5.3	5.8	6.3	45.4	44.9
Construction	27.5	25.5	5.8	7	3.4	3.5	63.3	64
Services, trade, transport and telecommunications	20.8	21	5.2	5.9	6.3	5.5	67.7	67.6
Corporations	36.7	36.5	4.8	4.5	5.4	6.4	53.1	52.6
SMEs	20.5	22.2	7.1	8.1	5.8	6.3	66.6	63.4

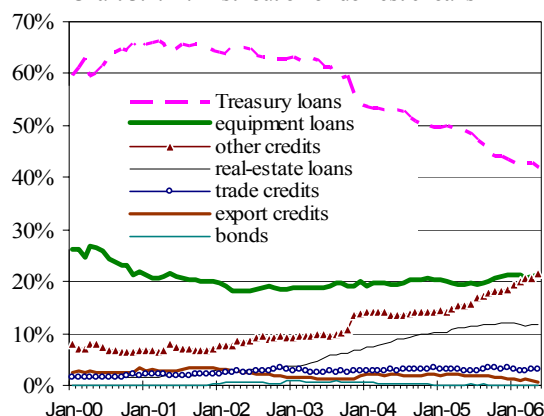
* including deferred income and provisions

Source: MoPF, NBR calculations

Companies are almost entirely financed through liabilities other than bank liabilities, of which trade credits and arrears hold a large share (Table 3.1.6). Only 8 percent of companies have taken a bank loan, while the distribution of this type of financing does not pose a concentration problem. The low level of bank lending entails higher information asymmetry, as the lack of closer

monitoring by credit institutions might have a negative impact on payment discipline as well.

Chart 3.1.12. Distribution of domestic loans



Source: NBR

The volume of bank credit to companies may increase in the period ahead, taking into account that the structural changes and those made to bridge the gap separating Romania from the EU have not yet reached their full potential, which still requires significant financing. Investment loans play the most important part, yet the share of domestic financing for this purpose remains relatively flat (Chart 3.1.12).

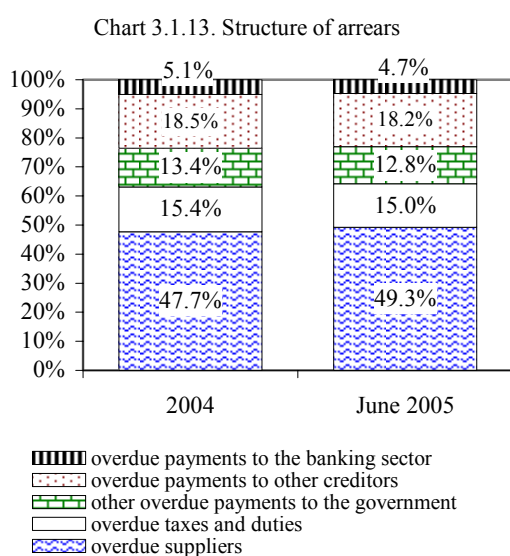
Although the Romanian banking sector features a high level of solvability and excess liquidity that is not channelled to the real sector, companies have resorted to loans from foreign banks (as part of private debt, publicly non-guaranteed and publicly guaranteed). Companies that finance (partly) their activity through foreign bank loans own a performing debtor profile with an average indebtedness level, higher liquidity and above-average profitability. Loans from foreign banks rose by about 50 percent in the past three years (Table 3.1.7), a faster increase being recorded in the latter half of 2005 by publicly non-guaranteed loans. Therefore, the export of low credit risk financial intermediation accounted for more than 50 percent of domestic bank loans to companies.

Table 3.1.7. External bank loans to non-financial companies

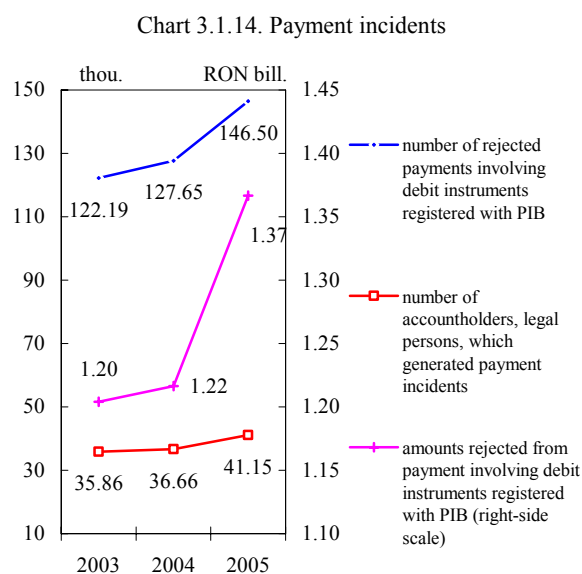
	Total, of which		Publicly non-guaranteed loans		Publicly guaranteed loans	
	Volume	Year-on-year growth	Volume	Year-on-year growth	Volume	Year-on-year growth
	(EUR bill.)	(%)	(EUR bill.)	(%)	(EUR bill.)	(%)
2003	2.91	-	1.19	-	1.73	-
2004	3.6	23.63	1.71	44.15	1.89	9.52
2005	4.56	26.67	2.26	32.16	2.31	22.22

Source: NBR

The efficiency of resource allocation in economy improved also as a result of the consolidation of the companies' balance sheets, which materialised into the decrease of arrears¹² (from 25.7 percent of GDP in 2004 to 23.6 percent in June 2005). The share of overdue payments to both government and banks decreased somewhat to the detriment of inter-company arrears (Chart 3.1.13), yet the latter posted decreasing nominal values. On the other hand, the larger number of payment incidents and the related amounts recorded by the Payment Incident Bureau (PIB) indicate that payment discipline further requires particular attention (Chart 3.1.14). The share of amounts rejected from payment in total overdue payments to suppliers accounts for 5 percent, which requires further vigilance as concerns the dynamics of this indicator.



Source: MoPF, NBR calculations



Source: NBR (PIB)

¹² Overdue payments to suppliers, government, banking sector and other creditors.

3.2. Household sector risks

The risks on financial stability stemming from household sector increased over the past years, without generating systemic problems. The most significant risk arises from the indebtedness. Potential negative shocks on the interest rate, incomes, exchange rate or prices of assets may affect the ability of households to service the debt. Financial liabilities of households with banks prevail over their liabilities with non-bank financial institutions. In terms of size, financial assets are still not large, being mainly of a banking nature. The increase in the weight of assets traded on the capital market led to a higher return on households' portfolio, being, however, accompanied by a larger volatility which induces a higher risk.

3.2.1. Household income, consumption and savings

The income is the most significant factor in servicing the debt. Household incomes are mainly financial (more than 80 percent), arising primarily from wages (more than 60 percent of incomes in 2005, up from the previous years). Social allowances (roughly 26 percent of incomes in 2005) and remittances¹³ of Romanians working abroad hold an ever increasing share. These sources of incomes are less volatile, being less directly interlinked with the effects of potential domestic shocks.

Medium- and long-term forecasts point to an increase in the permanent income, with the European integration playing a significant part in this development. Both the actual increase in income (starting particularly with 2002) and the adjustment of household behaviour to the favourable expectations of the income led, in the past few years, to the resumption of the rise in consumption¹⁴ (Chart 3.2.1). The marginal propensity to consumption went up, exceeding the average propensity to consumption, pointing to a future possible expansion of household expenses on consumption, with impact on indebtedness or saving.

Chart 3.2.1. Consumption and the development of net real wages (year-on-year)

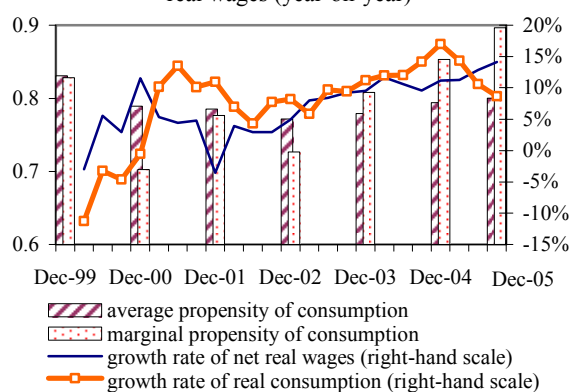
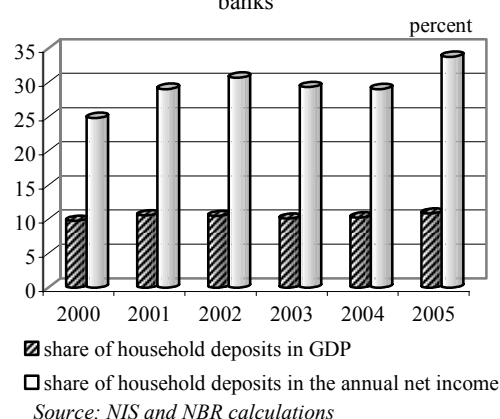


Chart 3.2.2. Development of households' saving with banks



The structure of expenses related to consumption shows an increase in expenses related to services. The households' budget is likely to be allocated to a greater extent to services, also as a result of a price effect, enhanced by the integration process (the Balassa-Samuelson effect). Expenses on non-

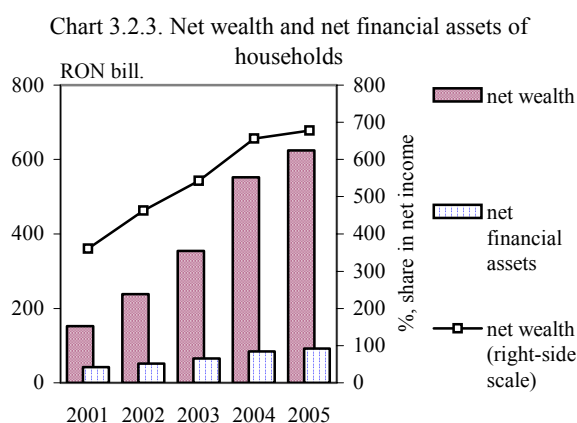
¹³ Private transfers came in at EUR 1,921 million in 2003, EUR 2,932 million in 2004 and EUR 4,336 million in 2005.

¹⁴ Actual individual final consumption of households

food items are likely to go up as well, due to households' appetite for purchasing durables, thereby improving their living conditions.

In aggregate terms, the growth rate of the income and consumption has a mixed effect on household saving (Chart 3.2.2). In 2005, the share of household deposits in both GDP and annual net income rose, thereby illustrating: (i) either that consumption was met through loans, (ii) or that in Romania there is a marked polarisation of incomes, which divides households into a larger category of net debtors and a smaller but consistent category of net creditors.

3.2.2. Household balance sheet



Source: NBR, NIS, NSC, ISC, NUUCITS, LCAR, BLA, Estimafinance, Credisison, Euroline

differing significantly from one country to another¹⁶. The real estate value has gone up substantially in recent years, magnifying the wealth effect or the indebtedness capacity by using non-financial assets as collateral. Nevertheless, the scarce liquidity of the real-estate market and the large share of non-financial assets in total net wealth may diminish considerably households' ability to withstand a potential systemic shock.

b) Financial assets of households (Chart 3.2.4) include mainly cash holdings and bank deposits (more than 75 percent in 2005). The poor diversification of asset portfolio points to either: (i) risk-averse behaviour of households or (ii) the lack of other saving instruments. The weight of share holdings¹⁷, bonds and units of investment companies increased in the past two years. This trend enhances the wealth effect on the background of a very active stock market capitalisation, particularly starting with 2004. During the said period, the decreasing trend of the money market interest rates caused less risk-averse households to invest partly in stock exchange.

As concerns the structure of financial assets, cash and life insurance premiums (around 20 percent and 2 percent, respectively) are the most stable components. Life insurances have not been very

The risks caused by households stem from both the asset side (namely, from the structure and dynamics of financial asset portfolio, and the development of prices of non-financial assets) and the liability side (namely, from the structure and dynamics of indebtedness).

a) Net wealth¹⁵ of households has stayed on an upward trend in recent years (Chart 3.2.3). Net wealth expanded mainly as a result of the rise in non-financial assets (the real estate value – Box 3.2.1). Actually, according to estimates, non-financial assets account for roughly 90 percent of assets, while in the European Union they hold 50 percent,

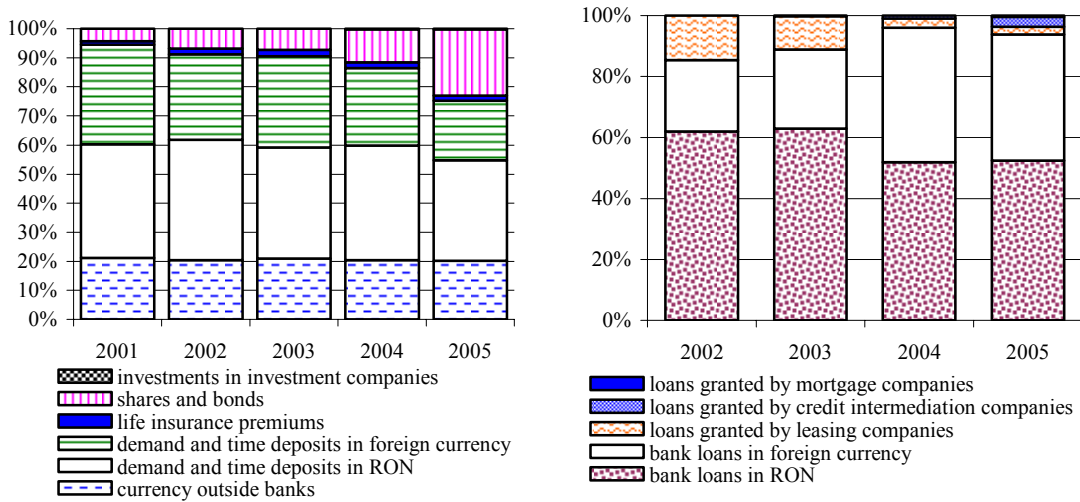
¹⁵ Net wealth is calculated as the sum of financial and non-financial assets out of which financial liabilities are subtracted. The lack of in-depth and accurate data on the value of assets and liabilities of households, particularly at the level of the real-estate market and the capital market led to their calculation, in some cases, on the basis of assumptions. Underlying these assumptions was a prudent financial stability approach, namely, the undervaluation of assets and the overvaluation of liabilities.

¹⁶ 40 percent in the Netherlands or 70 percent in Spain (2004).

¹⁷ Households' holdings of unlisted shares were left out of account.

attractive to many households¹⁸, while the large share of currency is indicative of a still low level of bancarization of households.

Chart 3.2.4. Structure of financial assets and liabilities of households

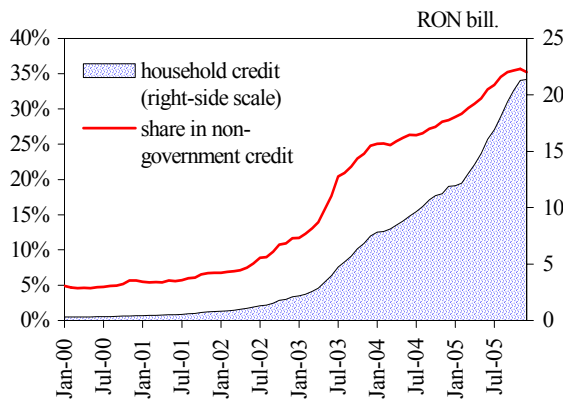


Source: NBR, NIS, NSC, ISC, NUUCITS, LCAR, BLA, Estimafinance, Credisson, Euroline

The decrease in the share of currency and deposits in total financial investments of households indicates that households assume higher risks in search of higher return. The diversification effect will diminish risks; however, the degree of liquidity of households' portfolio of financial assets is likely to go down.

- c) **The loans granted** by credit institutions hold the largest share in financial liabilities (roughly 94 percent in 2005). Non-bank financial liabilities hold a small share, as these institutions have only recently been interested in the retail market (Chart 3.2.4).

Chart 3.2.5. Development of household credit



Source: NBR

The financing through leasing lost ground in favour of that through credit intermediation companies, which diversified their range of products (for instance, card issuance). Given that the largest such companies are not usually financed by the Romanian banking sector, but by own funds or from resources raised within the group, the expansion of the lending through these companies did not cause the credit risk to shift directly from the Romanian banking sector to these non-bank financial institutions. Over the past few years, bank loans to households witnessed considerable growth rates, despite the low starting basis. In 2000-2005, the average annual growth rate

came in at 115.3 percent (82.4 percent in real terms); however, the starting basis equalled EUR 177 million (Chart 3.2.5). The expansion of the household credit was attributable to: (i) the need to

¹⁸ In the long run, life insurances may particularly lead to an expansion of households' saving concurrently with a development of future pension funds. This development is normal for a European economy, where life insurances hold roughly 28 percent of financial assets.

improve endowment with durables and dwellings, (ii) the increase in the wealth and incomes of households, (iii) favourable macro-economic conditions, (iv) the gradual decrease in interest rates, (v) banks' readiness to grant loans to households and (vi) banks' competition for the retail segment.

Box 3.2.1. Assessing the value of real-estate assets

The lack of relevant aggregate data for the real-estate sector, such as a price index for residential buildings or a market value for all these assets, called for theoretical solutions for estimating the value of buildings owned by households. The approach considers a building as a long-term investment, comparable to an investment in a long-term government bond. In this context, the price of a building may be determined the same as in the case of any asset, being equal to the sum of the present value of future flows. Rents, considered as constant, are the flows of the investment. The price of the building is calculated according to a simple perpetuity formula, using as an updating factor the yield to maturity of a government bond issued at an international level (also considered as constant):

$$P = \sum_{n=1}^{\infty} \frac{C}{(1+i)^{n-1}} = C \frac{1+i}{i} \quad \text{where } P \text{ is the price of the real-estate asset, } C \text{ is the rent, and } i \text{ is the yield to maturity for the government bond.}$$

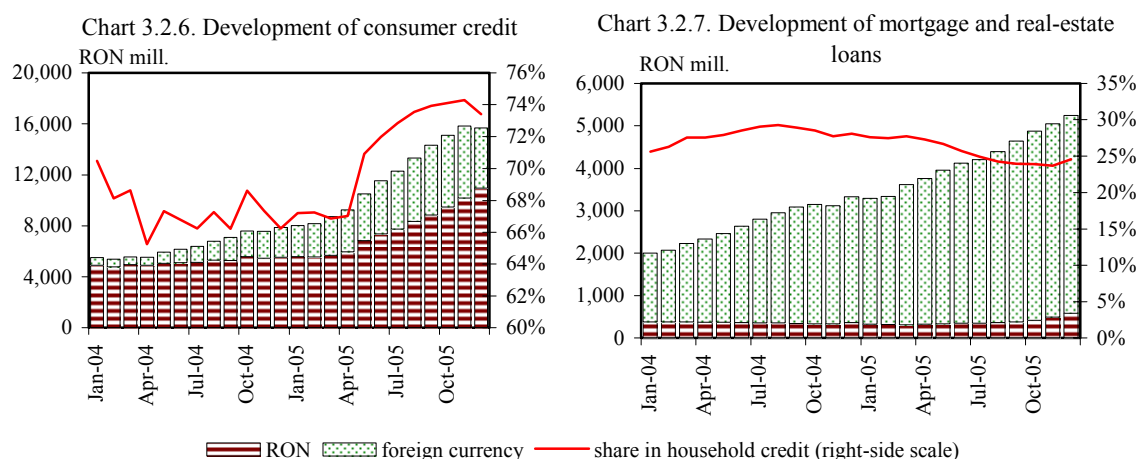
The first issue is related to the estimation of the value of the country-wide rent, over a given period. The guides containing approximate prices for real-estate properties, drafted by the assessing experts for notarial use* made possible the estimate of the average price for flats in urban area and for the square meter in rural area, but only for 2005. These average prices were established, by considering the main geographic areas divided into urban-rural. The benchmark for the price of urban dwellings was a three-room suit, in view of the fact that in the past few years the average number of rooms of a dwelling was of 2.6**.

In 2005, the rent was calculated based on the perpetuity formula. This rent was deflated by the rent growth index, thus resulting the rent for the previous years. Thus, the hypothetical price of dwellings was obtained together with an estimation of the hypothetical value of non-financial assets owned by

* The notarial chambers in Bucharest and the counties of Braşov, Covasna, Constanţa, Iaşi, Vaslui.

** According to NIS, 2005.

The risks arising from the financing of households by banks differs in terms of the credit type: mortgage credit is larger and it is guaranteed, while consumer credit is generally not guaranteed, being granted on income basis. The analysis of the structure of household credit by credit type illustrates the prevalence of consumer credit to the detriment of mortgage credit (Charts 3.2.6 and 3.2.7). Unlike the situation in Romania, the eurozone mortgage credit holds 69 percent of total, while consumer credit takes only 13 percent (September 2005).



Source: NBR

In the short run, the Romanian households are expected to take further loans, particularly consumer loans, considering the low endowment with durables¹⁹. In the long run, the convergence process will propel the development of mortgage loans, conditional upon the rise in both incomes and the supply of real estate. A mismatch between the supply and the actual demand may cause financial stability problems by means of the strong increase in the prices of these non-financial assets.

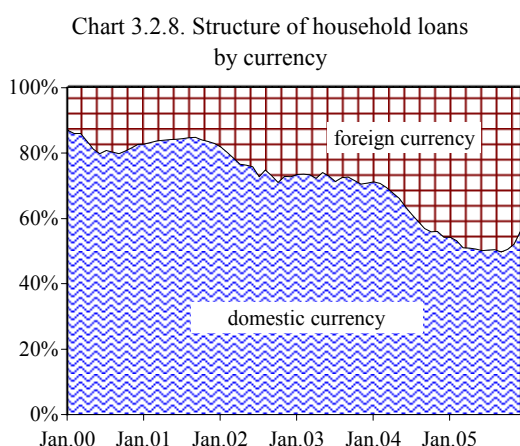
The structure of household credit shows two main developments that are worth mentioning: (i) a further significant share of foreign currency-denominated loan and (ii) the maturity extension of granted loans.

The share of foreign currency-denominated loan went up considerably (Chart 3.2.8), fuelled by lower interest rates on foreign currency-denominated loan, as well as by the strengthening process of the domestic currency. This raises the issue of unhedged borrowers, who are much more sensitive to foreign currency and interest rate shocks.

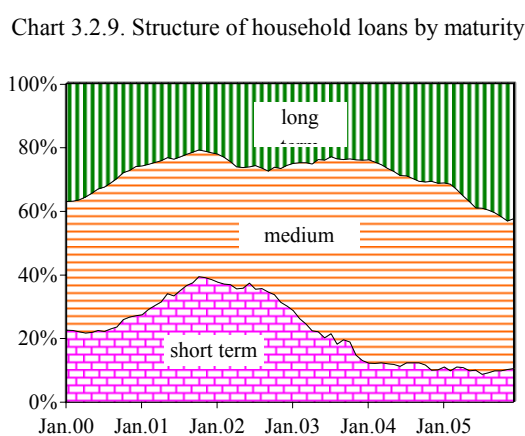
The analysis by type of credit (Charts 3.2.6 and 3.2.7) shows that mortgage loan is mainly denominated in foreign currency. Euro adoption is expected in the long run, so the negative impact on unhedged borrowers is less strong in this case²⁰. The consumer credit continues to be granted primarily in domestic currency. Medium-term credit (1 to 5 years) accounts for the bulk of household loan, holding 47 percent at end-2005 (Chart 3.2.9). Households tend to take longer-maturity loans (more than 5 years), against the background of the increase in mortgage credit and also as a response to the liquidity constraints imposed by the supervisory authority. The risks arising from the extension of loan maturity may be detected, on the one hand, at the level of banks' liquidity, which are likely to witness a mismatch of maturities related to asset and liability items, and, on the other hand, at the level of borrowers, whose indebtedness may increase owing to a lower debt service burden following the extension of maturity.

¹⁹ NIS, the Statistical Annual Report of Romania, 2004.

²⁰ The impact on unhedged borrowers will be contingent also on the level of the EUR-RON exchange rate at the moment of the adoption of the single currency.



Source: NBR



Source: NBR

The concentration risk of household loan declined, with beneficial effects on the financial stability (Table 3.2.1). The concentration diminished both geographically and institutionally. Moreover, the decline in the concentration degree related to consumer credit alleviates the risk caused by the significant increase in this type of credit.

Table 3.2.1. Concentration of household credit, Herfindahl index

	Geographical concentration			Institutional concentration		
	Total	Consumer	Mortgage	Total	Consumer	Mortgage
March 2004	1,174.5	1,190.2	1,158.7	1,622.5	1,589.5	2,049.3
March 2005	997.9	880.8	1,337.9	1,620.6	1,692.4	1,654.1
December 2005	984.1	839.6	1,523.5	1,509.0	1,536.7	1,566.1

Source: NBR calculations

3.2.3. Household indebtedness

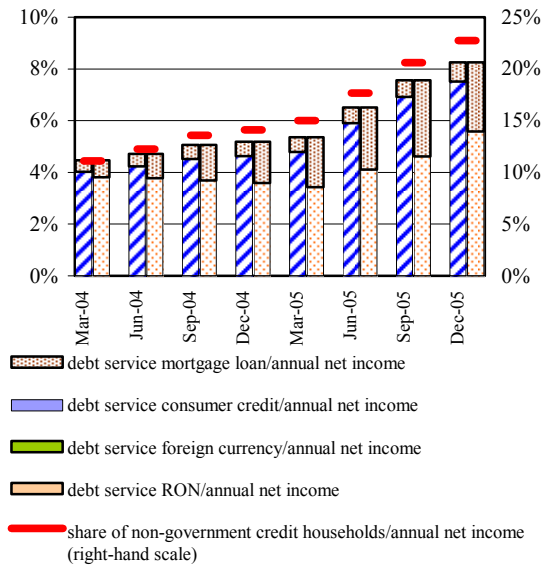
3.2.3.1. The dynamics of household indebtedness and the ability to service the debt

The share of household credit in GDP and that of total debts in GDP are still at very low levels compared to those in other European countries, whilst the share of debt service in the net income has experienced a significant expansion.

While in the eurozone bank credit held 57 percent of GDP in 2005, in Romania it is expected to account for merely 7.4 percent at end-2005 (Chart 3.2.11), illustrating therefore a very shallow financial depth at the level of households. Although the share of debt service in the net income is not significant, it is on a fast rise track (Chart 3.2.10). This indicator is still below that in the European countries²¹; however, the structure by type of credit differs. As concerns Romanian households, consumer credit accounts for the largest share of debt service. This development is underpinned by: (i) the large share of consumer credit in total household credit, (ii) shorter maturities and (iii) the high interest rate on such credit. The structure of the debt service by currency shows a larger and increasing contribution of exposure in the domestic currency to indebtedness; nevertheless, exposure in foreign currency contributes the most to indebtedness.

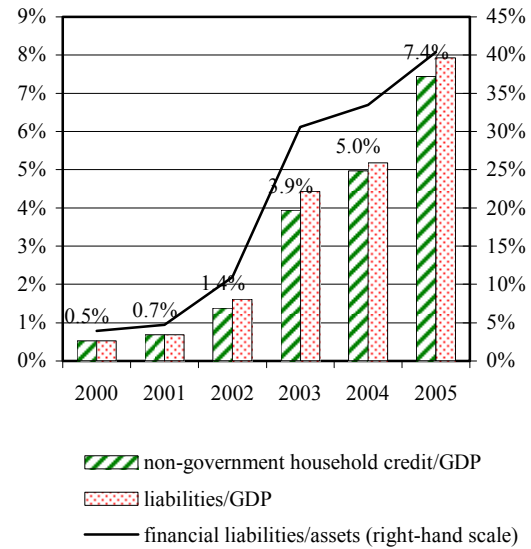
²¹ In EU, the debt service/disposable income ratio is about 12 percent.

Chart 3.2.10. Structure and development of debt service



Source: NIS and NBR calculations

Chart 3.2.11. Household indebtedness



Source: NIS and NBR calculations

The share of household loan in the annual net income and annual net wages, respectively, points to a substantial growth of household indebtedness, particularly starting with the latter half of 2005²². The growth rate of indebtedness exceeds that of incomes, which may affect the ability to service the debt where the current trends of the income dynamics or of interest rate dynamics (especially in what concerns foreign currency) witness a reversal.

The financial liabilities/assets ratio also illustrates households' ability to pay their liabilities (Chart 3.2.11). This indicator worsened starting with 2002²³, following the expansion of the bank credit and the development, by far more moderate, of financial asset value.

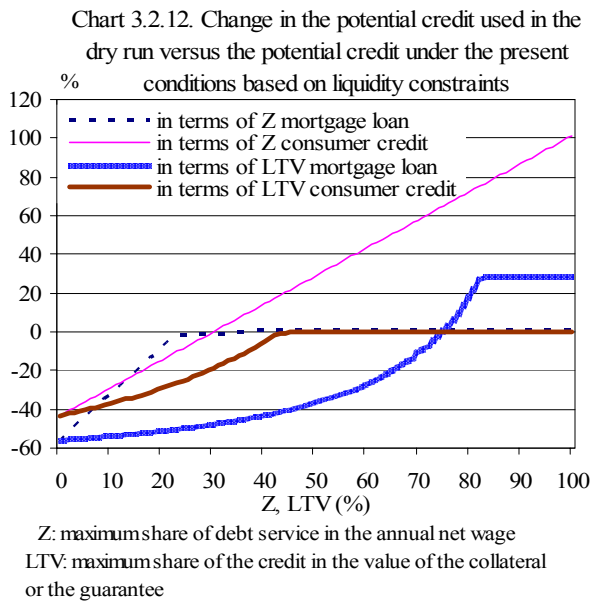
The maximum indebtedness level of credit applicants is contained by the regulations of the central bank. These constraints impose a share of the debt service in the net income of at most 30 percent for the consumer credit and of 35 percent for the mortgage loan. As concerns the mortgage loan, its share in the value of the collateral or the guarantee must be of at most 75 percent.

In view of the regulated liquidity constraints, the estimates on the potential bank credit showed that the actual household loan may still witness a considerable rise. The dry runs concerning the change in the liquidity constraints highlighted that, caeteris paribus, the requirement of increasing the down-payment for the mortgage loan would have the strongest impact on the reduction of credit (Chart 3.2.12).

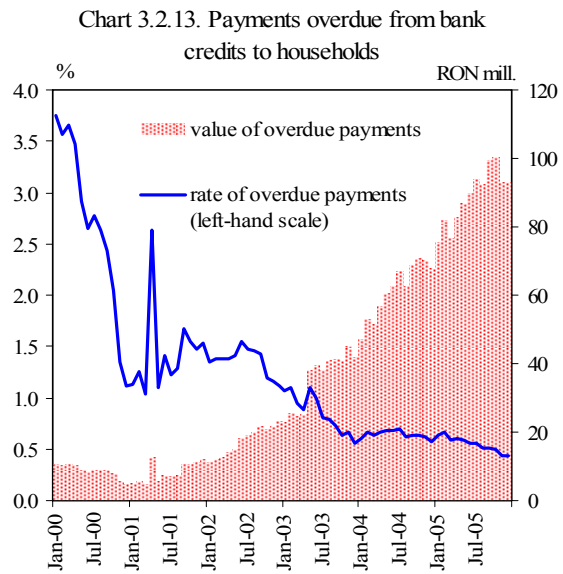
The pick-up in household indebtedness brings forward the issue of banks' credit risk management. An ex-post measure for assessing credit risk is the overdue payments ratio. Although the volume of overdue payments is on the rise, the share of overdue payments in total loans granted to households went down in the period under review (Chart 3.2.13). The 0.44 percent value recorded at end-2005 in Romania is significantly lower than that recorded in the EU (around 3 percent). Nonetheless, it is difficult to reach a conclusion from a financial stability perspective by considering only the overdue payments ratio. These statistical data might not, however, be accurate, as the indicators are likely to be undervalued following: (i) the robust expansion of lending, (ii) the maturity of exposures, and (iii) the upward trend of the economic cycle.

²² Nevertheless, the share of liabilities in the annual net income accounts for only one fourth of the similar European indicator.

²³ The current value of this indicator exceeds the European indicator (roughly 30 percent).



Source: NBR calculations, December 2005



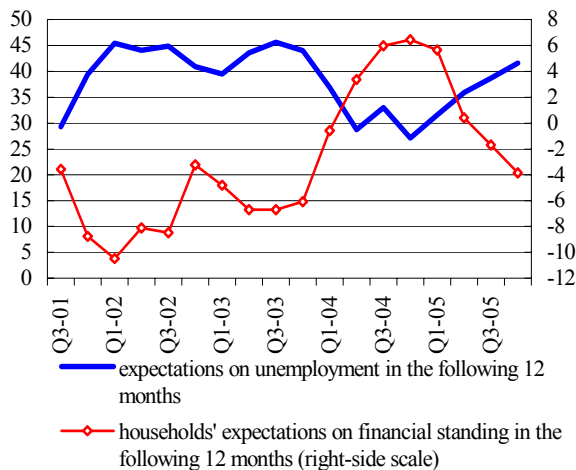
Source: NBR

3.2.3.2. Household indebtedness risks

The main developments likely to cause financial pressure on households, by lowering the ability to pay liabilities, are the following: the drop in incomes, the interest rate risk, the foreign exchange risk and the unfavourable development of prices for real-estate assets.

a) Incomes and macroeconomic environment

Chart 3.2.14. Households' expectations of financial standing and unemployment



Source: GFK Romania and the European Commission

The adverse development of incomes is the main factor which may affect directly the ability to service the debt and future indebtedness. Whereas in the medium and long run income is expected to go up (considering the EU integration), in the short run, households' expectations of financial standing and unemployment worsened. Thus, according to the survey on consumer's confidence, Romanian households expect a deterioration of financial standing underpinned by an expected increase in unemployment (Chart 3.2.14.) This pro-cyclical stance is fuelled by a negative perception in the short run generated by the slowdown in the economic growth; but, it may affect the ability to service the debt.

From the financial stability point of view, the impact of the worsening of households' income is ultimately contingent on the distribution of liabilities by household categories; the changes in financial conditions may produce different effects on households. Although statistical data are not available for the said distribution, it may be assumed that indebtedness related to mortgage loan is higher at the level of households earning average and high incomes, given the financing constraints. The ability of this household segment to withstand a negative income shock is much

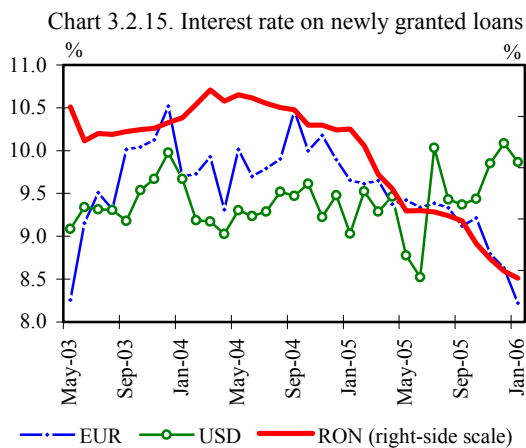
higher. Therefore, the ex-post confirmation of households' negative expectations might have a stronger impact on consumer credit. On the other hand, the institutional concentration of this type of loan is decreasing (Table 3.2.1), which makes a systemic risk less possible.

b) Interest rate risk

The interest rate on loans is a key element in the debt service dynamics. The change in the interest rate may produce effects to the extent to which loans are granted at a variable interest rate. Mention should be made that credit institutions in Romania usually granted variable interest rate loans.

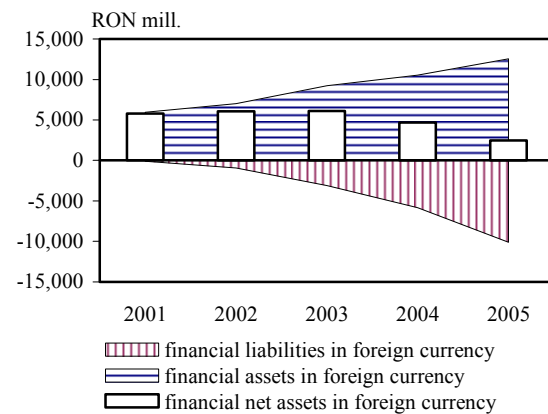
On the other hand, the downward trend in the interest rate on RON-denominated loans stimulated the credit institutions to grant fixed-rate loans as well. Although the structure of lending by interest rate variability is difficult to be exactly quantified in the absence of adequate statistical data, it is to be assumed that variable interest rates prevail over fixed ones, thus causing the negative shock on the interest rate to pass through to debtors.

Nominal interest rates on newly granted loans in RON and EUR (Chart 3.2.15) have been on a downward trend, particularly starting with 2005. This trend was determined by the decline in the inflationary component of domestic-currency denominated loans and the risk premium on foreign currency, and by the increase in competition. The drop in interest rates leads to a decrease in the debt service, which is likely to cause higher indebtedness.



Source: NBR

Chart 3.2.16. Foreign currency position



Source: NBR, NBR calculations

c) Currency risk

The currency risk is another significant issue for the financial stability, considering the marked expansion of households' financial liabilities in foreign currency. According to estimates, at an aggregate level, households hold a long, yet decreasing foreign currency position (Chart 3.2.16). This trend is likely to persist where the domestic currency is expected to strengthen. This development may boost lending in foreign currency and saving in domestic currency, inducing therefore a negative impact on households' financial wealth, where the present trends witness a reversal.

d) Real estate prices

Real-estate assets illustrate particularly the level of households' net wealth, constituting collateral for lending. The hypothetical real estate value (Box 3.2.1) saw a spectacular rise in the past years (Chart 3.2.17). The hike in the prices of buildings in Romania may be attributed to the surge in demand coupled with a weak supply response.

Demand determinants may be classified into two categories:

- i) Non-financial factors refer particularly to demographic issues, the impact of incomes and also to psychological and speculative factors. The potential demand for dwellings might be met given that an increasing share of households earns higher incomes and finds loans more readily available. The EU integration contributed to the convergence of real estate prices to similar prices in the EU. However, the development of the ratio of the hypothetical real estate value to the net income of households (Chart 3.2.18) points to a decline in households' ability to afford the purchase of a dwelling.
- ii) Financial factors refer to the features of mortgage lending: the interest rate, additional costs, liquidity constraints and lending terms. The increase in banking competition in granting mortgage loans caused a drop in interest rates on this type of loans, and implicitly in the monthly debt service, leading to a higher number of potential customers. On the other hand, the additional costs of lending increase the restrictiveness of this type of financing. The liquidity constraints imposed by the central bank also lead to the tightening of this type of financing.

Chart 3.2.17. Development of real estate price determinants

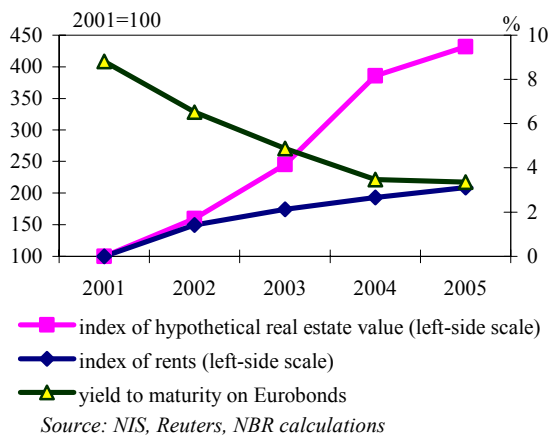
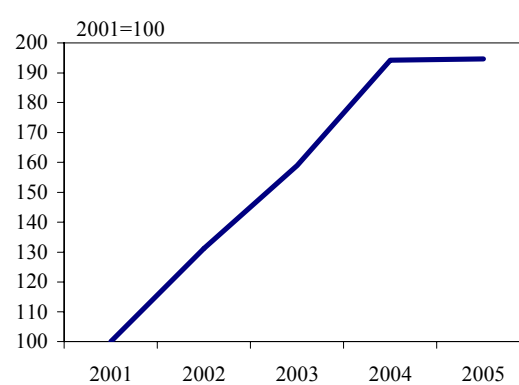


Chart 3.2.18. Ratio of the hypothetical real estate value to the annual net income



As concerns the supply, the dynamics of newly built dwellings witnessed only a slight increase, whilst the probability that most applicants for mortgage loans have access to new dwellings is low, considering their large average surface (more than 140 sq. metres).

The development of real estate prices raises the issue of a potential bubble. In the context of the structural factors under scrutiny, the dynamics of prices in Romania does not necessarily show a bubble on the real-estate market, but rather an adjustment to reach the expected market equilibrium. Banking financing plays a modest part in this adjustment, considering the volume of mortgage loans granted. The analyses of the international real-estate market have shown that, generally, in the long run, real prices of real estates tend to change with the growth rate of the income per capita. Nevertheless, the increased uncertainty about the long-term equilibrium, specific to an emerging economy, enhances the tendency for adjustment of long-term expectations based on short-term specific circumstances.

CHAPTER 4. FINANCIAL SYSTEM AND ITS RELATED RISKS

4.1. Structure of the financial system

Banks hold a dominant position in the Romanian financial system. In spite of their rapid growth in the past years, the other financial institutions hold relatively low market shares (Tables 4.1.1 and 4.1.2); therefore, their impact on financial stability is not significant. Non-bank financial institutions specialised in lending have been recently subject to regulation, monitoring and supervision by the central bank.

Table 4.1.1. The profile of the Romanian financial system in 2002 - 2005

Financial intermediation institutions	Share in GDP			
	2002	2003	2004	2005
Credit institutions (1)	31.19	30.76	36.59	44.76
Insurance companies (2)	1.51	1.78	1.90	2.21
Investment companies (3)	0.09	0.09	0.21	0.17
Financial investment companies (4)	1.45	1.45	1.29	1.76
Leasing companies (5)	1.48	1.81	2.97	3.63
Other institutions specialised in lending (6)	0.41	0.4	0.65	0.93
Total	36.13	36.29	43.61	53.46
Other financial companies				
BSE (7)	6.05	6.17	13.86	19.52
RASDAQ (7)	4.03	4.01	3.24	2.86

Source: NBR, NSC, ISC, NIS, NUUCITS, BLS, LCAR, BSE, RASDAQ, NUEMBS

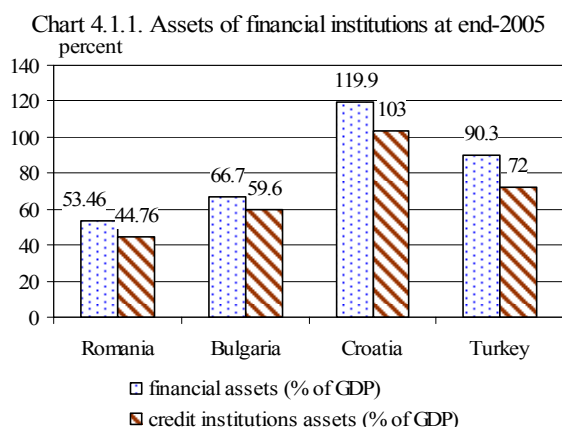
- 1) Net assets of credit institutions, including CREDITCOOP
- 2) The value of assets according to centralised balance sheets
- 3) Assets of investment funds, including the funds administered by IMC (Investment Management Companies), which are not NUUCITS members
- 4) Net assets of Financial Investment Companies (FICs)
- 5) Financed net assets
- 6) Total assets related to the following companies: consumer credit companies, mortgage loan companies, micro-finance companies, companies specialised in financing commercial transactions, companies involved in factoring, discounting and forfeiting operations, entities involved in issuing guarantees and assuming commitments, mutual assistance funds of employees and other companies specialised in lending
- 7) Stock market capitalisation

During the first years of transition, the slow macro stabilisation and restructuring of the real sector put a damper on the diversification of financial institutions. Moreover, the inefficient regulations and supervision of the financial activity, coupled with a faulty management, fostered the collapse of some market players and sapped temporarily the credibility of the financial system. Government securities and Treasury certificates issued by the Ministry of Public Finance were, at that time, the only saving instruments in competition with bank deposits.

Table 4.1.2. The number of financial institutions as of 31 December 2005

The type of financial institution	number of institutions
1 Credit institutions	40
2 Insurance companies	41
3 Investment companies	23
4 Financial investment companies	5
5 Other NBFI involved in lending, of which:	
Mutual assistance funds	3,306
Pawnshops	1,164
Financial leasing companies	278
Consumer credit companies	23
Mortgage credit companies	4
Micro-finance companies	14
Companies specialised in financing commercial transactions	2
Companies involved in factoring, discounting and forfeiting operations	3
Entities involved in issuing guarantees and assuming commitments, including loan guaranteeing	5
Other companies specialised in lending	2

Source: NBR



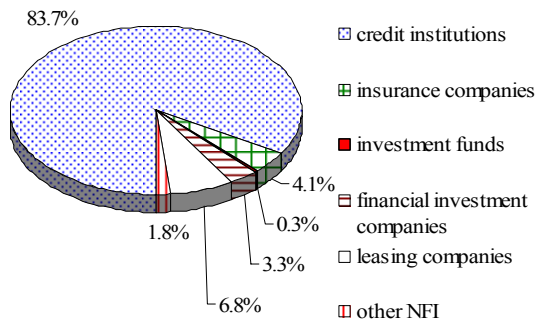
Source: NBR, EU

Until 2000, the banking sector faced a severe demonetisation and disintermediation process. However, starting with 2001, sustained economic growth became manifest, contributing decisively to restoring households' confidence in the banking sector. As a result of a large restructuring and privatisation process, private capital and foreign capital dominate the banking sector at present (94.0 percent of bank assets and 62.2 percent, respectively). The resumption, at a fast pace, of lending had as a result, in the past years, the expansion of the share of non-government credit in GDP to 21.1 percent in 2005 versus 10.1 percent in 2001.

Likewise, the expansion of non-government credit was the main determinant of the increase in the share of banking system assets in GDP to 44.8 percent at end-2005 (Chart 4.1.1), contributing to the decline in the disparity relative to financial intermediation compared to candidate and acceding countries. Starting from low levels, the activity of non-bank financial institutions and financial markets expanded markedly in the past years, following the macroeconomic stabilisation, high income levels, and the favourable external macroeconomic environment.

The restrictions imposed on banks, with a view to containing the lending risk, had a favourable effect on the non-bank financial sector. Considering the requests for protecting the borrowers and for ensuring uniform conditions for market operations, and also the possible impact on banks of non-repayment of loans granted to *non-bank financial institutions*, the central bank supported the initiation of measures regulating these institutions. As a result, at present, the NBR is directly involved in implementing the legislation governing non-bank financial institutions which perform

Chart 4.1.2. Market share of financial institutions as of 31 December 2005 calculated based on assets



Source: NBR, NSC, ISC, BLA, LCAR

lending operations²⁴, many of them being set to be brought under the scope of the central bank supervision.

With a market share of nearly 6.8 percent and a share of financed assets of 3.6 percent of GDP, leasing companies (Chart 4.1.2) came in second in 2005 among financial intermediation institutions, lagging considerably behind the banking sector. The tight authorisation conditions (a minimum capital of EUR 200 thousand), as well as the restrictions on financing through bond issues imposed by the recently enforced legislation may lead, at least in the beginning, to a lower number of leasing companies active on the market or to a shift in their activity towards the operational leasing.

Besides leasing companies, the other non-bank financial companies which perform generally lending activities (such as mutual assistance funds, pawnshops, mortgage credit institutions, consumer credit institutions, micro-finance institutions, etc.) are currently subject to the first monitoring stage by the central bank, based on the new regulations.

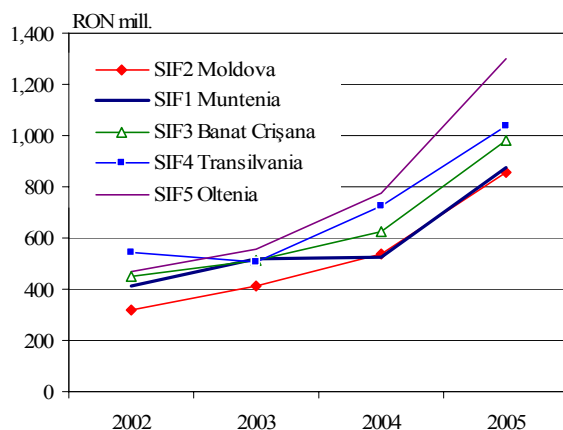
The insurance sector developed in the past years, particularly as a result of the implementation, starting with 2001, of a legislative and supervision framework consistent with the European one.

For 2005 as a whole, the nominal volume of subscribed insurance premiums was six times higher than the reading in 2000, year which preceded the establishment of the Insurance Supervisory Commission and the implementation of a new legislation in the field. In 2005, the share of gross insurance premiums in GDP was of 1.53 percent, according to preliminary data. In 2000-2005, the total assets of insurance companies rose by more than five times (in nominal terms), whereas the

number of authorised companies fell from more than 70 to 41, as a result of the consolidation process. Within this process, mention should be made that in 2003, minimum capital requirements of insurance companies were updated, with an impact on the capitalisation of the sector and on the number of insurers.

In 2005, share prices of the five *Financial Investment Companies* (FICs) quoted on the Bucharest Stock Exchange (BSE) followed an uptrend, their yields exceeding inflation rates. Net assets of these companies (Chart 4.1.3.) saw substantial year-on-year rises, ranging from 45.6 percent to 67.4 percent.

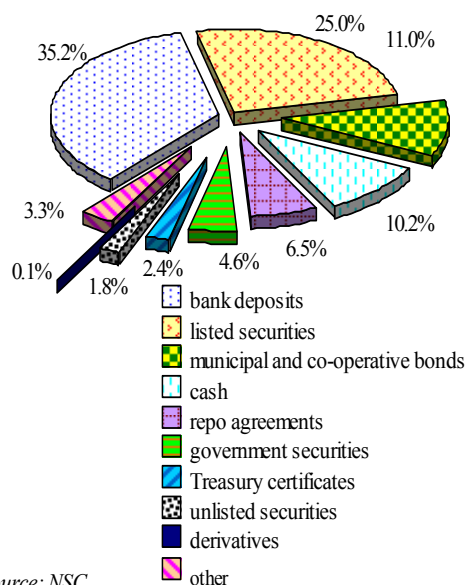
Chart 4.1.3. Net assets of SIFs



Source: BSE

²⁴ Ordinance No. 28 of 26 January 2006 on the regulation of some financial and tax measures, as well as on the secondary legislation for ensuring a comprehensive legal framework for its enforcement (NBR Norm No. 2/2006 on the minimum capital of NBF, NBR Norm No. 3/2006 on the General Register, the Special Register and the Entry Register, and NBR Norm/2006 on the notification procedure and the registration of NBF).

Chart 4.1.4. Composition of assets in open-end companies' portfolio



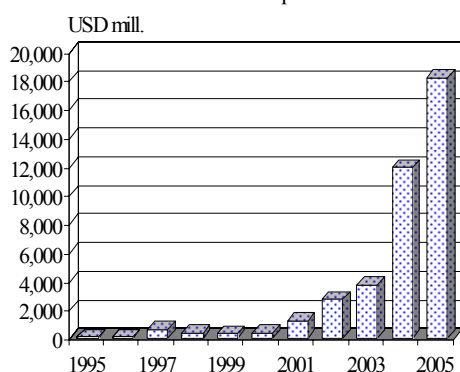
Source: NSC

Open-end investment funds held a small, albeit on the increase, weight in GDP, i.e. merely 0.2 percent at end-2005. Composition of assets (Chart 4.1.4.) shows a relatively low level of investment risk, given that 42 percent of the assets consist of money market instruments and bank deposits.

Over the past few years, the drivers of domestic capital market development have been the following: sustained economic growth, improving business climate, strengthening disinflation, a more favourable legislative framework governing the equity market, and the successive upgrades of Romania's sovereign rating assigned by the major international agencies.

At end-2005, capitalisation of BSE²⁵ and RASDAQ reached 22.3 percent share-to-GDP. The gains investors reaped from dealings on the Romanian stock market in the reported year outdid by far the returns on other financial market instruments.

Chart 4.1.5. BSE capitalisation



Source: BSE

Similar to previous years, in 2005 the BSE was further the more active capital-market segment, with all its indicators hitting historical highs²⁶. At year-end, market capitalisation accounted for 20 percent of GDP, rising more than threefold compared with 2003 (6.4 percent of GDP). Behind the swift rise stood across-the-board upturns in the listed shares, capital increases performed by some of the issuers quoted on the stock exchange, and new entrants on the market (Chart 4.1.5.). Investors showed keener interest in the shares issued by companies active in the petroleum-processing and financial sectors.

Despite the progress seen in recent years, the capital market's growth potential could not be fully capitalised upon, as illustrated by annual market turnover which still lagged behind the levels recorded in the other countries in the region. The small number of participants and the relatively few listed companies (64) still prevent the market from developing further. However, the number of listed shares is set to exceed the 100 mark after the merger of BSE and RASDAQ, which began in 2005.

In 2006, the admission to quotation of the companies in which the state still holds sizeable participations and for which this could be the best way to commence or complete privatisation is expected to have a strong impact on the stock market. Insofar as the sovereign rating improves, foreign investor equity holdings are seen growing.

²⁵ Ten years from the relaunch of dealings on the capital market in Romania (November 1995) were celebrated in 2005. The Extraordinary General Assembly Meeting of the BSE in January 2005 changed the legal status of the exchange to a joint stock company and in November 2005 approved the project of merger through absorption with the Electronic Exchange RASDAQ.

²⁶ During 2005, the three indices of the BSE recorded historical highs as compared to the beginning of the year: +51 percent BET, +38 percent BET-C and +175 BET-FI.

4.2. Banking sector²⁷

4.2.1. Structural developments

At present, foreign private capital dominates the Romanian banking industry, facilitating the access to external funding, making credit risk management more efficient and having a positive impact on the banking sector stability. Most of the 40 credit institutions operating at the end of 2006 Q1 were universal banks, excepting two banks: one lending to small and medium size companies and the other financing the purchase of motorcars. Three banks operate as specialised banks, out of which two banks are engaged in lending for housing while one bank is involved in financing foreign trade operations.

Box 4.2.1. Restructuring of the Romanian banking system

Restructuring of the banking system took its first step at the end of 1990 when the newly-established bank, Banca Comercială Română, took over retail operations performed previously by the NBR. Simultaneously, some privately-owned banking companies were established and foreign banks' branches were integrated into the domestic banking activity, the number of banks almost trebling* during 1991-1998.

The unfriendly economic environment, the poor quality of bank managers and shareholders and cumbersome legal procedures led to an increase in tensions, the poor quality of credit portfolio representing the major difficulty of the banking sector. At end-1998, non-performing loans accounted for more than 58 percent of total credit portfolio and 253 percent of Tier 1 capital, exceeding by far the usual coverage means – by recapitalisation or increase in loan recovery. Against this background, in early 1999, the NBR embarked on a programme aimed at restructuring the banking system meant to ward off systemic risk, which focused on: (i) removal of problem-banks; (ii) improvement of the regulatory and prudential supervisory framework governing banks; (iii) establishment or improvement of some instruments providing indirect support to the banking system, i.e. Credit Risk Bureau, Payment Incident Bureau and Bank Deposit Guarantee Fund. In addition, the Authority for State Assets Recovery (ASAR) was established in order to take over the state-owned banks' non-performing loans.

Ultimately, the problem of banks in distress was solved by removal from the banking system of Bancorex, the largest state-owned bank (in October 1999 Bancorex was subject to a merger through absorption process with BCR) and by adjudging eight small privately-owned banks bankrupt. Bancorex bad assets on and off balance sheet were transferred to the ASAR while viable assets were taken over by BCR, which became the largest bank of the banking system, its share in total bank assets rising to about 30 percent.

Bank restructuring brought about the resumption of the bank intermediation function and the increase in safety of bank depositors. Financial costs of banking sector restructuring were borne by the government and accounted for 10 percent of GDP during 1990-2003.

Notable progress was made also in the field of banking regulation and supervision: implementation of a uniform bank rating system and early warning system; reduction of on-site inspections to one year; financial discipline by tougher criteria for sanctioning banks; stricter criteria for the authorization of managers and shareholders of banks; increased co-operation with the Romanian and foreign supervisory authorities.

* In 1998, the Romanian banking system was made up of 7 commercial banks with majority state-owned capital, 13 banks with majority domestic privately-owned capital, 16 banks with majority foreign capital and 9 branches of foreign banks.

²⁷ Data relating to the end of 2005 and March 2006 are based on prudential reports.

Table 4.2.1. Structural indicators of the Romanian banking system

	Dec. 1999	Dec. 2000	Dec. 2001	Dec. 2002	Dec. 2003	Dec. 2004	Dec. 2005	Mar. 2006
Number of credit institutions*	41	41	41	39	39	40	40	40
Banks with majority private capital	37	37	38	36	36	38	38	38
Banks with majority foreign capital, <i>of which:</i>	26	29	32	32	29	30	30	31
- Foreign bank branches	7	8	8	8	8	7	6	6
Number of banks per 100,000 inhabitants	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.19
Assets of banks with majority private capital/Total assets (%)	53.2	53.9	58.2	59.6	62.5	93.1	94	94
Assets of banks with foreign capital/ Total assets (%)	47.5	50.9	55.2	56.4	58.2	62.1	62.2	61.9
Assets of top five banks/Total assets (%)	66.7	65.5	66.1	62.8	63.9	59.2	58.8	57.8
Herfindahl-Hirschmann index	1,296	1,375	1,427	1,381	1,264	1,120	1,124	1,130

* including CREDITCOOP

Source: NBR

Foreign capital inflows and privatization led to sweeping changes in the structure of the Romanian banking system (Tables 4.2.1. and 4.2.2, Charts 4.2.1 and 4.2.2.). Thus, at the end of 2006 Q1, the market share, in terms of assets, of banks with majority state-owned capital declined to 6 percent while that of banks with majority private capital increased to 94 percent. Moreover, during the same period, banks with majority foreign capital held 61.9 percent of total assets of the banking system.

By activity, three banks operate based on special laws²⁸. Raiffeisen Bank for Housing and HVB Bank for Housing are engaged in collective saving and lending for housing. The Romanian Export-Import Bank (EXIMBANK) is a specialised bank whose role is to underpin the financing of exports and to provide export-related insurance.

Two other banks, although they may provide all financial products and services specific to universal banks (in accordance with their licence), specialised mainly in granting loans for purchase of motorcars (Porsche Bank Romania) and for financing small- and medium-sized companies (ProCredit Bank).

Table 4.2.2. Structure of foreign share holding in the Romanian banking system

	% of total capital						
	Austria	Greece	Italy	France	Netherlands	Other	Total
Dec. 2000	3.2	8.5	0.4	6.8	3.1	18.4	40.4
Dec. 2001	21	6	1.1	3.4	8	13.7	53.2
Dec. 2002	24	8.2	2.7	5.7	3.5	11.7	55.8
Dec. 2003	21.5	11.1	4.6	5.9	4.5	10.6	58.2
Dec. 2004	24.6	10.1	8.4	5	5.9	16.6	70.6
Dec. 2005	21.8	12.4	5.8	5.6	8.2	15.1	68.9
March 2006	20.9	14.7	5.9	5.4	7.9	15.4	70.2

Source: NBR

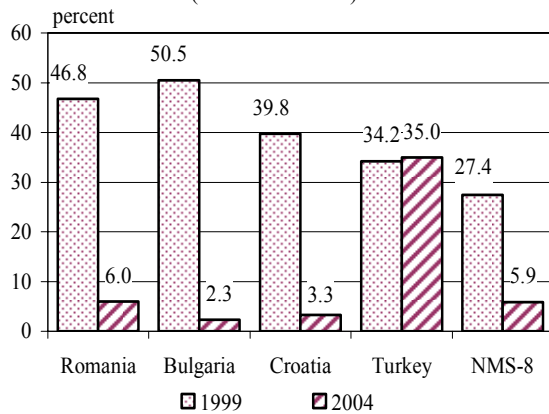
²⁸ Law No. 541/2002 on collective saving and lending for housing and Law No. 96/2000 on organisation and operation of the Romanian Export-Import Bank (EXIMBANK).

Special mention deserves the Savings Bank (CEC), specialised in savings in the communist period, which turned into a retail bank, benefiting from the State's guarantee for household deposits.

In order to ensure the soundness of the banking system, the NBR focused on the authorization, regulation and supervision of credit cooperatives. Starting with September 2002, the credit cooperative organization Creditcoop was brought within the scope of the central bank supervision. At end-March 2006, the Creditcoop network was made up of a central house and 124 credit cooperatives, with assets accounting for 0.4 percent of total assets of credit institutions.

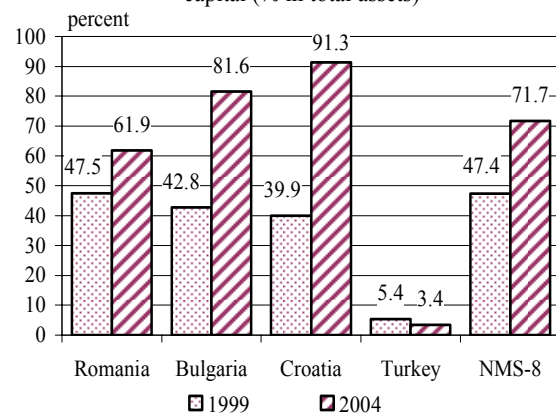
The measures adopted in order to accelerate the reform of the banking system by its privatization²⁹ contributed significantly to the current state of affairs in the banking system, the privatization of BCR entailing the substantial increase in the share of private capital. In this context, the completion of BCR privatization in 2006 will contribute to the increase in the share of banks with majority foreign capital to 88 percent of total bank assets.

Chart 4.2.1. Banks with majority state-owned capital (% in total assets)



Source: NBR, EU

Chart 4.2.2. Banks with majority foreign capital (% in total assets)



Source: NBR, EU

The privatization of the Savings Bank (CEC), which holds 4.5 percent of total bank assets, is in progress. Involvement of foreign banks had beneficial effects which materialized in better access to foreign financing, more efficient credit risk management, improved corporate governance and more stable banking sector. Restructuring and privatization strategy followed by the government allowed cleaning-up of the state-owned banks' balance sheets by transferring non-performing claims outside the banking sector alongside the central bank's policy of strengthening the supervisory framework and, last but not least, the increase in the share of foreign shareholders had as a result an improvement of assets quality. Thus, the share of past-due and doubtful claims in banks' Tier 1 capital dropped to 1.8 percent at end-March 2006 from 31.2 percent in 1999.

Market concentration (Table 4.2.3), which is measured by the share of top-five banks in total bank assets (57.8 percent), points to one of the lowest degree of concentration in the group of acceding and candidate countries, remaining however above that of euro area countries. The moderate level of market concentration is also confirmed by Herfindahl-Hirschman index which reached 1,130 at end-March 2006, being calculated in terms of assets.

²⁹ The privatisation process of Banca Română pentru Dezvoltare (BRD) and Bancpost was completed in early months of 1999 while that of Banca Agricolă was completed in the first half of 2001. The first stage of privatisation of BCR unfolded in 2004 by the sale of 25 percent of BCR share package to the EBRD and the IFC and 8 percent to the employees. At end-December 2005, in the second stage of privatization, Erste Bank AG acquired 61.88 percent of BCR stock.

Table 4.2.3. Bank concentration (top five banks)

	Dec. 2002	Dec. 2003	Dec. 2003	Dec. 2003	Mar. 2006
Assets	62.8	63.9	59.2	58.8	57.8
Loans	56.2	57.1	55.7	61.2	60.5
Securities	74.2	75.4	61.5	60.1	63.0
Deposits	63	64.9	59.5	57	56.2
Tier 1 capital	64.5	61.2	60.5	55.1	52.5

Source: NBR

The downward trend of market concentration and the increase in the share of banks with majority foreign capital may point to higher competition. Fiercer competition will entail changes in the strategy of small- and medium-banks (possible merger and acquisition), their long-term self-financing capability being significantly low when compared with that of major market players. However, they are likely to concentrate on specialised products or on certain client segments.

The number of banks per 100,000 inhabitants remained almost unchanged in the last few years (around 0.18 percent, slightly higher starting with 2005); however, this figure is below that recorded by new member countries (excluding Cyprus and Malta) or by acceding and candidate countries (excluding Turkey). Conversely, as a result of development of territorial networks, the number of units by credit institution increased in the last few years, exceeding almost five times that registered by euro zone.

4.2.2. Structure of assets and liabilities

Restructuring and strengthening of the banking system provided an underpinning to the rapid increase in bank assets in the past five years (Chart 4.2.3). Structural analysis of the dynamics of aggregate balance sheet shows that management policy of investments and resources underwent significant changes. The expansion in non-bank non-government sector's claims had as a result the deepening of financial intermediation, with the share of credit institutions' assets increasing to 44.8 percent of GDP at end-2005. Over the short term, the current structure of balance sheet appears to provide a good correlation between assets and liabilities by maturity given that holdings with the central bank and short-term credit prevail. The extension of maturity of financing sources contributes significantly to the matching of balance sheet items by maturity.

Claims on domestic non-bank sector represent the most significant component, accounting for 50.1 percent of bank assets at the end of 2006 Q1 (Table 4.2.4).

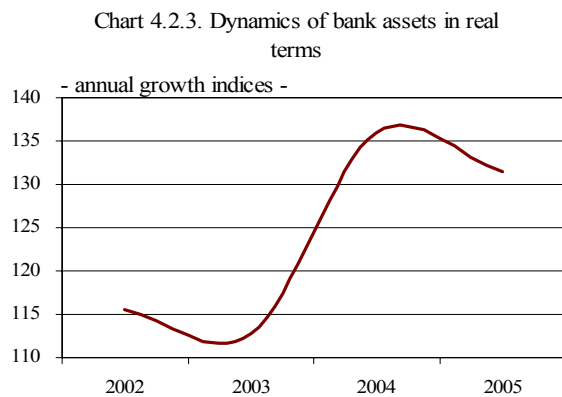
Household loans rose markedly, exceeding the growth of corporate loans. Taking into account the initially low level of household loan, its growth is expected to continue, the level recorded at the end of 2005 being well below that of euro area. Moreover, real-estate loan is still in its infant stage of development, accounting for 25 percent of household loan.

The moderate growth of corporate loans is also due to: (i) increase in corporate self-financing capacity as a result of favourable macroeconomic conditions; (ii) expansion of financing via commercial debt; (iii) constraints associated with participation in public auctions; (iv) increase in external financing.

Table 4.2.4. Assets structure

	% of total assets					
	2001	2002	2003	2004	2005	2006 Q1
Total claims, <i>of which:</i>	71.6	78.6	83.1	84.7	88.5	90.3
Claims on the NBR and credit institutions, <i>of which:</i>	27.2	32	29.3	36.5	40	40.2
- Claims on the NBR	23.4	28.6	26.3	28.5	25.1	33.4
Claims on domestic non-bank sector, <i>of which:</i>	44.4	46.6	53.8	48.1	48.5	50.1
- Claims on government	10.8	9.2	4.7	2.4	1.9	1.6
- Claims on corporations	31.3	33	36.9	32.7	30.2	30.6
- Claims on households	2.3	4.4	12.2	13	16.4	17.9
Foreign assets	14.5	8.3	5.7	5.7	3.5	1.7
Other	13.9	13.1	11.2	9.6	8	8

Source: NBR



Source: NBR

Measures taken by the central bank during 2004-2005 in order to contain the rise in non-government forex-denominated loans had as a result a slower growth rate of balance sheet assets in 2005 and 2006 Q1.

Claims on government sector were on the wane. The volume of government securities issues dropped as a result of a steady decline in budget deficit and the narrowing of the primary market for government securities.

Claims on credit institutions and on central bank were on the upside, reaching 40.2 percent

of total balance sheet assets at the end of 2006 Q1, compared with 30 percent in the euro area. Placements with the central bank prevailed in total interbank operations, continuing to represent an important feature of the banking sector. The main components of these placements were: credit institutions' holdings on current accounts with the central bank in order to set up minimum reserve requirements and the standing facilities (short-term deposit-taking operations and certificates of deposit issued by the central bank) in order to mop up surplus liquidity. It is worth mentioning that during 2000 – March 2006, minimum reserve requirements on foreign currency deposits increased to 40 percent from 20 percent. The interbank deposits (excluding the NBR) account for a small part in balance sheet assets.

It is noteworthy that foreign assets entered a downward trend given that most banks were involved in financing the expansion of domestic credit to households.

On the liabilities side, deposits taken from non-bank sector, especially corporate and household deposits represented the main financing source of commercial banks (Table 4.2.5). The share of this component in total balance sheet liabilities, albeit on a downward trend, was well above that recorded in the euro area (accounting for 30 percent). In the euro area the deposits of monetary and financial institutions are significant (22 percent). Securities issues, which are widely resorted to as a financing source in the euro area, hold a small part in total liabilities of Romanian banks, reflecting a still underdeveloped domestic market for private securities. Foreign liabilities rose

significantly during the past few years; their maturity increased, thereby contributing to the matching of balance sheet items.

Therefore, corporate and household holdings and deposits as well as external funds represent the main financing sources of banks. These sources are channelled mainly to non-government credit, and to a lesser extent invested in securities and interbank placements.

Table 4.2.5. Liabilities structure

	2001	2002	2003	2004	2005	2006 Q1	%
Total residents deposits, <i>of which</i> :	74.1	75	71.2	67.9	63.5	61.3	
Interbank deposits	3.7	3.3	2.9	3	2.45	1.7	
Non-bank sector deposits, <i>of which</i> :	70.4	71.7	68.3	64.9	61	59.6	
- Government sector deposits	3.7	3.1	3	2.6	3.5	3.4	
- Corporate and household deposits	66.7	68.6	65.3	62.3	57.5	56.2	
Capital and reserves	14.4	13.5	13.1	11.7	12.2	12.4	
Foreign liabilities	5.9	7	11.7	15.9	20.9	21.9	
Other	5.6	4.5	4	4.5	3.4	4.4	

Source: NBR

4.2.3. Capital adequacy

The analysis of indicators showing the capitalisation of credit institutions and the stress test results point out that the Romanian banking system is adequately capitalised, being able to resist to some severe exogenous shocks. Although these indicators went down slightly in the past few years due to the fast-paced growth of lending, the assertion is right. Over the short run, this trend is expected to continue due to the aforementioned factors, with solvency indicators remaining, however, at a high level in terms of the prescribed level.

4.2.3.1. Capitalisation of banks, Romanian legal entities

From the financial stability viewpoint, an adequate level of capitalisation of credit institutions is relevant for their ability to absorb potential losses generated by less prudent risk management practices or by various exogenous shocks. That is why the focus of financial stability analyses is the level of capital adequacy.

In 2005, capitalisation of banks, Romanian legal entities³⁰, was maintained at an adequate level (Table 4.2.6) despite the expansion in non-government credit during the past few years. Thus, solvency ratio³¹, although declined slightly during the past few years, remained at a high level (20.21 percent at end-2005 and 19.72 percent at end-March 2006), exceeding by far the minimum level laid down in prudential regulations applicable in Romania (12 percent) and that required by European and international regulations (8 percent).

The most dynamic item of Tier I capital was the share capital while from among Tier II capital components the banks' subordinated loans increased markedly. However, the profit is an important element of Tier I capital during the period under review, while the level of Tier II capital was

³⁰ Prudential requirements concerning own funds are not applicable to foreign banks' branches and, therefore, prudential indicators are not calculated based on own funds.

³¹ Solvency ratio is determined on the basis of own funds as a share of total assets and off-balance sheet items, net of provisions, adjusted by risk.

boosted largely by the volume of reserves resulted from wealth revaluation registered in banks' balance sheets.

Table 4.2.6. Development of own funds and capital adequacy indicators of banks, Romanian legal persons

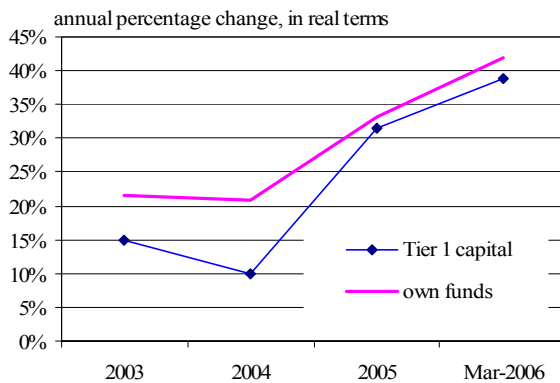
Indicator	- RON thou. -			
	31.12.2003	31.12.2004	31.12.2005	31.03.2006
Own funds	7,074,174	9,339,730	13,502,002	14,154,351
Tier 1 capital	6,073,256	7,290,693	10,417,391	10,978,689
Equity capital	3,674,765	4,615,785	6,848,931	7,682,375
Profit/loss	1,234,280	1,676,035	1,999,485	550,492
Subordinated loans	239,790	450,061	1,480,347	1,556,926
Revaluation reserves	1,022,462	1,387,090	1,378,016	1,394,383
Solvency ratio (>12%)	21.09%	20.55%	20.21%	19.72%
Ratio of Tier 1 capital to risk weighted assets (>8%)*	18.11%	16.04%	15.59%	15.30%

* This indicator is determined on the basis of Tier 1 capital as a share of total assets and off-balance sheets items, net of provisions, adjusted by credit risk.

Source : NBR

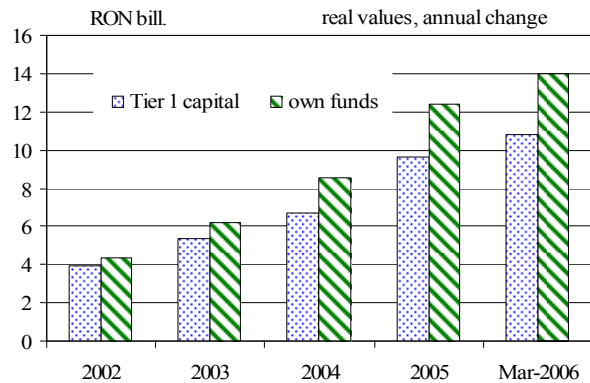
It is worth mentioning that Tier I capital and own funds increased markedly in real terms (Chart 4.2.4) during the last three years, due mainly to banks' efforts to ensure a sound growth of non-government credit (Chart 4.2.5).

Chart 4.2.4. Real growth rate of Tier 1 capital and own funds of banks, Romanian legal persons



Source: NBR

Chart 4.2.5. Development of Tier 1 capital and own funds of banks, Romanian legal persons

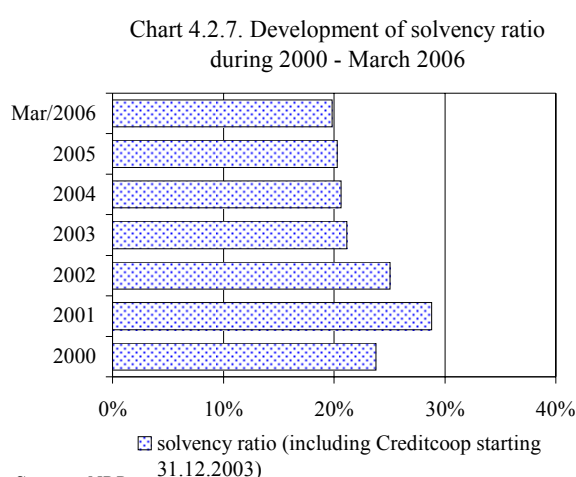
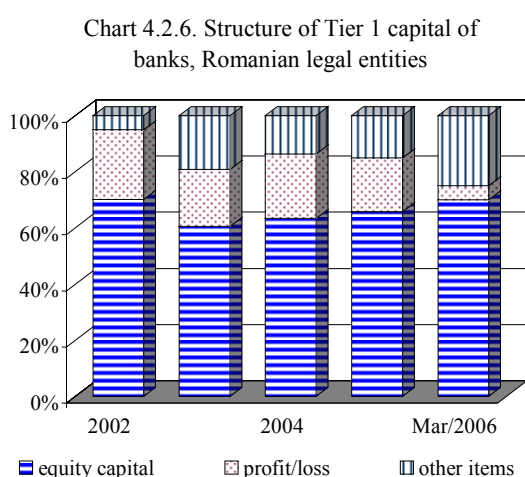


At the end of 2005, out of 40 credit institutions which operated in Romania, 28 increased their share capital during 2005. Consequently, the real growth of the share capital in the banking system reached about 38 percent compared with 2004. In 2006 Q1, share capital of five credit institutions increased. Capitalisation of credit institutions was also underpinned by their profit, which posted a real growth of 9.7 percent in 2005 compared with 2004.

Structural analysis of total own funds of banks, Romanian legal entities, points out that Tier 1 capital prevailed and Tier 2 capital increased faster in the last two years, reflecting the need of credit institutions to diversify their financing sources. As a result of these developments, during

2002-2005 the share of Tier 2 capital doubled to reach about 23 percent of total own funds. Tier 2 capital will continue to increase in the period ahead given that the maximum level laid down in prudential regulations is of 50 percent of own funds.

It is noteworthy that subscribed and paid-in share capital and current profit which boosted Tier 1 capital of banks, Romanian legal entities, posted uneven developments (Chart 4.2.6). Thus, the share capital increased to 65.7 percent at end-2005 and 70 percent at end-March 2006 as a share of Tier 1 capital, reflecting the efforts made by shareholders to increase the market share. On the other hand, the share of profit declined to 19 percent at end-2005, other items of Tier 1 capital making up the remainder.



4.2.3.2. Analysis of solvency

Solvency ratio of total credit institutions (Chart 4.2.7) was on a slightly downward trend, although at end-2005 and end-March 2006, its levels (20.29 percent and 19.82 percent respectively) were significantly higher than the minimum solvency ratio laid down in domestic regulations (12 percent) and that of euro area (11.5 percent).

The analysis of solvency ratio by group of banks³² during 2002-2005 (Chart 4.2.8) shows a downward trend, with solvency ratio of large banks being the lowest (16.16 percent at end-2005 and 15.46 percent at end-March 2006), when compared with solvency ratio of the other groups of banks and of the banking system. This development was driven by increasing competition on the credit market (the market share of top five banks rose to 61.2 percent at end-2005 and 60.5 percent at end-March 2006 from 55.7 percent at end-2004, their market share in total bank assets remaining unchanged at nearly 59 percent).

³² The NBR classified banks in terms of the share of their assets in total bank assets. Thus, large banks' assets account for more than 5 percent of total bank assets; medium banks' assets account for 1-5 percent of total bank assets; and small banks' assets account for less than 1 percent of total bank assets.

Chart 4.2.8. Solvency ratio during 2000 - March 2006 by group of banks

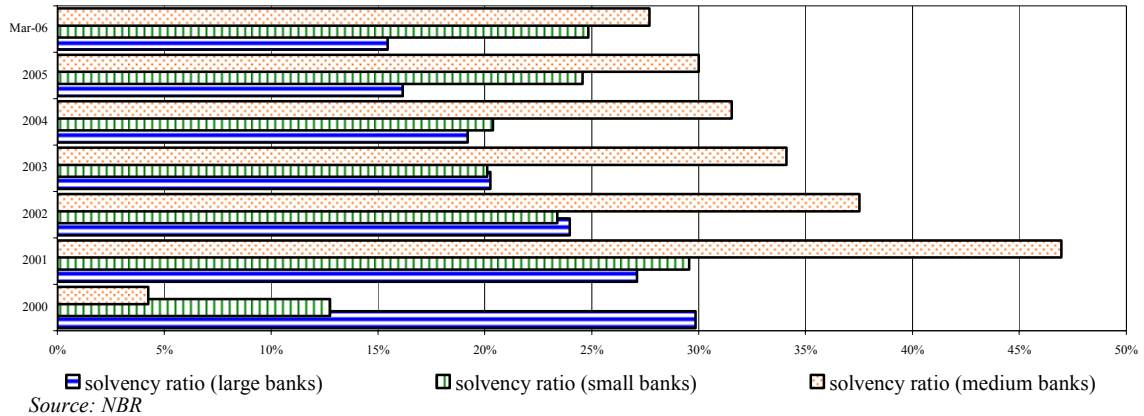


Chart 4.2.9. Banks in terms of solvency ratio

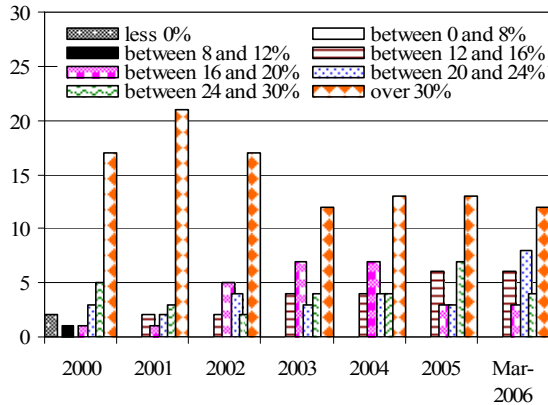
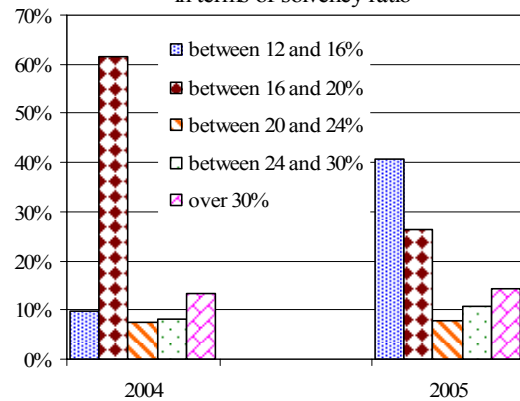


Chart 4.2.10. Bank assets in terms of solvency ratio



Analysis of ranking in terms of solvency ratio during 2000 – March 2006 (Chart 4.2.9) shows that banks’ capital adequacy ratio edged lower starting 2002, simultaneously with the expansion of non-government credit.

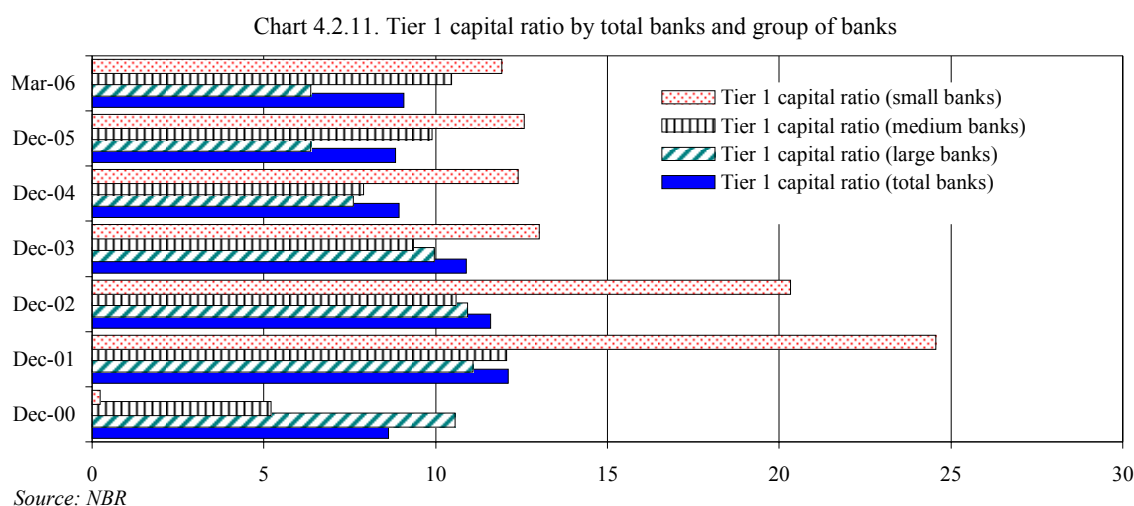
Distribution of bank assets in terms of solvency ratio (Chart 4.2.10) shows that at the end of 2004, most assets (61.62 percent) belonged to banks whose solvency ratio ranged from 16 percent to 20 percent while other banks held about 10 percent of total assets. At the end of 2005, most bank assets belonged to banks whose solvency ratio ranged from 12 percent to 16 percent (40.68 percent of total assets), the share of assets included in 16-20 percent solvency ratio falling to 26.45 percent. This development is the result of higher credit market concentration (the share of credit of top five banks rose by 5.5 percentage points in 2005 to reach 61.2 percent at end-2005).

Although the solvency ratio declined, bank capitalisation at the end of 2005 would ensure in the near future a potential significant increase in non-government credit.

Examination of bank financing through equity ratio³³ shows a slight drop in self-financing ability of the banking system during 2002 – March 2006 (by less than 3 percentage points to about 9 percent) as a result of faster increase in banking system’s total assets than in Tier 1 capital.

³³ Equity ratio is the ratio of Tier 1 capital to banks’ assets. This indicator reflects to what extent banks are able to ensure their financing from own sources.

An in-depth analysis of self-financing by group of banks (Chart 4.2.11) reveals that large banks own the lowest level of Tier 1 capital (6.37 percent at end-2005 and at end-March 2006) while small banks' self-financing ability is still the highest (12.58 percent at end-2005 and 11.92 percent at end-March 2006) compared with the other groups of banks and with the average for the banking system.



4.2.3.3. Results of stress test in assessment of solvency ratio and of own funds

As of 30 June 2005, the stress test analysis employed by the Financial Stability Department highlighted the effect of exogenous shocks under scrutiny (18.6 percent depreciation of the domestic currency exchange rate and 6.7 percentage point decline in interest rate on leu-denominated operations) on the level of own funds and solvency ratio reported by banks.

The systemic analysis revealed that the Romanian banking system is capable of absorbing the negative effects of shocks considered in the scenario, given its adequate capitalisation and a high level of liquidity. Actually, no credit institution is in the state of insolvency. Solvency assessment (Table 4.2.7) shows that solvency ratio fell by only 1.6 percentage points, from 18.3 percent to 16.7 percent. On an individual basis, solvency ratio after the shock was higher than the minimum level laid down in the Romanian prudential regulations (12 percent), except one small bank (which holds only 0.9 percent of total assets of the banking system) whose solvency ratio estimated by stress test was 9.7 percent. However, it is worth mentioning that this level is above the minimum level in European countries and worldwide. Moreover, the equity capital of that bank was raised in November 2005.

Table 4.2.7. Impact of shock on bank solvency

	Total	Banks with state owned capital	Privatised banks	Banks with domestic private capital	Subsidiaries of leading foreign banks	Other banks with foreign capital
Solvency ratio before the shock (%)	18.3	40.3	16.3	20.8	23.0	18.5
Solvency ratio after the shock (%)	16.7	39.7	14.1	20.6	22.2	18.2
Size of total impact (pp)	1.6	0.6	2.2	0.2	0.8	0.3

Source: NBR

By type of capital, privatized banks deserve mention (accounting for 52.3 percent of total assets), the average solvency ratio reaching 14.1 percent, 2.2 percentage points lower than at end-June 2005.

The combined effect of the stress test scenario is the 9.5 percent decline in total own funds (Table 4.2.8). By group of banks the strongest impact might be felt by privatized banks (which might experience a decrease in own funds of 15.2 percent).

Table 4.2.8. Assessment of shock effects on own funds

	Total	Banks with state owned capital	Privatised banks	Banks with domestic private capital	Subsidiaries of leading foreign banks	Other banks with foreign capital
DIRECT EFFECT	-8.1	-2.5	-13.4	-1.3	-0.9	-0.8
Exchange rate	0.0	0.3	-0.1	0.7	-1.3	0.1
Interest rate	-8.0	-2.8	-13.3	-2.0	0.4	-0.9
INDIRECT EFFECT	-1.4	-0.1	-1.8	-0.2	-3.7	-1.0
Credit risk (gross exposure)	-46.0	-1.0	-59.7	-7.2	-81.7	-25.9
Credit risk mitigated by collateral	-1.4	-0.1	-1.8	-0.2	-3.7	-1.0
TOTAL IMPACT	-9.5	-2.6	-15.2	-1.5	-4.6	-1.8

Source: NBR

Consequently, one may assert that the Romanian banking system capitalisation allows further sound increase of non-government credit and of the degree of financial intermediation. Over the short run, there is no ground to expect adverse effects that might endanger significantly the degree of capitalisation of credit institutions and, implicitly, the financial stability of the banking system.

4.2.4. Credit risk

The quality of credit portfolio is adequate and, over the short-term, adverse factors are not expected to affect it significantly. Credit developments are carefully monitored and, therefore, the risk of a credit boom remains moderate. However, credit risk tends to increase and this trend will maintain given the expected lending growth.

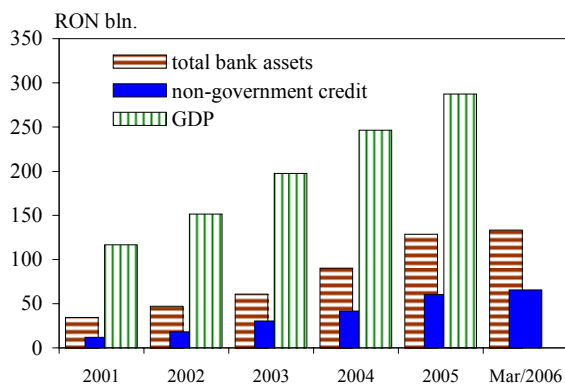
4.2.4.1. Main credit developments

Expansion of non-government credit in the last three years, especially foreign currency-denominated credit and household credit, was one of the phenomena which hallmarked the Romanian banking system and made the central bank take steps to monitor its growth. In 2005, the monetary policy measures and prudential rules adopted by the central bank succeeded in containing non-government credit expansion, especially in what concerns its foreign exchange component.

The expansion of lending activity reflected in the balance sheets of banks, Romanian legal entities and foreign bank branches, did not entail deterioration of the quality of credit portfolio, banks keeping in place prudent lending practices.

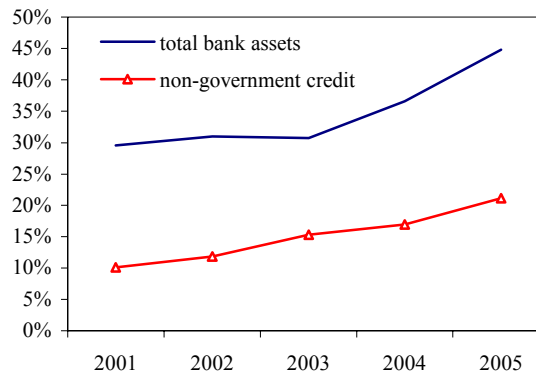
Domestic credit increased considerably during the past six years, solely due to non-government credit (Chart 4.2.12). Government credit, which accounted for 33.5 percent of domestic credit in 2000, posted a downward trend starting with 2001, reaching a negative level since 2003.

Chart 4.2.12. Development of bank assets and non-government credit



Source: NIS, NBR

Chart 4.2.13. Development of bank assets and non-government credit as shares in GDP

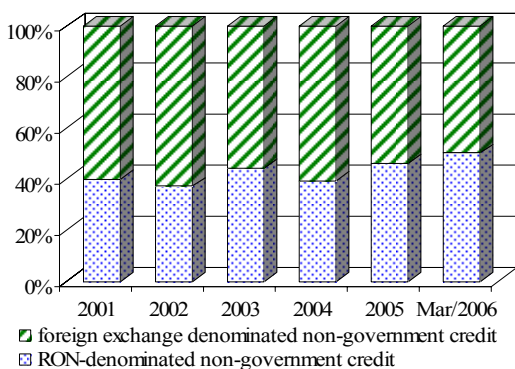


In the past five years, the degree of financial intermediation in Romania improved significantly. At the end of 2005, bank assets accounted for almost 45 percent of GDP while the share of non-government credit in GDP doubled during 2001 – March 2006 to reach 21 percent (Chart 4.2.13).

One of the short-term effects of the measures taken by the NBR to contain the growth of foreign currency-denominated credit was the 6 percentage point drop in the share of this credit in total non-government credit (Chart 4.2.14) compared with the previous year (at end-2005, foreign currency-denominated credit accounted for 54 percent of total non-government credit). Another effect was seen in 2006 Q1 when the share of foreign-currency-denominated credit fell to 49.7 percent of total non-government credit, while the leu-denominated credit held sway for the first time in the past ten years. It should be mentioned that this development was also underpinned by the significant decline in the interest rate differential between domestic and world markets.

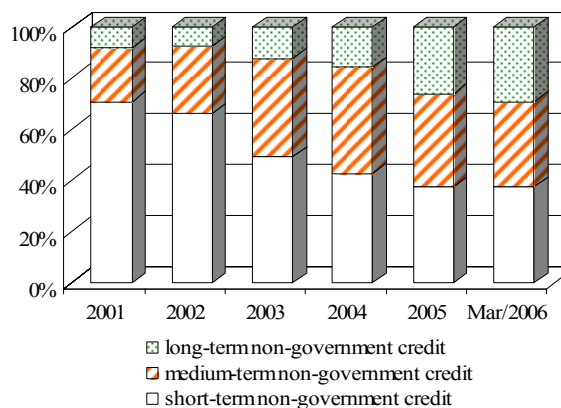
However, the international experience shows that effectiveness of prudential measures taken by the central bank may diminish, this state of affairs calling for the adoption of additional measures with the aim of ensuring maintenance of a sound and efficient banking system.

Chart 4.2.14. Development of non-government credit in terms of currency denomination



Source: NBR

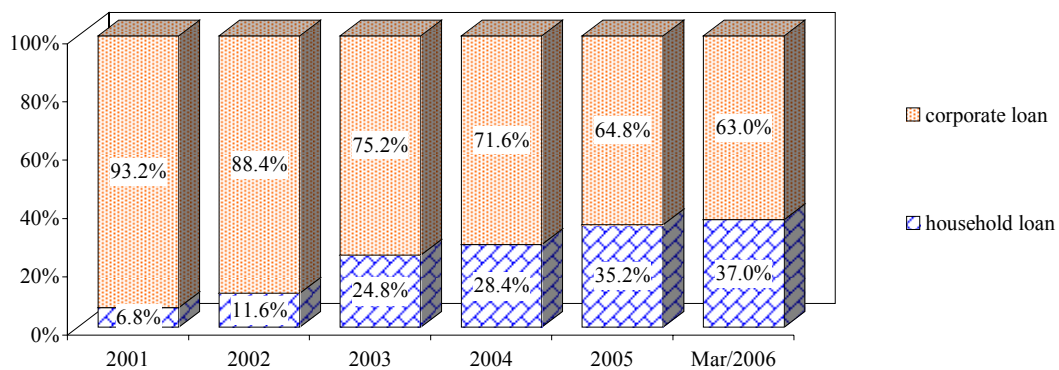
Chart 4.2.15. Development of non-government credit by maturity



The maturity structure of non-government credit (Chart 4.2.15) underwent a significant change on the back of high demand for long-term credit. Compared with 2001 when short-term loans accounted for more than 70 percent and long-term (more than five years) loans represented only 8 percent of total, starting with 2005, the structure of non-government credit balanced relatively. Thus, the share of short-term loans dropped to roughly 37 percent of total, while long-term loans (more than five years) accounted for more than 25 percent and about 29 percent at end-2005 and end-March 2006, respectively.

Although corporate loans continued to account for most of non-government credit, household loan grew at a faster pace, leading to a significant change in non-government credit structure in the past five years (Chart 4.2.16). This was due to high demand for such loans and to extremely low amount of these loans (only RON 800 million in 2001). At end-2005, household loans accounted for 7.4 percent of GDP and 16.6 percent of total bank assets (amounting to more than RON 21 billion in nominal terms). The upward trend of household loans continued into 2006 Q1, accounting for 18.2 percent of total bank assets.

Chart 4.2.16. Development of non-government credit components



Source: NBR

4.2.4.2. Credit quality

Credit quality in the Romanian banking system is adequate, even recording an improvement compared with 2000. Thus, the share of past-due and doubtful loans to non-bank clients (net value) in total credit to the non-bank credit portfolio³⁴ dropped below 1 percent, continuing the downward trend, to reach almost 0.26 percent at end-2005 and end-March 2006. The gross value of this indicator evolved favourably, reaching 0.47 percent at the end of 2005 and end of 2006 Q1 (Chart 4.2.17).

³⁴ According to the balance sheet.

Chart 4.2.17. Credit quality in the banking system

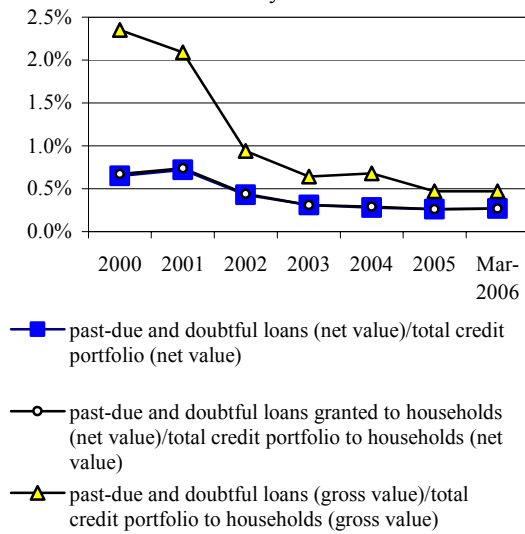
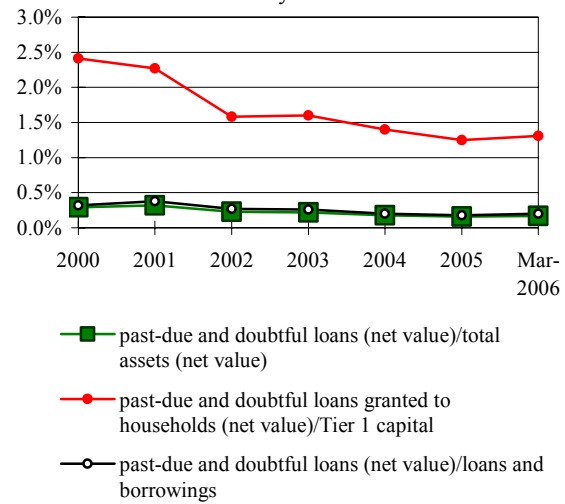


Chart 4.2.18. Credit quality in the banking system



Source: NBR

Past-due and doubtful claims (net value) as a share of total bank assets and of Tier 1 capital of credit institutions posted relatively low levels during the past six years, improving somewhat (Chart 4.2.18). This development points out that the level of Tier 1 capital of credit institutions is high enough to absorb losses from non-performing claims recorded in banks' balance sheets. Last but not least, it should be noted that the very low level of the ratio between past-due and doubtful claims and total bank liabilities (at end-2005 and end-March 2006, the ratio was about 0.2 percent, i.e. half of the level recorded at end-2001) points out the prudent manner of placing bank liabilities (Chart 4.2.18).

Chart 4.2.19. Credit quality in the banking system

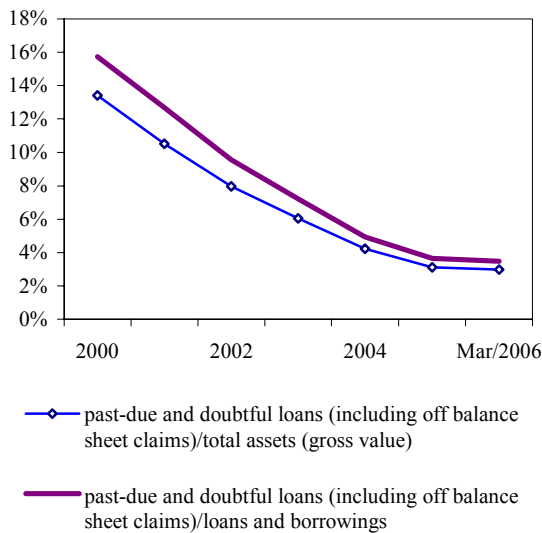
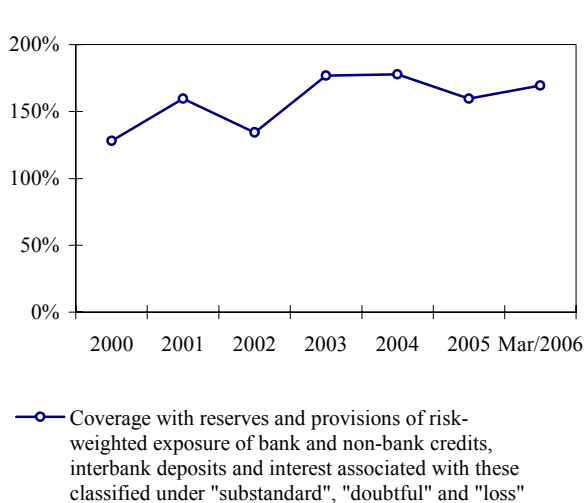


Chart 4.2.20. Coverage of claims classified "substandard", "doubtful" and "loss"



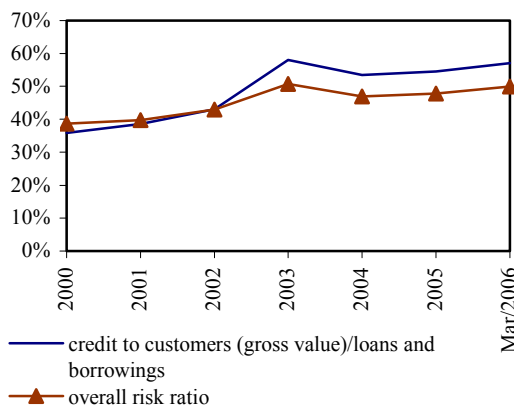
Source: NBR

The share of past-due and doubtful claims (including off-balance sheet claims) in total assets (gross value) and in total bank liabilities went down from 13.4 percent and 15.7 percent respectively at

end-2000 to about 3 percent and 3.7 percent at end-2005 and 2006 Q1 (Chart 4.2.19) pointing to the improvement of risk management in the banking system.

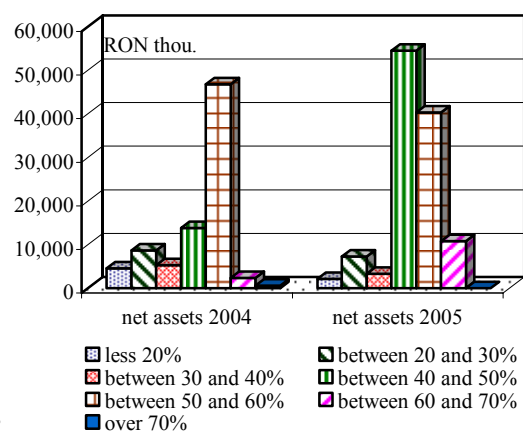
Risk-weighted exposure of bank and non-bank credits, interbank placements and interest rates associated with these, classified as “substandard”, “doubtful” and “loss” were adequately covered by reserves and provisions during the period under review (about 160 percent at end-2005 and 170 percent at end-March 2006), improving considerably compared with 2000 (Chart 4.2.20).

Chart 4.2.21. Risk assessment indicators calculated on the basis of credit institutions' balance sheets



Source: NBR

Chart 4.2.22. Net assets distribution in terms of overall risk ratio



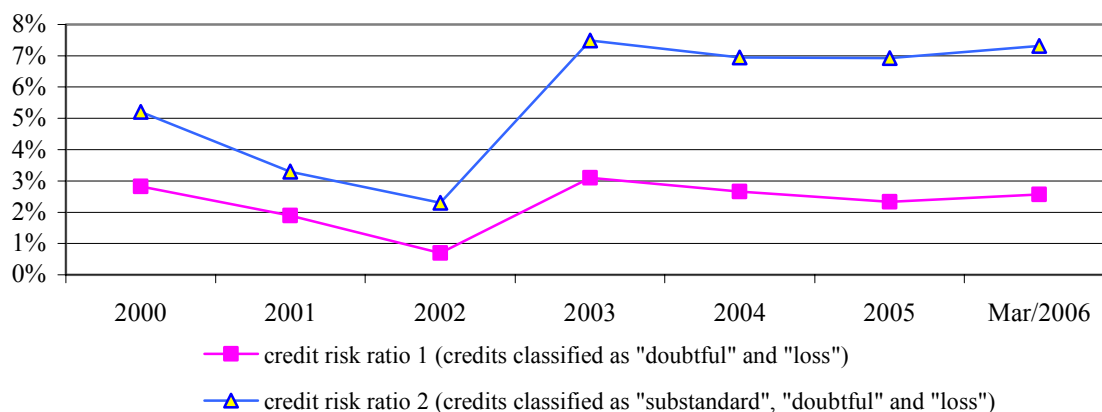
Deepening of financial intermediation is reflected by the 20 percentage point increase in the share of loans (gross value) in bank liabilities (Chart 4.2.21) during the six-year period (from 35.8 percent at end-2000 to 54.6 percent at end-December 2005 and 57 percent at the end of 2006 Q1).

The increase in lending to corporate and household sector and the deepening of credit concentration in 2005 inflict the rise of credit risk, especially in the case of large banks. This is reflected by the overall risk ratio, which stood at 47.8 percent at end-2005 and 50 percent at end-March 2006 (Chart 4.2.21).

Comparative analysis of net assets in terms of overall risk ratio at end-2004 and 2005 (Chart 4.2.22) shows that this indicator moved to levels reflecting higher risks. Although non-government credit posted a nominal rise of about 50 percent in 2005, total overall risk ratio in the banking system rose by only one percentage point from the previous year, reaching 47.80 percent at end-2005.

Developments of 1 and 2 credit risk ratios (Chart 4.2.23) mirror the changes to regulations on loan classification and setting up of specific risk provisions. The downward trend of the aforementioned indicators during 2000-2002 was interrupted in 2003 following the introduction, among loan classification criteria, of that relative to the financial performance of companies. In 2004 and 2005, these indicators improved slightly. It is worth mentioning the significant impact on credit risk ratio of credits and interest included under “substandard” category.

Chart 4.2.23. Credit quality in the banking system



Source: NBR

To these developments also contributed the bulk of information about corporate and household loans disseminated by Payment Incidents Bureau and Credit Information Bureau, which provided their support to banks in assessing indebtedness of borrowers.

4.2.4.3. The results of the stress test analysis relative to credit risk

The assessments of 30 June 2005, using the stress test analysis (which aims at identifying potential vulnerabilities of the banking system), included also the estimation of credit risk of commercial banks. The analysis was made by means of the indirect impact of shocks consisting in the 18.6 percent depreciation of the exchange rate of the domestic currency and the 6.7 percentage point cut in the interest rate on domestic currency loans, on financial statements and performance of credit institutions. More specifically, the central bank analysed the manner in which the two shocks mentioned above affected directly the ability of companies which were granted loans by credit institutions to repay the principal and the interest.

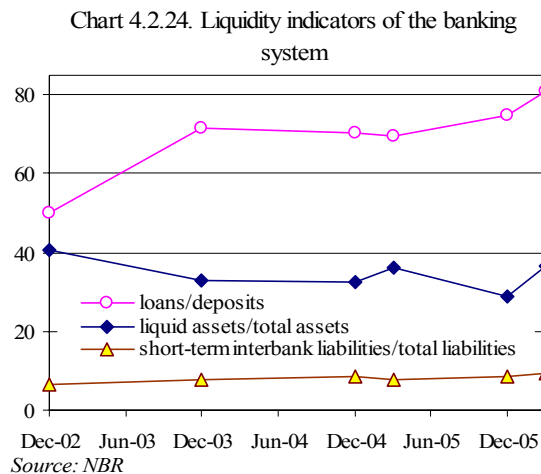
The analysis of the direct impact of the change in the exchange rate and the interest rate on domestic currency loans on the banking system was accompanied by the analysis of the indirect effect of the impact generated by the same shocks by means of the credit risk arising from the exposure towards companies (second round effects) on financial statements of credit institutions.

When taking into consideration exposures adjusted by guarantees, at the system's level, the indirect effect leads to a merely 1.4 percent erosion of own funds. Among the groups of banks subject to the analysis, privatised banks and the subsidiaries of internationally reputed banks would be more affected, because their own funds would diminish by 1.8 percent and 3.7 percent respectively. The indirect impact of the two shocks mentioned above, felt through the credit risk, could produce effects on 22 banks in the system, whose own funds may decline in a range between -8.0 percent and -0.1 percent. The own funds of eight banks might witness above-average decreases at the system's level (-1.4 percent).

However, mention should be made that the indirect impact of the shocks considered in the scenario is much more difficult to assess than their direct impact on the balance sheet and the profit and loss account of credit institutions. Therefore, banks must maintain high levels of capital adequacy indicators and adopt conservative practices for setting up provisions.

4.2.5. Liquidity risk

The Romanian banking system has a high level of liquidity, albeit decreasing slightly, given that large financial resources are used for credit expansion. Over the forthcoming period, the banking system liquidity is not expected to pose problems from the viewpoint of the risk, considering that short-term credit accounts for more than a quarter of non-government credit and that the number of deposits with the central bank, which feature a high level of liquidity, is very large. The trend to extend the maturity of financing resources, particularly of foreign resources, is yet another favourable development. Given the major exposure of banks to the central bank, the “contamination” risk on the interbank market is expected to be further low.



Liquid assets, as a share in total balance sheet assets, remained at high levels over the past years, albeit on a decrease from 33.1 percent at end-2003 to 28.8 percent at end-2005 (Chart 4.2.24). This development was mainly the result of more modest rises in deposits with the central bank, as an increasing number of banks abandoned the high level of liquidity in favour of substantial incomes from lending. Nevertheless, the National Bank of Romania remains the most important counterparty to banks (89 percent of total interbank operations) against the background of a still low volume of interbank transactions.

In 2006 Q1, the share of liquid assets in total balance sheet assets went up almost 8 percentage points, solely as a result of the pick-up in the volume of banks’ deposits with the NBR (+36.3 percent in real terms) – against the background of the average interest rate on these deposits entering an upward path and the increasing impact of prudential measures aimed at containing non-government credit expansion, especially foreign exchange loans.

In 2003-2005, the indicators short-term assets/short-term liabilities³⁵ and loans/deposits³⁶ recorded similar developments, going up from 210.5 percent to 245.7 percent and from 71.7 percent to 74.9 percent, respectively, which is indicative of an acceptable level of exposure to credit risk. For end-March 2006, these indicators (244.3 percent and 81.0 percent, respectively) show that banks’ liquidity stays within optimum parameters.

As concerns the indicator loans/deposits, mention should be made that, from a structural point of view, the difference between leu-denominated amounts (56.9 percent in 2005 and 66.5 percent at end-March 2006) and foreign exchange-denominated amounts (126.6 percent and 123.7 percent, respectively) is still high. This illustrates the low level of liquidity risk for leu-denominated loans/deposits compared with the large liquidity risk exposure for foreign exchange-denominated loans/deposits.

Foreign financing resources stayed on an upward trend in 2005 and 2006 Q1. More than half of these liabilities are taken on medium and long term.

³⁵ The maturity of the assets and liabilities taken into account is of up to 3 months, in compliance with NBR Norm No. 1/2001 on banks’ liquidity, as subsequently amended and supplemented.

³⁶ The indicator loans/deposits was calculated for non-bank customers.

Banks focused on more stable financing resources, with much longer maturities than deposits taken from non-bank customers, also as a result of the development recorded by subordinated debt, which rose three times in real terms at end-2005 compared to 2004; the upward trend was manifest in 2006 Q1 as well. The number of banks launching bonds on the capital market³⁷ witnessed an increase, the volume of bonds launched being nine times higher at end-2005 than in 2004. January through March 2006, the balance of bonds saw a slight drop.

The analysis of bank assets and liabilities by maturity in compliance with the Norm on prudential liquidity shows also the extension of the maturity of financing resources (Table 4.2.9).

Table 4.2.9. Structure of bank assets and liabilities by type of maturity*

	%				
	Assets <1M	Assets 1M-3M	Assets 3M-6M	Assets 6M-12M	Assets >12M
31.12.2004	57.6	6.0	7.2	9.2	20.0
31.12.2005	56.1	5.7	6.4	9.1	22.7
	Liabilities <1M	Liabilities 1M-3M	Liabilities 3M-6M	Liabilities 6M-12M	Liabilities >12M
31.12.2004	68.3	8.8	3.2	3.6	16.1
31.12.2005	55.5	9.7	4.1	4.6	26.1

* according to NBR Norm No.1/2001 on banks' liquidity

Source: NBR

In 2005, the share of liabilities with a residual maturity of more than one year in total liabilities posted an increase, particularly as a result of foreign financing. The volume of assets with the same maturity band recorded a marginal increase in total assets.

Nonetheless, at end-2005, more than half of the volume of bank assets and liabilities had a maturity of up to one month.

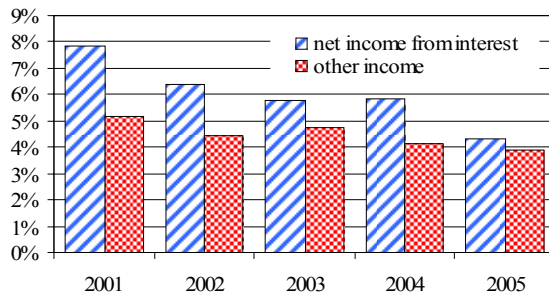
4.2.6. Market risk

At the level of the Romanian banking system, market risk is, generally, low, given the moderate direct exposure of credit institutions to the change in the interest rate and the less significant direct exposures to the change in the exchange rate and the share price. Nevertheless, indirectly, the risk passes through to the loan portfolio quality. The conclusions of the analysis of the relevant specific indicators match the outcomes of the stress test assessment for the first six months of 2005.

The interest rate risk is, generally, moderate in the Romanian banking system, in terms of both the P&L account and the balance sheet structure. The share of the net income from interest rates in average assets and that of the net income from other activities than those generating interest are on a downward trend (Chart 4.2.25). However, the decline in the share of net incomes from other activities than those generating interest in average assets is much lower than that of net incomes from interest rates in 2001-2005. This dynamics is indicative of the rise in the sensitiveness of the return on assets to the change in the interest rate. Moreover, the extension of the average maturity of loans granted is indicative of a potential increase in sensitiveness of the balance sheet to changes in the interest rate.

³⁷ Banks have issued bonds on the capital market starting with 2004.

Chart 4.2.25. Share of total average assets of net income from interest* compared with that from activities other than interest-bearing activities



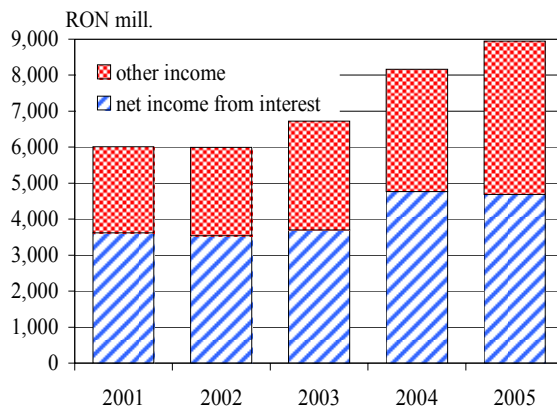
*) net income from interest inclusive of net income from operations with clients and net income from operations in securities

Source: NBR

remains reasonable, as interbank assets and liabilities contribute to maintaining a manageable disequilibrium of the structure by maturity. In addition, the increase in the share of long-term assets is further accompanied by the rise in the share of long-term liabilities (although, not to the same extent), while associated interest rates remain, generally, variable.

On the other hand, as far as the profit and loss account is concerned, an increase is detected in net bank incomes, particularly in the share of net incomes from other activities than those generating interest (Chart 4.2.26). This illustrates that the decrease in the period under review of the return on assets is the result of the development of bank intermediation. Mention should be made that some banks pass on the interest cost of loans to the commissions charged for these facilities, which alleviates the actual impact of the interest rate risk. Furthermore, at the level of the aggregate bank balance sheet, the problem of correlating resources with investments, by maturity band,

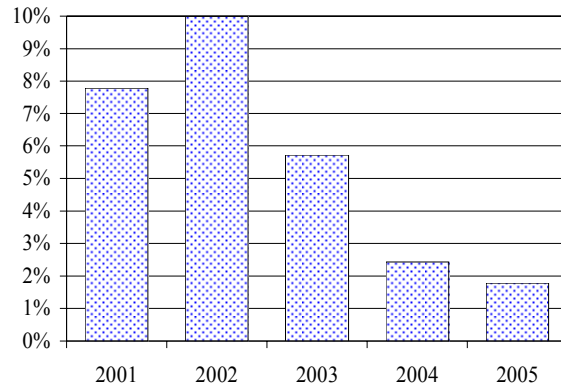
Chart 4.2.26. Developments* in net bank income



*) comparable prices for 2005

Source: NBR

Chart 4.2.27. Share of total foreign exchange position in own funds of the banking system



Source: NBR

The direct exposure of credit institutions in Romania to the exchange rate risk is further low. Although, in 2001-2005, foreign exchange loans went up by 46.9 percent on average per year and forex deposits of residents picked up by only 22.3 percent on average per year, the share of the foreign exchange position in own funds remained very low (Chart 4.2.27). The foreign exchange position reached a relative balance by taking foreign resources in foreign currency at low interest rates. Mention should be also made that foreign currency transactions resulted in considerable net incomes for banks. Over the past five years, these incomes accounted for 13.4 percent, on average, of net incomes from interest rates.

The direct risk of a change in the share price is also low in the case of the Romanian banking system. Credit institutions neither hold significant investments or participations, nor obtain marked incomes from share trading.

Table 4.2.10. The estimate of the effects produced by the considered shock on own funds

	%
	Total
Interest rate	-8.01
Exchange rate	-0.04
TOTAL IMPACT	-8.05

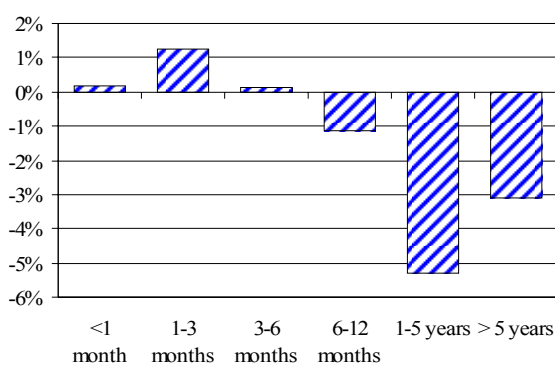
Source: NBR

Table 4.2.11. Distribution of credit institutions based on the size of the direct effect of the interest rate as a percentage of own funds

from +1 percent to +5 percent	6 banks
from 0 percent to +1 percent	6 banks
from -1 percent to 0 percent	4 banks
from -3 percent to -1 percent	6 banks
from -7 percent to -3 percent	5 banks
from -17 percent to -7 percent	5 banks

The assertions concerning the moderate exposure of the Romanian banking sector to the market risk match the outcomes obtained following the dry runs relative to 2005 Q1, based on the stress test assessment. The analysis of the cumulative effect of interest rate shocks and exchange rate shocks applied directly to the banks' balance sheet and profit and loss account shows a relatively low impact on the banking system, which results in the 8.05 percent decline in own funds (Table 4.2.10). If the interest rate fell by 6.7 percentage points (according to the stress test scenario), net incomes from interest rates would post a decrease, causing an 8 percentage point decline in own funds of the banking system. The direct effect of the exchange rate is insignificant, leading to a 0.04 percent drop in own funds against the background of an 18.6 percent depreciation of the domestic currency.

In the case of the shock applied to the interest rate, 20 banks in the system might be negatively affected (Table 4.2.11), which would bring about a contraction of the volume of own funds in a range between -16.9 percent and -0.1 percent (compared to an average of -8.0 percent at an aggregate level). Under the same circumstances, 12 credit institutions witness a sharper cut in interest costs than in interest incomes, which generates a surplus of own funds in a range from 0.05 percent to 4.4 percent³⁸.

Chart 4.2.28. Maturity bands related to direct effect of interest rate (% of own funds)

Source: NBR

The interest rate risk is more significant than other market risks, because leu-denominated operations with customers are not correlated in terms of assets and liabilities, either as a total, or by maturity band, which means that, generally, resources are taken on short term, while assets are invested in the medium and long term. The negative effect is generated primarily by the non-correlation at the level of the 1-5 year maturity band (Chart 4.2.28), which causes more than 60 percent of the potential loss associated with the interest rate.

³⁸ The analysis of the outcomes of the stress test scenario refers only to banks, Romanian legal entities. Except for the dry runs relative to the interbank market, the branches of foreign banks are not included in the test because they are not subject to capital adequacy requirements and thus the lack of data makes it impossible for the solvency ratio to be determined. It is very little likely that, in shock-induced circumstances, these branches default on their liabilities, given the consistent support they benefit from parent undertakings.

All these lead to the conclusion that the interest rate risk is moderate, at least for the considered period. In addition, the impact of the shock applied to the interest rate is alleviated by the stance shown by some banks to offset the drop in interest rates by raising the credit amount or by charging new commissions for the same facility.

Table 4.2.12. Distribution of credit institutions in terms of the size of the direct effect of the exchange rate as a percentage of own funds

from +1 percent to +3 percent	5 banks
from 0 percent to +1 percent	15 banks
from -1 percent to 0 percent	8 banks
from -1.5 percent to -1 percent	4 banks

Source: NBR

The shock applied to the exchange rate, referred to in the scenario (namely the depreciation by 18.6 percent of the domestic currency), might affect only 12 banks in the system, whose own funds would narrow in a range from -1.44 percent to -0.1 percent (Table 4.2.12). The size of the impact is very low, owing mainly to adequate capitalisation and also to a relatively balanced correlation of

foreign currency assets and liabilities.

However, the foreign currency risk is indirectly passed on to debtors, with impact on banks by means of the credit risk.

4.2.7. Profitability and efficiency

In the past years, one of the essential features of the Romanian banking system was the high level of profitability. The financial performance, along with an adequate capital level, ensured a high protection against potential adverse shocks.

In the short run, the profit rate is expected to fall slightly, taking into account: (i) the downward trend in the interest margin, chiefly against the background of fiercer competition; (ii) the pick-up in the amount of provisions required, as a result of the sustained growth rate of lending; (iii) the intention of banks with retail businesses to invest considerable amounts for the development of territorial networks in order to get closer to customers, and (iv) additional costs related to the implementation of the Basel II Accord.

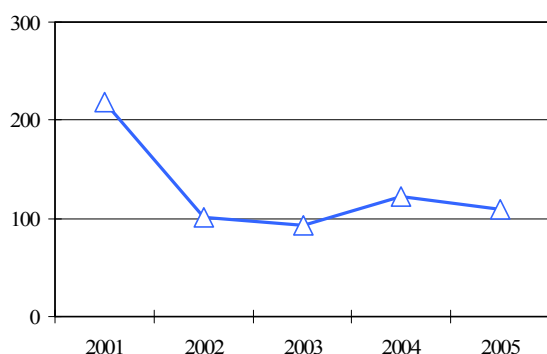
The measures adopted by the central bank for the restructuring³⁹ and privatisation of state-controlled banks had a marked contribution to the profitability development (Chart 4.2.29), leading to the strengthening of the Romanian banking system.

In 2005, the banking sector ended its financial activity on profit for the sixth year in a row (RON 2,113.1 million, up RON 338 million compared to 2004). Net incomes from interest rates had the largest contribution (almost 58 percent) to the profit from bank operations. About 63 percent of these incomes came from operations with non-bank customers, 20 percent from interbank transactions, and approximately 17 percent from operations in securities (certificates of deposit issued by the NBR and government securities).

The increase in net incomes from interest rates was by far more modest than in 2004, owing mainly to: (i) the downward trend in the differential between average lending and deposit rates applied by banks to non-bank customers (from 18.3 percentage points in 2002 to 12.9 percentage points in 2005) and (ii) the drop in the return on operations with the central bank and operations in government securities.

³⁹ The cleanup ended in 2001, having as a result the removal of non-viable banks and the development of the sound part of the system.

Chart 4.2.29. Dynamics of real net profit
- annual percentage change -

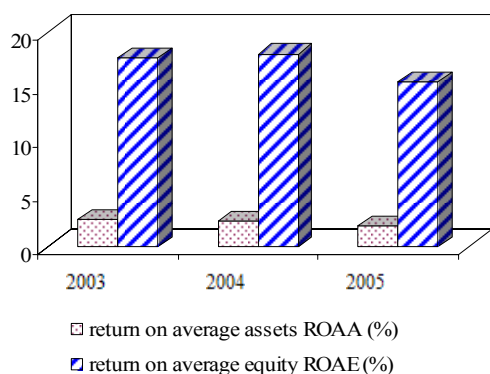


Source: NBR

rate goes down. Such a portfolio is not expected to have an adverse impact on financial stability, if instruments based on interest rate (such as hedging instruments) are more frequently used by banks and the structure by maturity of investments and that of funds raised are not significantly asymmetric.

Net incomes from foreign exchange operations peaked up from 6.8 percent in 2004 to 12.0 percent in 2005 in relation to the profit from bank operations; given the high volatility of these incomes, this rise calls for an increased vigilance from credit institutions and the supervisory authority. However, the low level of this type of incomes does not pose financial stability problems.

Chart 4.2.30. The development of ROA and ROE



Source: NBR

level (1.9 percent and 15.4 percent, respectively) in 2005 as well.

The downtrend in ROA and ROE compared to 2004 may be associated with a faster growth rate, in real terms, of bank assets (by 31 percent) and equity (38 percent) than of the net profit (9.6 percent).

Beside the already-mentioned factors which had a negative effect on the volume of net incomes from interest rates, the relatively modest rise in the net profit in 2005 was also owed to: (i) the considerable expansion of expenses related to provisions, following the change in the credit classification and provisioning methodology⁴⁰; (ii) changes in minimum reserve requirements,

Compared with previous years, during 2005, banks were less sensitive to the reduction of reference rate. The adjustment in the interest rate policy of banks, particularly on the retail segment, was caused to a larger extent by the rise in the competition environment and the favourable conditions in the economy (for instance: the increase in households' appetite for consumption).

Interest rates on both loans and deposits fluctuated markedly. Nevertheless, banks could extend their portfolio of fixed-rate investments and deposits to the extent to which the inflation

Incomes from commissions and fees accounted for 18.4 percent (17.2 percent in 2004) of the profit from bank operations. In Romania, the cost related to financial services and the fees for the various packages of services are not as high as in some EU countries, where this type of incomes has an increasing contribution to the profit. Most of these incomes come from lending and interbank payments (this is the case of nearly all the banks).

Profitability of the banking sector (Chart 4.2.30) expressed by return on assets (ROA) and return on equity (ROE) stayed at a high

⁴⁰ With a view to maintaining the development of foreign currency credit within prudential limits, the credit classification and provisioning methodology was changed; thus, natural entities earning permanent incomes in other currency than the loan currency were classified in a lower financial performance category.

namely the decision to apply a 30 percent minimum reserve ratio to all foreign currency liabilities, regardless of their maturity and date they had been raised.

The profitability indicators differ considerably in terms of the banks' size. Profitability is high particularly in the case of large banks, exceeding the average for the banking system. In this light, big banks, which have a systemic importance, enjoy a good capacity for absorbing potential shocks.

On the other hand, most small banks (with an individual asset share below 1 percent of the system) recorded low profitability levels, with a direct impact on their developing capacity.

In 2000-2005, the cost/income ratio ranged between 62.4 percent and 66.7 percent. Its increase by 5.1 percentage points in 2005 was due mainly to the drop in the interest margin, directly mirrored by a lower rate of increase of net incomes from interest rates.

In 2006 Q1, the impact of the prudential and administrative measures adopted by the central bank in the last part of 2005 became even more manifest as concerns: (i) the alteration of the credit classification and provisioning methodology and (ii) the pick-up to 35 percent in the minimum reserve ratio related to foreign currency liabilities starting with 24 January 2006 and to 40 percent starting with 24 March 2006. Mention should be made that, beside these factors, the average differential between lending rates and deposits rates applied to operations with non-bank non-government customers continued its downward trend (from 13.9 percentage points in March 2005 to 12.9 percentage points in December 2005 and 10.1 percentage points in March 2006). In this context, the net result of the financial activity (RON 550.5 million) was 12 percent below the level recorded in 2005 Q1, in real terms.

The net income from interest rates continued to have the largest contribution (60 percent) to the profit from bank operations; compared to end-March 2005, the contribution of these incomes stood two percentage points lower. As concerns the structure of these incomes, incomes from operations with customers accounted for 72.1 percent, followed by incomes from interbank operations (63 percentage points); at end-March 2005, incomes from these two main operations held relatively equal shares (40.8 percent and 40.2 percent, respectively). In both periods, net incomes from securities accounted for about the same share (around 19 percent) of the total volume of net incomes from interest rates.

4.3. Non-bank financial sector

4.3.1. Insurance market

Insurance market is a stable segment of the Romanian financial system. It has experienced substantial development in recent years, and the financial and technical performance of insurance companies has improved. There is little threat of systemic shocks to occur in the insurance sector, as the market volume remains small compared to the real economy.

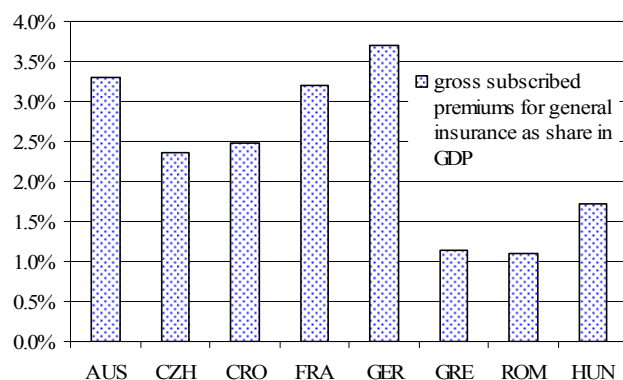
4.3.1.1. General overview

From a global perspective, insurance sector is seen as a stable component of the financial system. It has a contribution to economic growth and to the efficient allocation of resources by transferring risks and mobilising savings. Insurance companies own illiquid assets and are not exposed to contagion risk, unlike commercial banks. They mobilise long-term financial resources and decrease pressures on the budget.

The performance of local insurance companies has improved, driven by the overall development of the financial sector. The major risks for the insurance sector are the downturn in interest rates as

regards life insurance policies and the increase in the maximum indemnity ceiling as regards general insurance.

Chart 4.3.1. General insurance market in 2004 (% of GDP)



Source: Comité Européen des Assurances-Annual Report 2004-2005, International Financial Statistics

The decrease in the interest rate puts pressure on life insurance companies, which seek to get yields at least on a par with the minimum guaranteed rate. Following the lowering interest rates, companies' investments in high-yield, high-risk assets went up. Issues of treasury certificates have fallen sharply of late, forcing insurance companies to invest short-term funds mainly in banking products.

The insurance sector's recent rapid growth and its strengthening ties with banking and capital markets made insurance companies play a greater part in maintaining financial stability. Insurance sector penetration in Romania lagged behind full-fledged markets and other countries in the region. In 2001, the Romanian insurance sector equalled 0.67 percent share-to-GDP whereas in 2005 general insurance accounted for 1.17 percent of GDP, with sectoral dynamics being at the forefront. Hence, car insurance was the chief driver of insurance market growth, accounting for 66.8 percent of total, ahead of catastrophe and fire insurance with 13.78 percent and credit insurance with 6.34 percent. The weight of life insurance in GDP widened to 0.36 percent in 2005, from 0.18 percent in 2001. Moreover, the leading categories are life insurance policies related to investment for which exposure to investment risk is transferred to the insured (34 percent) and mixed life insurance (33.2 percent). Total assets topped EUR 1 billion in 2004. Insurance technical reserves followed the market's upward trend, reaching RON 2,811.3 million, or EUR 767.09 million.

Table 4.3.1. Insurance market

	RON mill.					
	2000	2001	2002	2003	2004	2005
Total gross subscribed premiums from direct contracts	673.9	1,001.2	1,889.9	2,641.7	3,443.6	4,397.0
- general insurance	567.2	789.8	1,450.4	2,021.7	2,697.6	3,370.0
- life insurance	106.7	211.5	439.5	619.9	746.0	1,027.0
Total gross technical reserves	445.3	625.0	1,335.0	2,083.9	2,931.9	2,811.3 *
- general insurance	257.0	300.1	794.5	1,222.0	1,682.2	1,321.8 *
- life insurance	188.3	324.9	540.5	862.0	1,249.7	1,489.5 *
Total assets	931.0	1,171.7	2,284.1	3,507.7	4,678.8	6,334.4

* data cover 2005 H1 and refer to net technical reserves

Data for 2005 are preliminary.

Source: ISC

4.3.1.2. Financial stability indicators

The indicators set out in Tables 4.3.2 and 4.3.3 identify and calculate the key elements of financial stability of the insurance system. Indicators are calculated separately, i.e. general insurance and life insurance, due to the different nature of these activities. Life insurance companies focus on

portfolio investments and have stable periodical payments. General insurance companies are a lot more exposed in the near run and thus they attach particular importance to collected premiums and compensation rates.

Table 4.3.2. Indicators of financial stability for general insurance

	2001	2002	2003	2004	2005 H1
Capital adequacy					
- net premiums / total capital	1.95	2.54	3.15	2.89	3.69
- capital / technical reserves	0.94	0.49	0.37	0.41	0.59
Reinsurance					
- insurance with holding rate	0.70	0.69	0.70	0.73	0.85
Profitability and solvency					
- indemnity payments / net premiums	0.63	0.51	0.55	0.62	0.26
- technical reserves / indemnity	0.86	1.57	1.58	1.36	1.75
- solvency	-	8.88	6.65	6.62	-

Source: ISC, own calculations

In the reported period, the volume of insurance premiums as well as reserves and capitalisation were on the rise. Achievements are in line with those of a developing market, whereas the indicators' changes owe much to the capital dynamics, which incorporates a slight lag related to net premiums and technical reserves. Capital adequacy indicators could be regarded as key signs of financial stability, as they reflect the risk emanating from subscription operations and calculate the sector's ability to absorb losses ascribed to risk exposure. Exposures are determined by the size of reserves, capital requirements and risk models.

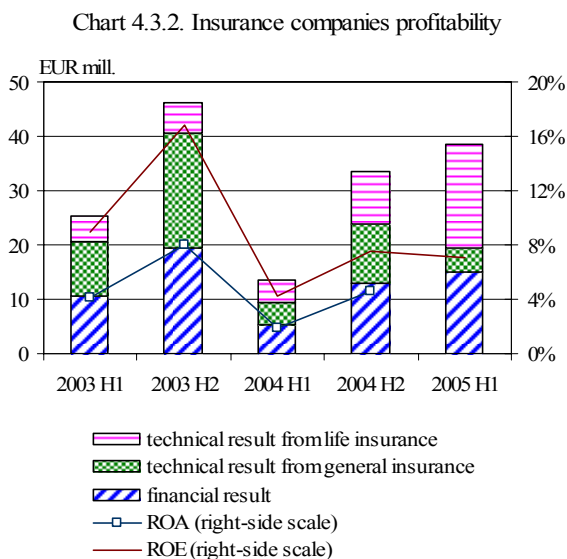
On the general insurance market in Romania, the withholding index rose from 70 percent to 85 percent. This indicator reached an optimum level, comparable with those seen on European markets, which is expected to remain broadly unchanged over the foreseeable future. Own withholding of premiums underwritten for life insurance topped 95 percent during the reviewed period. In order to mitigate insured risks and increase solvency, insurance companies in Romania started transferring risks to international reinsurance companies. As for underwriting risks pertaining to natural catastrophes, current legislation requires insurers to conclude reinsurance programmes.

Table 4.3.3. Indicators of financial stability for life insurance

	2001	2002	2003	2004	2005 H1
Capital adequacy					
- net premiums / total capital	0.73	1.09	1.35	1.05	1.29
- capital / technical reserves	0.87	0.72	0.52	0.55	0.52
Reinsurance					
- insurance with holding rate	0.98	0.97	0.97	0.96	0.98
Profitability and solvency					
- indemnity payments / net premiums	0.28	0.33	0.25	0.10	0.10
- technical reserves / indemnity payments	5.64	3.78	5.63	16.60	14.63
- solvency	-	5.63	3.53	8.35	-

Source: ISC, own calculations

After having posted net loss in 2001, the insurance sector reported stronger efficiency, as illustrated by the performance of profitability indicators. The decline in profitability in 2004 H1 was only short lived, and thereafter the market resumed the upward path. Moreover, as far as general insurance was concerned, the technical result decreased due to the sharp rise in damages. ROE and ROA recorded downturns as a result of substantial increase in capitalisation and total assets combined with slower profit growth.



These indicators tend to stabilise after posting wide swings in the past few years (Chart 4.3.2). In the medium and long term, positive technical result is instrumental for solvency and capital sources. For the paid indemnities and assessed damages, insurance companies set up damage reserves matched by eligible, unencumbered assets, in compliance with the regulations in force. Indicators show increased volatility, yet the results are not indicative of any difficulties of the insurers in making payments according to the underwritten policies. Indemnities paid on general insurance went up, but insurance companies still show a significant level of solvency, having sufficient resources to ensure their coverage.

Insurance companies comply with the requirements imposed by the Insurance Supervisory Commission, the regulatory and supervisory authority in Romania. The level of solvency calculated for every insured person falls within legal limits, and this state of affairs is expected to remain unchanged in the period ahead since insurers must fulfil the capital requirements starting 2006.

Box 4.3.1.**Credit insurance**

At end-2004, credit insurance accounted for 6.34 percent of gross collected policies and 7.79 percent of gross paid indemnities on the general insurance market. The fast-paced growth in non-government credit and its increasing weight in the credit institutions' balance sheets brought up the issue of insurance in the case of insolvent debtors. Until the introduction of financial instruments involving transfer of credit risk on the capital market, credit insurance remains the key method to protect creditors.

Table 4.3.4. Credit insurance market in Romania in 2004

	Gross collected premiums	Gross indemnities paid	Compensation rate	Market share of general insurance
Insurance companies having banks or financial groups as significant shareholders	72.22%	74.62%	0.62	15%
Other insurance companies	27.78%	25.38%	0.58	85%

Source: ISC

Resident banks or financial groups holding resident banks have substantial equity interests in certain insurance companies in Romania. Even though these companies hold a low share of the insurance market, they are fairly active on the credit insurance segment (72.22 percent of total). A large portion of credit risk remains within financial groups, and there is the possibility of contagion within the group if the debtors' solvency worsens.

Indemnity rate for the companies under review stood at 0.62, close to that of other companies on this market (0.58), hence the quality of insured credit portfolios is not significantly different. Retaining credit risk within the financial groups was meant to develop the group's operations and insurance companies are not overly exposed to credit risk.

4.3.1.3. Asset structure

The asset structure features great differences from one country to another, both in developed and emerging economies, similar to that of the local financial market. The global trend in general insurance is to invest in risky, highly liquid assets, whereas life insurance companies tend to invest in less risky, not very liquid assets, with medium- and long-term maturities.

Table 4.3.5. Structure of assets covering technical reserves

Assets	%					
	General insurance			Life insurance		
	2004 H1	2004 H2	2005 H1	2004 H1	2004 H2	2005 H1
Government securities	26.8	23.6	16.2	61.9	55.3	38.9
Bank deposits	19.4	27.6	29.3	15.2	22.8	29.3
Securities	1.4	2.4	2.6	7.7	9.6	7.4
Municipal bonds	1.0	0.9	1.4	0.1	0.3	10.8
Real estate	13.0	10.4	10.5	7.8	4.9	5.3
Claims on gross subscribed premiums	37.1	33.7	37.8	5.6	7.1	5.0
Other assets	1.3	1.3	2.1	1.7	0.1	3.3

Source: ISC

In Romania, the weight of fixed-income securities is on the wane, due to the reduction in the number of issues launched by the Ministry of Public Finance and the lowering interest rates. Insurance companies have increasingly been investing their funds in bank deposits, municipal bonds, securities issued by UCITS and on the capital markets of EU Member States (life insurance). While in the case of general insurance companies worldwide stocks prevail over life insurance policies, in Romania the picture is completely different. The propensity towards life insurance can be ascribed to the higher yields and the customers' investment preferences⁴¹. For the time being, general insurance companies avoid high-profile investments in stocks because of the high volatility still manifest on the Romanian capital market.

In contrast to its European peers, the domestic market features a large weight of real-estate investments in total portfolio, a picture similar to the markets in Asia. Such long-term investments have low liquidity and high risk. Insurance companies, general insurance companies in particular, are exposed to large fluctuations. Investments hinge on the rise in property prices seen during the past few years and on the upbeat expectations of joining the European Union.

For insurance companies to determine whether asset structure may represent a source of instability, both assets and liabilities should be taken into consideration. Their maturities should be equalled to preclude a maturity mismatch. This trend has become quite commonplace in Romania, as insurance companies seek to adjust to market conditions depending on the type of insurance they cover. General insurance companies have short-term exposure stemming from the highly liquid assets they invested in. Life insurance companies invest in assets with longer maturities. As a result, a matching between assets and liabilities takes shape, as both have long-term payment deadlines and low risk in the short term.

Unlike the full-fledged markets, in Romania general insurance prevails over life insurance. Low savings rate and short track record on the domestic market for life insurance products prevented the insurance sector from developing so as to become a reliable financial intermediary, along with the banking system.

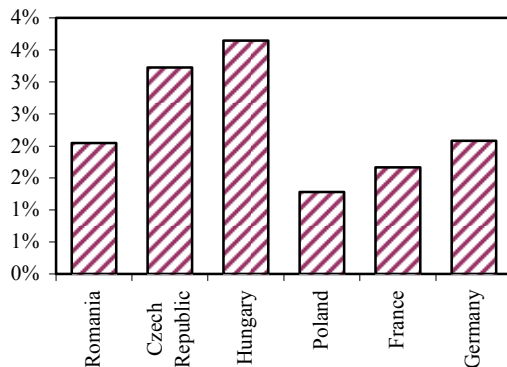
4.3.2. Leasing companies

In Romania, leasing companies posted the strongest advance among all bank and non-bank financial institutions over the past four years. They are tightly connected to banks, as illustrated by the shareholding and the origin of funds taken. Leasing activity reduces credit risk via the lower recovery costs of non-performing exposures and do not pose the threat of systemic shocks as long as the banks make an accurate assessment of the risk emanating from the activity of leasing companies they lend to.

⁴¹ Life insurance companies provide their customers with long- and medium-term investment schemes according to their risk profile. Customers single out a portfolio in which they choose to invest and agree to assume full risk.

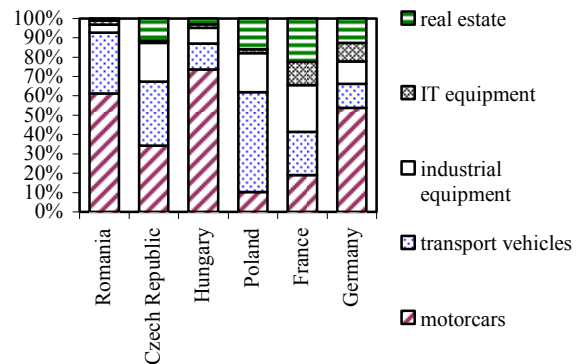
Market dynamics

Chart 4.3.3. New leasing contracts
(share in GDP, 2004)



Source: Leaseurope, NBR calculations

Chart 4.3.4. Leasing contracts structure by type
of assets, 2004*



*) 2005 for Romania

Source: L CAR, BLA, Leaseurope, NBR calculations

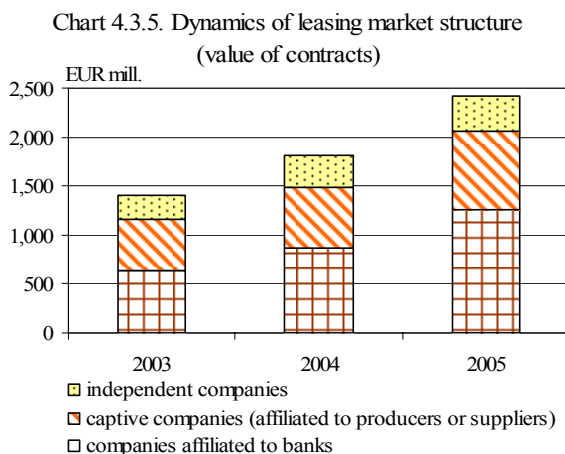
Assets of leasing companies doubled in terms of volume to almost 3 percent of GDP in 2005 and made (financial) leasing become the runner-up in the financial intermediaries ranking, after credit institutions. The value of contracts signed in 2005 rose by 22 percent year on year and multiplied 2.5 times against 2002. As for market penetration (Chart 4.3.3), it may be asserted that Romania is mid-ranked, with new contracts for 2004 averaging almost 2 percent of GDP, a level close to the European average of 2.1 percent. In the new Member States, the weight of the leasing market is relatively important, as a result of low financial intermediation and sharper credit expansion.

The composition of leased goods in Europe is more diversified than on new markets, yet car leasing is prevalent. The Romanian market counts among the least diversified markets, with car leasing accounting for 92 percent in 2005 and posting a year-on-year decline in terms of commercial vehicles subject to leasing. The leasing market shows a potential to grow, as the demand for cars is still unsatisfied and the industrial equipment and real-estate leasing look set to increase in the years ahead. Moreover, expansion of client groups by increasing the weight of contracts with government institutions and households is seen fostering market dynamics.

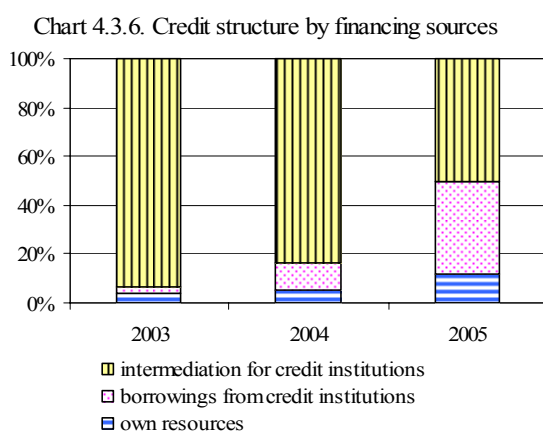
Credit risk associated with leasing is significantly lower than in usual lending. Leaseurope calculated the default rates and recovery rates in case of default⁴². The values of the former indicator are comparable with the default rates for retail portfolios of banks since most customers of leasing companies are small- and medium-sized enterprises which exhibit a minimised event (idiosyncratic) risk, but whose recovery rates in case of default are far higher. Assets are still owned by the leasing company for as long as the contract is in place, whilst the potential losses incurred by bad debtors and the losses arising during the recovery process are cut down. Although there are no accurate data on non-performing leasing contracts in Romania⁴³ as yet, the current level of defaults is not a matter of concern. Moreover, the fact that the recovery rate on agreements in default at European level is the highest for car leasing (84 percent), a sub-sector that prevails on the local market, is yet another reason for assuming that credit risk on the leasing market is currently low.

⁴² Leaseurope – “Cover Document to the Working Document of the Commission Services on Capital Requirements for Credit Institutions and Investments Firms”, 2003

⁴³ Existing data tend to underrate their number by also considering the agreements with two overdue instalments, regardless of the payment frequency, as part of this category.



Source: LCAR, BLA, NBR calculations



Source: NBR

Even though the banking sector and leasing companies are distinct components of the financial market, an in-depth analysis is required. The developments in market composition (Chart 4.3.5) show that more than half of the volume of lease contracts remains in the possession of companies held by banks (their weight widened slightly in the past four years). In fact, their ties with banks are much stronger for two reasons, as follows: (i) some of the captive companies are directly subordinated to the bank or to the group and thus the segregation between the two categories is blurred and (ii) considering the low volume of finance extended via bonds so far, it can be asserted that a great part of capital raised by leasing companies, regardless of their affiliation, stems from the banking sector as well. If risks are largely concentrated in the banking sector, the transfer of risk is diminished by the nature of leasing, so that the aggregate effect remains a positive one. Therefore, it may be asserted that leasing does not have the potential of generating shocks on the financial market – on the contrary, it can mitigate, proportionally to the market's relatively low volume, the assessed credit risk at aggregate level.

4.3.3. Other non-bank financial institutions. Consumer credit companies

The likelihood of disruptions occurring at lending companies to trigger a potential systemic risk is very low. This could be attributed to: (i) small volume of assets of lending companies (below one percent of GDP, part of them included in the proportion of 7 percent of GDP accounted for by consumer credit in total bank assets) and the composition of consumer credit portfolios similar to that of bank portfolios; (ii) a large part of funds stems from foreign borrowings or foreign-backed borrowings, which causes the risk pertaining to such loans to be transferred outside the banking system.

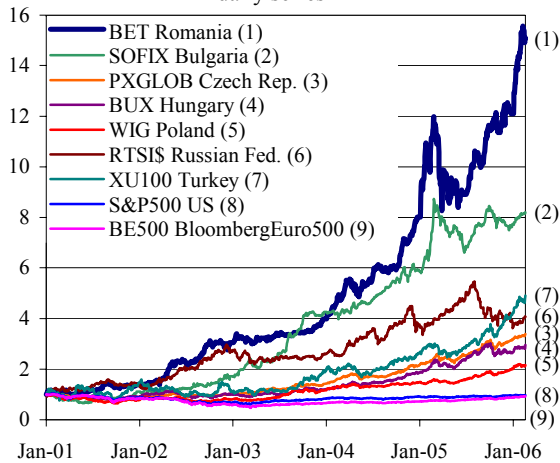
Once consumer credit gained ground, companies specialising in granting such loans were set up in Romania. Most of the consumer credit companies are affiliated to some financial groups or chain stores and are largely financed by (either foreign or local) banks and from own funds. Analysis of the developments in composition of funding sources for a significant market segment shows a sizeable increase in their borrowing-based funds against the backdrop of a decline in direct intermediation operations performed for credit institutions. This trend mitigates credit risk for the banking system, as companies take over credit risk and exposures from the retail portfolio pass on to banks' corporate portfolio.

4.4. Capital market

The regulatory and supervisory framework governing the Romanian stock exchange has recently been subject to broad-based harmonisation with the EU legislation in terms of secondary legislation as well as to streamlining of institutional architecture (demutualization of the BSE and its merger with RASDAQ). However, the risks associated with the lack of market transparency still persist due to the overrated role played by the SIFs (Financial Investment Companies), which could prompt higher volatility. The steady increase of the capital market over the past five years should not be regarded as a bubble, but rather as a correction induced by initially undervalued equity prices. Moreover, the Romanian capital market is highly unlikely to cause a systemic shock, as the sector's financial intermediation is still small. For the same reason though, potential shocks in the banking sector could not be efficiently absorbed by the capital market in its current state.

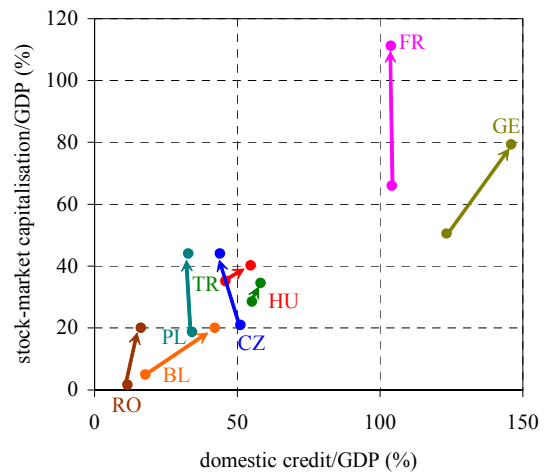
A diversified and liquid capital market has a substantial contribution to promoting efficiency and economic development in many ways: (i) financial development in terms of stock market capitalisation was a major catalyst for absorbing foreign direct investment which subsequently contributed to economic growth (Alfaro, Chanada – 2001); (ii) decrease in asset price swings as a result of fluctuations in demand and supply, as well as market misevaluation, which allows more efficient resource allocation; (iii) easier public debt management and stronger efficacy of monetary policy tools.

Chart 4.4.1. Stock exchange indices 2001-2005, daily series



Source: Bloomberg. Index value is 1 as of 1 January 2001

Chart 4.4.2. Financial intermediation 2000-2005



Source: Bloomberg; own calculations

Having in place diversified financial markets takes a long time, as money markets must first develop and thereafter serve as a support for capital market. The same holds true for the domestic financial market, as the Romanian capital market is still in its infancy, featuring low intermediation and rapid growth. The BET index multiplied twelve times over the past five years, ranking topmost in the group of countries shown in Chart 4.4.1. However, considering the financial intermediation recorded in 2000 and that reached five years later (Chart 4.4.2.), Romania trails behind the other selected countries in terms of stock-market capitalisation and total bank loans. During 2000-2005, the pace of progress in achieving convergence with the EU Member States was faster from the

perspective of stock-market capitalisation than that of lending. The market capitalisation/GDP indicator is relatively volatile, which casts doubts over its relevance in the short run.

Table 4.4.1. Correlation coefficients between daily yields on indices 2001-2005

	BET RO	SOFIX BL	PXG CZ	BUX HU	WIG PL	RTSIS RU	XU100 TR	S&P500 US	BE500 EU
BET RO		0.000	0.076	0.075	0.062	-0.044	0.042	0.023	0.028
SOFIX BL	0.000		0.019	0.020	-0.016	-0.010	0.059	-0.003	0.031
PXG CZ	0.076	0.019		0.463	0.432	0.008	0.210	0.155	0.369
BUX HU	0.075	0.020	0.463		0.496	0.003	0.231	0.205	0.405
WIG PL	0.062	-0.016	0.432	0.496		-0.011	0.238	0.232	0.394
RTSIS RU	-0.044	-0.010	0.008	0.003	-0.011		0.019	-0.005	0.036
XU100 TR	0.042	0.059	0.210	0.231	0.238	0.019		0.114	0.218
S&P500 US	0.023	-0.003	0.155	0.205	0.232	-0.005	0.114		0.522
BE500 EU	0.028	0.031	0.369	0.405	0.394	0.036	0.218	0.522	

Source: Bloomberg, NBR calculations. Figures above 35 percent are typed bold.

Capital market development can also be described by the level of market integration, i.e. inter-market correlation. The table below sets out the low integration of the Romanian capital market in international markets. While EU Member States form a group featuring stronger correlation both intra-group and in regard to full-fledged markets, Romania and Bulgaria, along with Russia or Turkey appear to be the most segmented markets. Daily yield correlations, as shown in the table below, imply instant market response and are indicative of the strong connections between them. Alternatively, monthly yield correlations between BET and other indices run at around 20 percent, leading to the conclusion that the domestic market is less integrated in the other selected stock exchanges. This state of affairs is not necessarily a negative one, given the institutional investors' opportunities to diversify their portfolios.

Full capital account liberalisation is seen reducing substantially and swiftly the isolation of the local market. Research works (Taskin, Muradoglu, 2001) have shown that, after the freeing of capital movements, global market returns had a greater impact on a country's economy and the ties between economic fundamentals and returns on local bonds strengthened, since isolated capital market are cut off not only from the external environment, but also from the domestic real economy. The rationale is that the low traded volumes (see Chart 4.4.3.) and the small number of listed shares are not instrumental for economic activity, neither for the dissemination of information among the markets, nor for ensuring efficient resource allocation. A case in point is the non-uniform representation of economic sectors on the Romanian stock exchange, with the services sector holding a small weight in total.

Non-residents' traded volumes dropped in 2005 to about 30 percent share-to-GDP, from 40 percent in previous years, yet the figures on net purchases by non-residents are in positive territory and on the increase. These developments point to the less speculative behaviour of non-residents compared with that of residents.

What is really questionable is whether the sustained growth in equity prices recorded as yet will continue, considering that the aforementioned features are largely representative of the domestic market as well. The price-earning ratio is a topical issue in the literature and has the feature of reverting to average levels that are kept stable over longer periods (Shen, 2000). Chart 4.4.4. sets out the Romanian capital market's average price-earning ratio, which reached a level comparable to

the figures seen in other markets in a relatively short period of time, hinting at the fact that the time of corrective price increases from undervalued levels is over, on the one hand, and the same growth pattern is no longer feasible, on the other. A potential increase in the price-earning ratio well above the levels ruling on foreign markets might induce price corrections all the more so as integration will deepen as well.

Chart 4.4.3. Annual volume of trades and market capitalisation

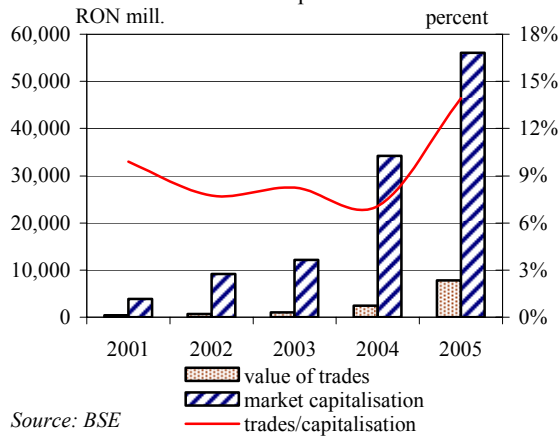
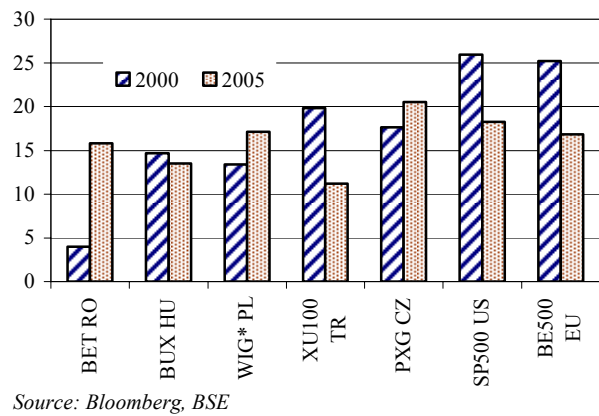


Chart 4.4.4. Developments in P/E ratios, average 2000/2005



A useful exercise is to assess the efficiency of the Romanian capital market, namely the well-established concept of efficient market hypothesis. Box 4.4.1 makes an assessment of the weak efficient market hypothesis (EMH). Despite the results which are not entirely relevant, it may be asserted that the quantitative methods resorted to are applicable and serve to some extent to detect inefficiency of emerging markets.

Box 4.4.1. Testing for Efficient Equity Market Hypothesis

Market efficiency refers to the situation when current prices reflect all known information on a security. The fundamental idea is that, as a result of competition, information feeds through to prices so that previous information can no longer be used to forecast future share price changes. Depending on the level of information available, there are three forms in which the efficient market hypothesis is commonly stated, i.e. weak form efficiency, semi-strong form efficiency and strong form efficiency. The weak form efficiency hypothesis holds that current prices already reflect former prices and that improved performance is impossible by using any information that the market already knows. A consequence of the validity of the hypothesis is the technical analysis inefficiency. The semi-strong form efficiency hypothesis implies that share prices reflect publicly available information, which includes, aside from the current price, financial statements, various announcements, economic factors, etc.

The consequence is that, for instance, future share price changes cannot be predicted and no excess returns can be earned by using investment strategies based on the companies' balance-sheet information. The strong form efficiency hypothesis points out that share prices reflect all information, including confidential information, and thus company managers cannot take advantage of known information to earn excess returns. It is the market that can accurately anticipate the share price changes. The testing for weak form efficiency of the hypothesis is achieved through testing for the random walk property:

$$p_t = p_{t-1} + \varepsilon_t \quad \text{or} \quad r_t = \Delta p_t = \varepsilon_t \quad \text{where:}$$

p_t is the share price at t , r_t stands for the share price change or the return on the share at t as against $t-1$, whereas ε_t is a random process that fulfils the following conditions: $E(\varepsilon_t) = 0$ and $E(\varepsilon_t \varepsilon_{t-g}) = 0$ with $g \neq 0$, i.e. the error process has null expected value and there is no autocorrelation for any value of g . Hence, the equation shows that the expected value for a price at t is p_{t-1} , of course admitting that the conditions for ε are met.

I. The most widely used method for testing for random walk hypothesis in terms of prices is the variance ratio test developed by Lo and MacKinlay (1988). It is based on the fact that the variance of variables satisfying the random walk hypothesis increases linearly with the length of the observation interval q :

$$VR = \frac{\sigma_q^2}{q \sigma^2} \quad \text{where } \sigma_q^2 \quad \text{and } \sigma^2 \quad \text{stand for the price variance for } q \text{ periods and a single period respectively.}$$

The test relies on checking whether the estimated value is significantly different from one.

II. Another method for testing for efficient equity market hypothesis is to use technical trading rules. The returns earned by using various strategies are compared to market return for the same time period.

The most applicable methods are the variable moving average (VMA) and trading range break (TRB) methods.

In respect of the former, two observation intervals are chosen, a short one and a long one*. If the price average in the short (more recent) observation interval is superior to that in the long observation interval, a sell signal is generated at t . Otherwise, the investor stays out of the market or sells, if s/he has previously bought the index.

As for the latter case, one moving window is selected, and the buy (sell) signal is generated if the most recent observation is the highest (lowest) price recorded in that particular observation interval.

The tables below present the results of VR test for BET index and other indices of foreign stock markets, as well as the efficiency of technical rules during 2001-2005 for the BET. Daily index figures were normalised to one for the first entry in the series.

* According to Chang Lima, Tabak (2003), the most widely utilised "short window - long window" pairs are 1-50, 1-150, 5-150, 1-200, 2-200, while for TRB the observation interval is regularly 2, 5, 10, 25, 50.

(continued)

VR Test – Levels of p probability of accepting null hypothesis random walk¹

q (days) - Size	BET Romania	SOFIX Bulgaria	PXG Czech Republic	BUX Hungary	WIG Poland	RTSI Russian Federation	XU100 Turkey	BE500 Bloomberg EU
2	0.000*	0.000*	0.004*	0.919	0.101	0.031**	0.279	0.997
4	0.012**	0.000*	0.12	0.162	0.042**	0.234	0.623	0.318
8	0.031**	0.000*	0.044**	0.891	0.038**	0.092***	0.78	0.214
16	0.003*	0.000*	0.052***	0.723	0.023**	0.077***	0.771	0.657
32	0.004*	0.000*	0.12	0.754	0.075***	0.21	0.367	0.975
64	0.029**	0.000*	0.158	0.83	0.108	0.403	0.626	0.906
128	0.392	0.2610	0.101	0.995	0.193	0.781	0.858	0.668
256	0.787	0.1940	0.051***	0.344	0.447	0.593	0.845	0.301
512	0.215	0.076***	0.007*	0.109	0.426	0.354	0.431	0.101

¹ probabilities are marked at 1 percent (***), 5 percent (**), and 10 percent (*) to reject null hypothesis.

Performances of technical trading rules – BET Romania¹

Strategy	VMA	VMA	VMA	TRB2	TRB5	TRB10	TRB25	TRB50
	1-50	1-150	5-50					
Number of trades	105	41	17	621	277	139	55	15
Buy signals	1,032	1,139	1,140	801	822	969	955	1,076
Sell signals	258	51	50	536	511	358	354	200
Mean return on buy signals	0.0022	0.0018	0.0020	0.0033	0.0027	0.0023	0.0023	0.0021
Mean return on sell signals	0.0012	0.0084	0.0056	0.0001	0.0008	0.0009	0.0014	0.0021
Excess return for combined signals	0.0011	-0.0066	-0.0036	0.0032	0.0019	0.0015	0.0009	0.0000
t-statistics for buy signals excess return	0.3555	-0.4609	-0.2401	1.9640	1.1311	0.638	0.4446	0.119
t-statistics for sell signals excess return	-0.6187	1.6651	1.5962	-2.3401	-1.36	-0.966	-0.62	0.0704
t-statistics for combined signals excess return	0.7744	-1.7404	-1.6648	3.6908	2.1087	1.3014	0.8691	-0.0113

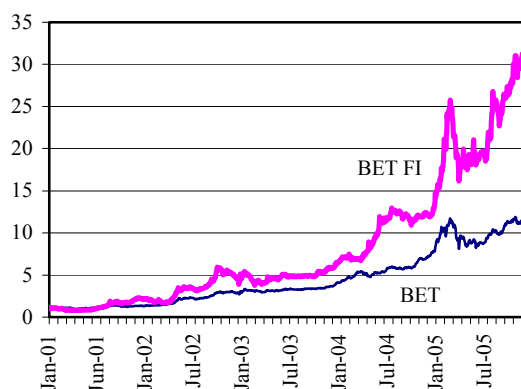
¹ figures marked against the dark grey background are those showing returns superior to technical rules and statistically significant at the 95 percent confidence level.

The VR test reveals that the Romanian capital market ranks last but one (ahead of Bulgaria) in terms of efficiency. The results found inefficiency, yet to a smaller extent, on the Czech, Polish and Russian stock exchanges. In fact, the rejected random walk test implies predictability of share prices and excess returns from technical trading. However, Table 2 generally shows the inefficiency of technical strategies for Romania, except TRB2 and TRB5 which are the least viable in practice.

In order to calculate alternative returns, which are based on the various above-mentioned strategies, we have considered zero transaction costs and transactions simultaneous with the received signals, which are rather unrealistic conditions for an emerging equity market. Should these prerequisites be eased, the results of TRB2 and TRB5 would be the most affected, as these strategies need the most number of transactions with the fastest response. A key factor for inefficient trading strategies could be the steady increase of the index over the past five years so that the requirement for improved performance of strategies is high.

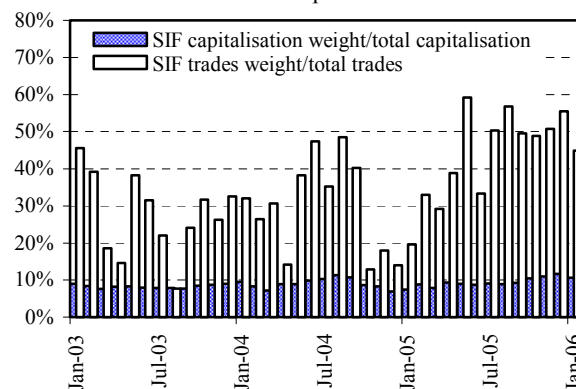
To sum up, the BSE (regarded as a whole through its daily index) does not show a dynamics close to the weak form efficiency hypothesis for the observation interval, yet the returns based on trading rules are not significantly superior to buy-and-hold strategies.

Chart 4.4.5. Developments in BET and BET-FI



Source: BSE

Chart 4.4.6. SIF weight in trades and market capitalisation



Source: BSE

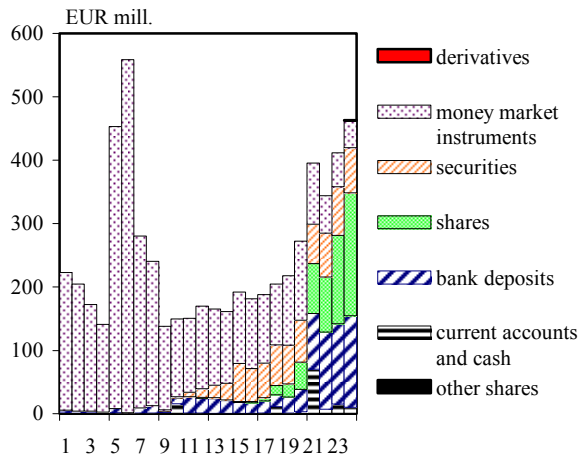
A distinct feature of the domestic capital market is the role played by the SIFs (Financial Investment Companies) on the BSE. On the developed markets, such closed-end investment companies stand for the last remnants of market imperfection, i.e. the existing disparities between the SIF share prices and the net asset value (NAV) in their portfolio. As a rule, the shares of closed-end investment companies are traded at a discount of 5-30 percent as against the market value of the assets in their composition. The explanation for this undervaluation could lie with agent costs, management fees, taxation factors or their low liquidity (Ross, 2000). None of these explanations could account for the large fluctuations in the discount rate attached to these shares.

On the BSE though, the most liquid shares are those issued by the SIFs organised as closed-end investment companies. The SIFs account for 30-50 percent of total transactions (Chart 4.4.6.) and hold a relative steady weight of 8-11 percent in total stock market capitalisation. The reason for the deviation from the international pattern is the lack of attractive investment alternatives, the segmented structure of SIF shareholding and the initial undervaluation of the NAV for these companies, due largely to a considerable number of attractive shares in their portfolios which are unlisted and thus recognised at the discounted book value. This atypical situation will fade away amid the increase in the number of listed securities, including those in the SIFs portfolio. Last year's rise in the ceiling on individual holdings of SIF shares from 0.1 percent to 1 percent and the belated price corrections compared to the other listed shares sent SIF share prices higher, as well as higher returns especially in 2005 (Chart 4.4.5.). The risks are that the decisions of a smaller number of investors, boosted by the concentration of indirect holdings, could increase co-ordination, thus generating higher volatility. In order to avoid large-scale corrections and shocks on the capital market, market assessments should focus on financial results rather than on NAV.

In 2006, a landmark event on the capital market will be the listing of *Proprietatea* fund, a closed-end investment company worth roughly EUR 4 billion. It was set up to indemnify owners or heirs for the assets seized by the communist ruling class. The participations of the state in 114 companies let alone, the fund includes government claims on debtor countries, which had been incurred prior to 1990. Indemnifications in the form of shares will be made gradually, with restitutions worth EUR 500 million being planned for the first year after the launch. The fund's listing is set to have a beneficial impact on the BSE, as noticeable increases are expected for market capitalisation and liquidity, considering the developments following the launch of the five SIFs. Nevertheless, admission to trading of the high-profile companies included in the fund's portfolio is imperative in the long run. Apart from the specific conditions of the Romanian capital market, i.e. the important

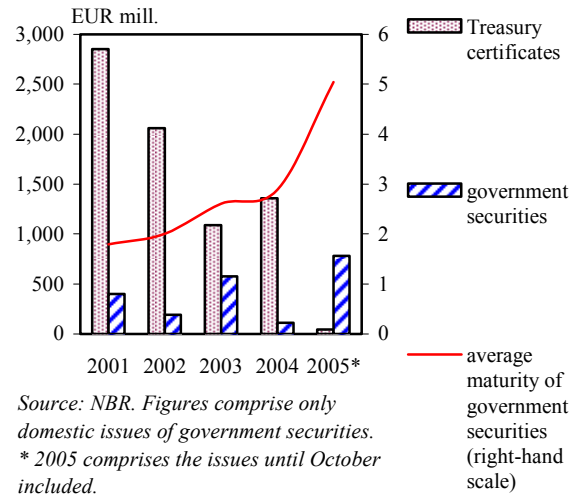
and benign role played by closed-end investment companies, the equity market's function of disseminating information and assessing companies could successfully be achieved via admission to trading. Closed-end funds generate undervaluation and higher volatility even on developed equity markets, as market value will be determined by market sentiment rather than real performance, compared to direct listing. Furthermore, should the admissions to trading be imposed through administrative means, without adequate management training, the Romanian bourse runs the risk of still being a trading market and to a far smaller extent a financing market.

Chart 4.4.7. Volume and structure of net assets of open-end investment funds



Source: NSC

Chart 4.4.8. Issues of Treasury certificates and government securities



Source: NBR. Figures comprise only domestic issues of government securities. * 2005 comprises the issues until October included.

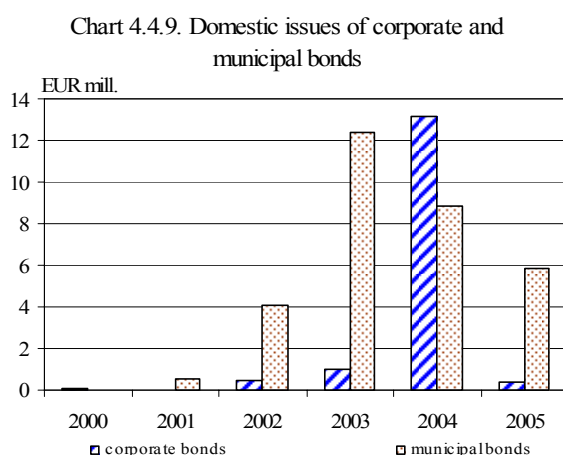
Open-end funds posted a remarkable performance over the past few years in terms of volume and particularly portfolio diversification (Chart 4.4.7). Nevertheless, their importance is still insignificant. Net assets of Romanian open-end funds accounted for merely 0.6 percent of GDP in 2005 compared with more than 5 percent of GDP in the Czech Republic and Hungary in 2003. Behind the portfolio diversification stood the funds' adjustment to market conditions that prevailed in the last few years, i.e. fewer issues of government securities, upturn in quotations, and issues of municipal bonds.

The market for debt securities is segmented. Government securities, including government bonds and treasury certificates, are as yet traded only on the interbank market. Dynamics of issues of treasury certificates (Chart 4.4.8) reflect the balanced fiscal policy that led to halving of the traded volumes in 2005 over the year before. On the other hand, issues of government bonds, which displayed an upward trend in average maturity, from 2.8 years in 2004 to 5.3 years in 2005⁴⁴, are a positive factor for the market. Liquidity of government securities contracted by half over the past year, with a daily average of 41 transactions in 2005, due largely to fewer issues. Nonetheless, traded volumes outpaced almost three times equity market turnover (EUR 5.9 billion and EUR 1.9 billion respectively).

Even though the listing of government securities on BSE could well foster trading, it is unlikely that the equity market would take over a significant part of interbank transactions or generate additional liquidity. All this should not be seen as arguments in the long run against the free trading of government securities on the capital market and the setting-up of a sole depository for securities. Issues of government securities should continue during the periods when budget surpluses are

⁴⁴ Average maturity is calculated as a mean weighted by the volume of issues. In 2005, the first bonds with 10- and 15-year maturities were launched.

recorded for the very reason of maintaining a benchmark in the form of term structure and for preserving a volume of securities available for being pledged as collateral on the interbank market.



Source: www.kmarket.ro

Unfortunately, the Romanian capital market faces a low volume of issues and dealings in corporate bonds (Chart 4.4.9). Except for 2004⁴⁵, when such issues peaked at EUR 10 million, only small volumes were launched on a yearly basis. Municipal bonds fared somewhat better, yet the downturn for the two categories does not promise sustained growth in the period ahead.

The reasons behind the current state of the corporate bond market are the following:

- weak corporate governance still hampers both supply and demand. Investors are wary of the scarcity of reliable instruments to assess the issuers' risk, the lack of confidence in the quality of financial reports or the competence of Board members, whereas on the supply side stands the poor expertise of company managers;
- low ratings, partly caused by the lowest investment grade rating assigned to Romania (BBB-, according to Standard & Poor's), resulted in a disparity between the amount of risk local investors are willing to take and what they are offered. Therefore, rating agencies choose to get involved as little as possible and thus low market transparency still lingers;
- the international climate featuring excess liquidity has a strong impact on domestic liquidity through the agency of the banking system. This depresses lending standards, thus boosting opportunity costs attached to bond issues;
- uncertainties surrounding the pace of disinflation and the absence of a risk-free term structure of interest rates (on government securities) still act as a disincentive on bond issues, especially on fixed-income bonds.

The bond market could be given a boost by the launch of new financial products such as mortgage bonds, fostered by the expansion of the mortgage market over the past few years, and the putting in place of the legal framework governing mortgage bonds and receivables securitisation in 2006 Q1.

The derivatives market, which is part of the Monetary, Financial and Commodities Exchange in Sibiu, could be described as entering a new development stage in 2005. If by 2004 more than 85 percent of futures and options were concluded to cover or speculate on currency risk, in 2005 total transactions multiplied nearly ten times owing mainly to derivatives backed by shares, which accounted for about 80 percent of total transactions. The spectacular growth was driven by the originally low levels and the capital market trends, i.e. high volatility and uneven price performance, which heightened the need for covering market risk and paved the way for speculation opportunities.

⁴⁵ The peak in issues of government securities owed much to the banking system following the efforts to improve the maturity mismatch of the banks' assets and liabilities, as well as the financing of daughter leasing companies.

CHAPTER 5. FINANCIAL SYSTEM INFRASTRUCTURE

The infrastructure of the financial system establishes the connections among all participants in financial markets and sets the regulatory framework for the adequate operation of financial markets and institutions. Given its importance, the analysis of the financial system infrastructure from the stability perspective implies the assessment of each of its components – regulatory framework, payment and settlement systems, and securities settlement systems – in terms of the impact any of them might have on the development of the financial system in its entirety, as well as the potential risks they might induce.

5.1. Developments in the regulatory framework of financial markets in Romania

5.1.1. Approximation of international standards

The dynamics of institutional changes that shaped the Romanian financial system was boosted both by the accession calendar and the increasingly active co-operation between the Romanian competent authorities and the international organisations promoting the highest standards applicable to financial markets and institutions. This context paved the way for some significant changes in the regulatory framework of the main institutional categories operating on the financial markets and the implementation of certain practices meant to enhance the transparency, integrity and competitiveness of the entities involved, to the benefit of financial stability. The financial markets' increased tendency to integration and globalisation, as well as IT&C development – the defining features of the past decades – have fuelled the concerns for consolidating the architecture of the international financial system. The standardisation efforts made by well-reputed organisations provided support both to the international financial community and the competent authorities. Thus, the Basel Committee on Banking Supervision drafted the set of standards “Core Principles for an Effective Banking Supervision” for the banking sector, the International Organisation of Securities Commissions compiled the comprehensive set “Objectives and Principles of Securities Regulation” for the capital market, while the International Association of Insurance Supervisors published the “Insurance Core Principles” for the insurance sector. These organisations hold regular meetings under the aegis of the Joint Forum, during which they debate topical issues and initiate projects aimed at harmonising standards for the common issues of the three sectors. In addition, mention should be made of the standards applicable to systemically-important payment systems drawn up by the Basel Committee on Payment and Settlement Systems, as well as the Recommendations for Securities Settlement Systems compiled by the International Organisation of Securities Commissions.

The International Monetary Fund and the World Bank have a major contribution to the large-scale promotion of good practice standards and codes, as these institutions have initiated joint assessment programmes conducted under a large number of jurisdictions. Such actions highlighted the effects on the stability and efficiency of the financial system engendered by the implementation of financial sector regulation and supervision standards, of standards on transparency of certain public (monetary and fiscal) policies, as well as of standards on market integrity and transparency (corporate governance principles drafted by the Organisation for Economic Cooperation and Development; accounting standards established by the International Accounting Standards Committee; International Audit Standards compiled by the International Federation of Accountants; creditor rights and insolvency principles advocated by the United Nations Commission on International Trade Law – UNCITRAL).

Recent developments in the regulatory framework of the Romanian financial system prove that national legislation is being permanently developed and enhanced in line with the internationally-recognised standards. Aside from its role of promoting sectoral policies, financial regulation is an instrument for accelerating European and international integration, as well as an important pillar of financial stability.

Most of the Romanian financial sectors are already governed by a third generation of primary legislation, accompanied by the corresponding adjustments in secondary regulations. This is also valid for the legal framework regulating the status of some of the authorities with regulatory and supervisory powers over certain financial sectors.

5.1.2. Credit institutions

The resolutions adopted in drafting the regulations applicable to credit institutions, aimed at transposing the *acquis communautaire* and the internationally-recognised standards, fostered the innovation and stabilisation of the banking sector.

The factors that triggered changes in the approach to prudential supervision of credit institutions include the implementation of standards on consolidated supervision, corporate governance, transparency, reputation, integrity and financial standing for the shareholders' structure, of reputation and expertise requirements for managers. The current generation of primary and secondary regulations anticipates further changes in the legal framework applicable to credit institutions. Thus, the amendments to some pieces of community legislation (Directive 2000/12/EC relating to the taking up and pursuit of the business of credit institutions and Directive 93/6/EEC on capital adequacy of investment firms and credit institutions) call for a revision of the entire institutional legal framework in view of transposing the new capital standards into national legislation. The new regulatory framework will become effective on Romania's accession date to the European Union, scheduled for 1 January 2007.

The project of implementing the New Capital Accord (Basel II) unfolds by transposing community directives into the national legislation, based on an agenda rigorously divided into stages and involving considerable means.

5.1.3. Joint projects of the competent authorities in the field of financial market regulation

5.1.3.1. Implementation of Basel II Framework

The process of implementing Directive 2000/12/EC relating to the taking up and pursuit of the business of credit institutions and Directive 93/6/EEC on capital adequacy of investment firms and credit institutions, as subsequently amended, involves a unitary approach at national level by the competent authorities in charge of transposing pieces of community legislation into national legislation. The issues that may be object of discretion according to community directives have been taken into account by the National Bank of Romania and the National Securities Commission within the framework of the Basel II Project.

5.1.3.2. Financial conglomerates

The European institutions' interest in regulating financial conglomerates also derives from the approach set forth in the Financial Sector Action Plan launched in 1999. The passing of Directive 2002/87/EC on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate and amending Directives 73/239/EEC, 79/267/EEC, 92/49/EEC, 92/96/EEC, 98/78/EC and 2000/12/EC marks a further stage in the consolidation and

integration of the single financial services market, which called for the regulating of groups with inter-sectoral financial activities, either nationally or transnationally. The intricate structure, the range of financial services (banking/investment/insurance) as well as the increasingly expanding dynamics of financial conglomerates have led to the drafting of a European legal act for setting the supervisory framework applicable to such sophisticated financial groups (supplementary supervision of regulated entities that are part of financial conglomerates).

The main objectives considered while establishing the prudential regime governing financial conglomerates were the following: setting the financial conglomerate identification criteria and determining the supplementary supervision scope, ensuring an adequate capital base, defining the calculation methods for the financial conglomerate's capital adequacy requirements, treatment of intra-group transactions and risk concentration.

Directive 2002/87/EC reaffirms the principle of co-operation among the competent authorities from a new perspective, tailored to the configuration of the supplementary supervision of financial conglomerates. In this respect, the Directive sets forth some measures to facilitate supplementary supervision, such as: the criteria for appointing the competent authority responsible for co-ordination and exercise of supplementary supervision, the co-ordinator's tasks, as well as co-operation and exchange of information between competent authorities.

With a view to fulfilling the commitment to implement Directive 2002/87/EC in the national legislation, a Task Force was created under the co-ordination of the Ministry of Public Finance, consisting of representatives of the competent authorities in the financial services field – i.e. the National Bank of Romania, the National Securities Commission and the Insurance Supervisory Commission – as well as representatives of the Ministry of Justice and the Ministry of European Integration. This inter-institutional Task Force, set up in 2004, agreed on the agenda for accomplishing its task of compiling a draft law meant to transpose the above-mentioned Directive into the national legislation. It also agreed on the need to tackle the issues laid down in the Directive in a uniform manner by all competent authorities involved.

Recent steps to ensure the prerequisites for enforcing the bill transposing the Directive into the national legislation include the Memorandum of Understanding – effective 10 March 2006 – signed between the National Bank of Romania, the National Securities Commission and the Insurance Supervisory Commission. The framework stipulated by the trilateral Memorandum reflects a flexible approach, better tailored to the current state of affairs in the financial market and to the competent authorities' responsibilities, by activating more efficient co-operation mechanisms aimed at promoting stability of the financial system and of its components.

5.1.3.3. Legislation governing mortgage loans and securitisation

In February 2006, the Parliament of Romania passed the package of laws governing the mortgage loan market, as follows:

- Law No. 34/2006 amending and supplementing Law No. 190/1999 on mortgage loans for real estate investment;
- Law No. 33/2006 on mortgage loan banks;
- Law No. 32/2006 on mortgage bonds;
- Law No. 31/2006 on securitisation.

The above-mentioned laws set forth individual or joint responsibilities of the competent authorities. Besides the norms to be issued according to their institutional responsibilities, the National Bank of Romania and the National Securities Commission will issue joint norms on the licensing of brokers representing the holders of mortgage bonds or of securitisation positions.

5.1.4. The legal framework of the private pension system

The severe under-financing of the public pension system in Romania – brought about by the significant rise in the number of pensioners and the arrears to the social insurance budget – casts doubts on its ability to withstand medium-term constraints. Institutionalisation of the private pension systems is the alternative for streamlining the pension system and avoiding any slippages.

The year 2004 saw the enactment of Law No. 249 on occupational pensions and Law No. 411 on privately-managed pension funds, introducing in the Romanian pension system Pillars III and II respectively. The laws were submitted to amendment procedures in order to draft a separate piece of legislation on the regulatory and supervisory authority in the field, as well as to improve the two laws in terms of eligibility criteria for participants and establish a better prudential framework applicable to institutions managing private pension schemes.

The Private Pension System Supervisory Commission, which is the regulatory and supervisory authority in the field, was set up through Emergency Ordinance No. 50/2005, as approved and amended by Law No. 313/2005. The prudential regime governing the private pension system is extremely important from a dual perspective. First and foremost, the system plays a paramount role in its capacity as a provider of payment benefits to pensioners, therefore protection of beneficiaries – from a social and prudential standpoint – encompasses a large number of contributors. In addition, the amount of financial flows, particularly those related to pension funds spun off the public pillar, will lead to the holding and management of a significant level of financial assets, which – along with the payment obligations to beneficiaries and the interaction with other categories of financial institutions – might affect financial stability.

Regulating the private pension funds will bring in major institutional investors. The private pension system will generate significant capital flows that may be channelled towards projects likely to foster economic growth and emancipation. The sustainable development of the private pension system will take pressures off the government budget, entailing beneficial effects on the entire investment environment and, last but not least, a considerable rise in financial intermediation.

5.1.5. The regulatory framework governing the lending activity performed by non-bank financial institutions

The legal framework governing financial markets improved once Government Ordinance No. 28/2006 on certain financial and fiscal measures came into force. The Ordinance refers, under Title I, to the lending activity performed by non-bank financial institutions.

Non-bank financial institutions are entities performing lending activities in the normal course of their business, the main difference from credit institutions being that they do not accept deposits or other repayable funds from the general public. While regulating this segment, the authorities tried to establish the minimum access conditions for the lending activity, as well as to define a monitoring and supervisory regime, as appropriate, which might ensure sustainable development of this non-government credit market and remove any discriminatory regime between the regulated and the non-regulated segments. Regulating, monitoring and supervisory responsibilities are incumbent upon the National Bank of Romania.

The supervisory system architecture has a two-tier structure. The entities eligible for the first tier (to be registered with the General Register) are subject to monitoring, while the entities eligible for the second tier (to be registered with the Special Register) are subject to supervision.

Credit unions and pawnshops pertain to a distinct category, which is subject to registration with the Entry Register and governed by softer requirements.

The competent authority is currently in the process of drafting the secondary regulations supplementing the legal framework applicable to non-bank financial institutions.

5.1.6. Experimenting deregulation in payment system restructuring

The payment system restructuring project focused on deregulation, a novel approach departing from the pattern according to which the competent authority imposes a detailed normative framework on market institutions. The pattern fostering market initiative based on a principle-driven framework was promoted instead.

The components of the national payment and settlement system are currently operating largely on a contractual basis, which is an important innovation. Systems are based on rules and principles ensuring the transposition of standards in the field, which are binding upon all participants in the respective system. Joining the system is the participants' voluntary decision, as it is not imposed by the authorities via norms.

The flexible framework regulating the legal relations between the parties involved in a payment and settlement system entails numerous advantages. Thus, contractual partners may review contract provisions in line with the best standards, encouraging adhesion and convergence to well-established practices in the field. Whether they concern system rules or the framework applicable to legal relations between the administrator and the participants, making the necessary amendments involves simpler, faster and less costly procedures than those brought on by changes to the normative framework, thereby following market development.

In conclusion, the regulatory framework of the Romanian financial system has proved to be fairly dynamic. This points to the competent authorities' concern for institutional strengthening by transposing into the national legislation the best practice standards and principles applied by the international financial community. The regulatory framework reflects the efforts to transpose and implement the *acquis communautaire*, which materialised in the financial sector's high level of convergence with the EU accession requirements.

From the financial stability perspective, the potential differences between the sectoral regulations agenda are unlikely to induce any significant risks.

5.2. Payment systems

Payment systems are networks whereby financial institutions are interlinked and fulfil their payment obligations, in their capacity as participants in the financial market. From this standpoint, payment systems are deemed as the core of the financial system, while their efficient and secure operation safeguards the soundness of a country's economy, ensures stability and development of its financial system, and makes monetary policy implementation easier.

5.2.1. The importance of payment systems to financial system stability

A modern and reliable payment and settlement system needs to be in place for performing efficient financial transactions, minimising risks and reducing costs.

Given the swift development of financial markets worldwide and the links between them, as well as the technological advance in financial market infrastructure, central banks have focused on promoting the proper functioning of payment and settlement systems through measures such as (i) development and modernisation, and (ii) strengthening of oversight. The first measure is aimed at striking the balance between the systems' distinguishing features: security, reliability and efficiency; oversight implies identifying potential risks and inefficiencies brought about by the architecture and the operating manner of the payment systems, as well as taking adequate remedial measures.

A secure and efficient payment system contributes, on the one hand, to ensuring financial stability by increasing the security of transactions (protection against unauthorised access and fraud), tightening control over associated risks (particularly credit risk and liquidity risk), cutting transaction costs and, on the other hand, to boosting economic activity (by reducing settlement time), tightening control over monetary aggregates (short-term liquidity is more efficiently used by eliminating or minimising payment delays, and the increase in currency issue is no longer needed), developing the financial sector (establishment and/or development of new institutions and markets, financial instruments, products, etc.).

5.2.2. Modernisation of the Romanian payment and settlement systems⁴⁶

5.2.2.1. Payment systems

The architecture and the functionalities of the Electronic Payment System (EPS) allow the National Bank of Romania to fulfil its statutory tasks of securing and overseeing the smooth functioning of the payment systems with a view to ensuring financial stability and bringing the Romanian payment systems in line with those in the EU.

The National Bank of Romania started to reform and modernize the national payment system in 2000, in an attempt to: (i) implement a Real Time Gross Settlement System, or ReGIS; (ii) implement an Automated Clearing House for low value payments, or SENT; (iii) implement a Settlement and Financial Instrument Register, or SaFIR; (iv) implement a back-up and recovery system in case of disaster (an alternate processing site); (v) adjust the legal framework accordingly.

ReGIS, SENT and SaFIR have been considered even in blueprint as systemically important components – both in terms of financial stability and their importance for the economy – by taking into account the Eurosystem standards and the requirements for such systems⁴⁷ as well as the best practice worldwide.

⁴⁶ The Romanian payment and settlement systems comprise: the electronic payment system (EPS), which includes (i) Real Time Gross Settlement System (ReGIS), (ii) Automated Clearing House for low value payments (SENT), and (iii) Settlement and Financial Instrument Register (SaFIR), as well as other payment systems for funds settlement, namely (iv) the settlement system for operations in certificates of deposit, (v) paper-based payments interbank clearing house (ICH), (vi) settlement-clearing system of financial instruments on the stock market (BSE), (vii) National Securities Clearing, Settlement and Depository Company (SNCDD), (viii) payment systems ensuring funds settlement related to bank card transactions (VISA, MasterCard).

⁴⁷ Including those laid down in the “Core Principles for Systemically Important Payment Systems”, prepared in 2001 by the BIS Committee on Payment and Settlement Systems.

Furthermore, in order to take full advantage of the economy of scale, all three components have been implemented on a common hardware platform having a joint back-up and recovery system in case of disaster. Since the systems are centralised, access of a participant to any of these systems is possible by connecting to this platform, through a single access point at the participant's headquarters.

ReGIS and SaFIR – which are extremely important in ensuring payments and settlements and hence in maintaining financial stability – are owned and administered by the National Bank of Romania, while SENT is owned and administered by the National Company for Funds Settlement and Transfer – TRANSFOND. The central bank, in its capacity as administrator of ReGIS and SaFIR may also monitor participants in the system, including the other systems settling payments through ReGIS. The technical operation services of the two systems are rendered by TRANSFOND, which provides the technical infrastructure and operates it according to the terms and conditions established by the system administrator.

a) The Romanian electronic Gross Interbank System (ReGIS)

ReGIS has been operational since April 2005. The system is destined for the real-time gross settlement⁴⁸ and processing of large-value (above RON 50,000) or urgent payment instructions initiated by participants (credit institutions and the State Treasury), of instructions pertaining to other clearing systems⁴⁹, as well as funds transfers involving government securities in the SaFIR system and certificates of deposit.

The system is of critical importance to financial stability because it ensures the settlement of: (i) the central bank's monetary policy operations; (ii) payments related to interbank market operations; (iii) net positions calculated by all clearing systems; (iv) funds transfers related to transactions with financial instruments in all settlement systems of operations in financial instruments.

b) Automated Clearing House (SENT, administered by TRANSFOND)

SENT has been operational since May 2005, being destined for the clearing of low-value payment instructions (credit transfer and direct debit below RON 50,000) among credit institutions and between credit institutions and the State Treasury, by calculating the multilateral net positions of system participants and submitting them to ReGIS for final settlement. The clearing of any instruction accepted in the system (three sessions per day) is ensured by the collateral set up by participants as fund reserves in ReGIS and/or government securities in SaFIR, to which SENT is interconnected through automated interfaces.

The importance of SENT for the economy is conferred by its uniqueness, as any potential breakdown would entail the processing of all low-value payments through ReGIS, at costs similar to urgent payments and running the risk of overloading the latter system.

In the future, SENT will incorporate an additional clearing module for payments related to paper-based debit payment instruments (cheques, bills of exchange, promissory notes).

⁴⁸ Performing one instruction at a time, with immediate effects, to the limit of funds in the settlement account.

⁴⁹ Including the settlement instructions of net positions in the paper-based clearing system, the SENT system, VISA and MasterCard card-based payment systems, as well as the systems administered by the Bucharest Stock Exchange and the National Securities Clearing, Settlement and Depository Company (operational until March 2006).

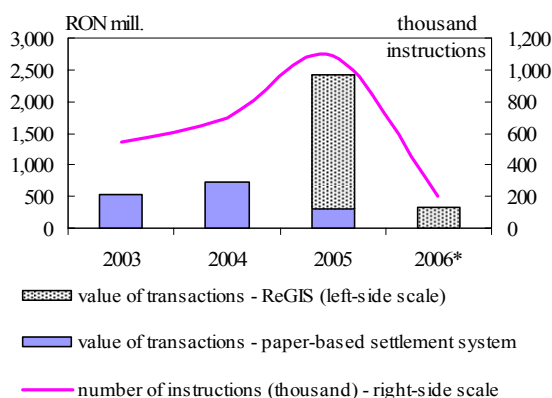
Box 5.2.1. Assessments of the performance of ReGIS, SENT and SaFIR systems

There have been no major issues in the operating of the three systems since their coming in operation. The new electronic payment and settlement systems not only shorten the settlement time (thus complying with core principles no. 4 and 5 for systemically important payment systems) but also provide operational advantages (such as better liquidity and credit risk management, more efficient activity, increased security of interbank transactions) and help cut the cost of interbank payment processing, following the introduction by the central bank of a participant-friendly tariff-setting policy.

In general, system availability fell within normal parameters, without impairing financial stability. For instance, the average availability of ReGIS during the 11 months in operation stood at 99.83 percent, while SaFIR availability for the 5 operating months was of 100 percent.

Traffic through ReGIS, i.e. the volume of large-value and urgent payments, increased by more than 43 percent during 8 April – 31 December 2005. The average value of payments processed through ReGIS rose from approximately EUR 1.3 billion in the first operating month to over EUR 2.6 billion in January 2006. ReGIS operated without any disturbances, with 4,791 processed transactions on average per day, at an average daily value of RON 10.5 billion or EUR 2.9 billion; in September 2005, transactions peaked at EUR 7.1 billion; it can be estimated that the number of transactions involving large-value payments leapt 44 percent (up 75 percent in terms of value) after the coming into operation of ReGIS. In 2005, the maximum number of instructions per hour ran at 2,082.

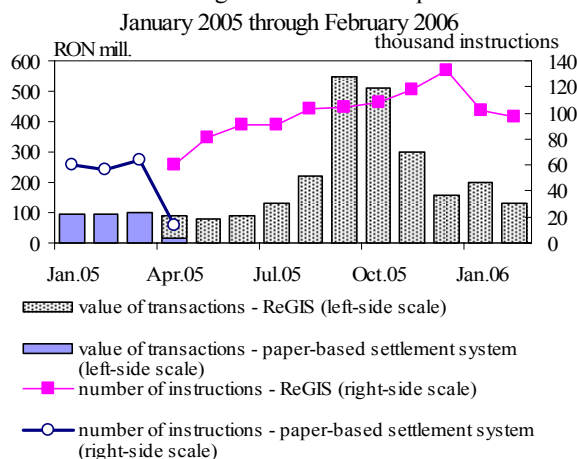
Chart 5.2.1. Developments in large-value transactions



* January-February

Source: NBR

Chart 5.2.2. Large-value transactions processed

**Table 5.2.1. Developments in low-value transactions**

Daily average values	2003	2004	2005	2006 (Jan., Feb.)
No. of instructions	159,833	211,414	220,987	218,763
- paper-based system	159,833	211,414	95,925	25,659
- SENT	-	-	196,856	193,104
Value (RON thou.)	556,230	757,749	766,036	593,457
- paper-based system	556,230	757,749	450,714	140,516
- SENT	-	-	496,341	452,941

Source: TransFonD

The volume and value of transactions performed through SaFIR October 2005 through January 2006 are relatively low compared to the other systems. On average, 20 transactions were processed daily through this system, equivalent to approximately EUR 10 million.

Source: NBR, TransFonD

SENT did not record any disturbances in the first 9 months in operation. The table below depicts the developments in transactions performed through the paper-based net settlement system and through SENT after its commissioning (13 May 2005).

c) Settlement and Financial Instrument Registration (SaFIR)

SaFIR has been operational since October 2005, having both registry functions – by acting as a government securities settlement system⁵⁰ – and ancillary functions⁵¹. The system provides support for ReGIS and SENT, as participants may set up real-time collateral by pledging government securities for the settlement of net positions. The interfaces connecting the three systems allow the online exchange of information on collateral.

The system is currently being developed for storing and settling certificates of deposit issued by the central bank and for implementing new functionalities aimed at managing benchmark⁵² issues.

5.2.2.2. Securities settlement and clearing systems

The strengthening of the Romanian capital market through the merger of stock markets entails a reconsideration of the related settlement and clearing systems.

Settlement and clearing stand out as key functions on the securities markets, because they lead to the transfer of ownership over the securities. A disruption in the functioning of the settlement and clearing systems would send ripple effects onto the financial markets. Economies of scale and network effects call for the concentration of these activities in a small number of settlement and clearing central systems acknowledged as systemically important infrastructures. This phenomenon is also manifest on the Romanian market.

The completion of the merger through absorption of RASDAQ by the Bucharest Stock Exchange (BSE) at end-2005 was the first big step towards restructuring the capital market, by “*creating a single, better capitalised and more liquid, Romanian stock market, based on systems and regulations in line with those of other European stock markets*”. The new architecture of the stock market implies that trading should be performed on a single technical platform; furthermore, the restructuring of its settlement-clearing and registry system is scheduled to be completed in 2006.

The possible merger between the BSE and the Monetary, Financial and Commodities Exchange in Sibiu, due for completion this year, would lead to the creation of a single stock market, aimed at consolidating transactions in contracts and derivatives. This would also entail changes in the settlement and clearing systems of the two markets, namely BSE’s Settlement and Clearing House and the Romanian Clearing House⁵³. The underlying platform of the clearing-settlement system administered by the Romanian Clearing House is integrated with BSE’s trading platform⁵⁴.

5.2.3. Risks associated to payment systems

The risks associated to payment and settlement systems can be: systemic risk, credit risk, liquidity risk, operational risk and legal risk.

⁵⁰ Abiding by the “Delivery versus Payment” (DVP) principle.

⁵¹ Including the daily assessment of issues, queue management and gridlock mechanism, tariff-setting, reporting, secured messaging.

⁵² As defined in “Core Principles for Systemically Important Payment Systems” prepared by the BIS Committee on Payment and Settlement Systems.

⁵³ Stock company ensuring the record-keeping, settlement and clearing of transactions on the Monetary, Financial and Commodities Exchange in Sibiu (regulated derivatives market), in charge of calculating the net positions of system participants and operating as central counterparty.

⁵⁴ Performs simultaneously the registration of traded derivatives, the clearing and transfer of amounts to the accounts, confirms the completion of transactions, ensures the real-time marking to market concomitantly for futures and options markets.

5.2.3.1. Risks associated with payment and settlement systems

From the financial stability perspective, the analysis of the payment and settlement systems implies an overview of the potential risks to which these activities are exposed and hence of the measures for mitigating or completely removing such risks. Being involved in the design, operation and oversight of payment systems, the central bank assesses the systems for minimising systemic risk and maintaining confidence in payment systems; such a detailed analysis applies mainly to systemically important payment systems, as defined in the Core Principles⁵⁵ published by the BIS.

The risks associated with payment and settlement systems originate in: (i) their improper design (judging by the processing, settlement rules, etc.) and may have systemic consequences, even if participants are financially-sound institutions; (ii) clearing and settlement activities, being generated by the financial institutions participating in the system (financial risks such as credit risk, market risk, liquidity risk, etc., along with operational, legal and reputational risks which any financial institution may be exposed to); (iii) other specific risks to the financial infrastructure that are not generated by financial institutions (legal risk and the risk generated by accounting records and entries). All these types of risks, either individually or aggregately, may have systemic consequences.

Over the last decades, liberalisation, integration and globalisation of financial systems have rendered systemic risk more intricate. Under these circumstances, the risk is very easily and quickly transferred – through credit institutions – to several financial markets and to a diversified investor group (non-banks and individuals). On the one hand, this type of risk segregation – mitigating concentration risk and thus reducing the likelihood of an institution facing financial difficulties – yields systemic benefits. On the other hand, however, such benefits are offset by the higher vulnerability to the shocks of an extended system, through aggregate exposure to financial markets, involving simultaneous influences from the markets, generated by episodes of economic adversity.

5.2.3.2. Identifying and managing risks in the Romanian Electronic Payment System (EPS)

EPS implementation led to enhanced security and efficiency of transactions, lower costs and tighter control over the associated risks (particularly credit risk), with a view to avoiding any systemic risks/crises.

Even though the implementation of EPS and the changes in the legal framework mitigated or even removed some of the specific risks associated with interbank payments, while risk control improved considerably, the need to identify any potential risks, to evaluate them and elicit the best risk management solutions still persists.

Financial risks related to payment systems may be reined in through system rules and procedures. The EPS rules and procedures cover both normal and contingent situations, by specifying the manner in which financial risks are managed and the tasks incumbent upon the system administrator and participants.

Credit risk is practically eliminated in ReGIS through: (i) real-time settlement (there is no perceptible difference between the acceptance for settlement and the final settlement of the payment instruction) and (ii) the participants' inability to access information on future collections (thus reducing the risk of a beneficiary participant crediting the client's account in anticipation of a collection that ultimately does not occur). As far as SENT is concerned, credit risk is extremely

⁵⁵ "Core Principles for Systemically Important Payment Systems", prepared in 2001 by the BIS Committee on Payment and Settlement Systems.

low, especially due to the “defaulter pays” guarantee scheme and the unfolding of several clearing sessions in one day. In order to mitigate credit risk, SaFIR transactions are settled in real time, based on the delivery versus payment principle (gross-gross).

EPS liquidity risk is controlled under ReGIS through the existing instruments for managing liquidity risks: (i) queue management; (ii) intraday credit through intraday repo transactions in eligible financial assets; (iii) appointing the central bank as settlement agent for easily obtaining the required funds; (iv) easier access to borrowings on the market through real-time connections between systems (ReGIS-SaFIR); (v) more efficient liquidity management by resorting to ReGIS facilities (online information on the settlement account, online interfaces), (vi) gridlock resolution mechanism. The need for liquidity in SENT is much lower than in ReGIS (gross settlement), since borrowing requirements are diminished by the existence of three settlement sessions per day (on a net basis). Besides, given the nature of the guarantee scheme, the need for liquidity to settle accepted payment instructions is entirely covered. As regards SaFIR, liquidity risk is controlled through the intraday liquidity obtained from the central bank as well as through settlement on a net basis for funds, in case of primary market operations and the processing of payment events.

Control of operational risk in the EPS was achieved by designing it in compliance with international security standards and with the measures for maintaining a high level of operational resilience. In time, market developments and technological progress will call for a revision of such standards. Operational resilience does not only refer to cutting-edge technology and an adequate back-up system, but also to efficient procedures and competent staff that might ensure smooth and safe system operation. From a technical perspective, the EPS architecture abides by the “no single point of failure” principle, as the system is equipped with an alternate processing site, which allows automatic resumption of service from the primary site, after data have been copied. Although in this case operational risk is much lower (both from a technical and technological point of view), human errors are still likely to occur. Working procedures have been drafted for the very purpose of preventing such human errors, by clearly defining the activities and operations of system participants and the system operator. The operating procedures, the contingency plan and the back-up procedures in case of disaster are currently being improved. In addition, the plan to ensure the continuity of ReGIS and SaFIR is being developed. These procedures have not been entirely tested on system participants. For instance, the contingency procedures were applied several times in 2005. Therefore, the efficiency of these procedures during a crisis is still to be confirmed.

For payment systems to be efficient and secure, a transparent, broad-based and clearly-defined legal framework ensuring system security from this point of view is required. Putting in place such a legal framework implies the co-operation of all institutions involved in the good functioning of payment systems, with a view to (i) correlating the provisions of general legislation (ownership right law, contractual framework/contract law, banking law, bankruptcy law, collateral regime, the law on electronic documents and digital signatures, etc.) with the specific provisions of payment system legislation (the legislation on payment finality, clearing, novation, regulations on payment system oversight, participation in the interbank payment system, etc.), (ii) harmonising Romanian legislation with the applicable community legislation, and (iii) supplementing the current legal framework (e.g. provisions on electronic funds transfers, especially by adopting the EU legal requirements on payment and securities settlement systems).

To this end, the National Bank of Romania has relentlessly pursued the creation and/or adjustment of the legal framework (laws, regulations, contracts) required for the proper functioning of the implemented systems, in an attempt to shift from a legal framework based on central bank norms to a framework relying on contract provisions established between the system administrator and

participants. Another objective was to regulate the IBAN and BIC standards in the payment systems and the manner of using SWIFT and XML payment messages. Furthermore, the central bank has either drafted or contributed to the drafting of several pieces of legislation transposing the Directive on settlement finality in payment and securities settlement systems (Law No. 253/2004) and the Directive on financial collateral arrangements (Ordinance No. 9/2004, as approved by Law No. 122/2004).

Major challenges that the central bank will have to face in the near future include self-assessment of the EPS in Romania, based on the Core Principles laid down by the BIS, and designation of the payment systems of systemic and critical importance for their proper oversight.

CHAPTER 6. STUDIES ON FINANCIAL STABILITY

6.1. Implementing Basel II in Romania*

Basel II represents a paradigm shift promoted internationally in banking risk management, entailing in-depth changes in the regulatory, prudential supervision and international co-operation framework among the authorities. There is a relative delay in implementing Basel II in Romania, and the process engenders major challenges both to the central bank and credit institutions. In the first stage, the overwhelming majority of banks are likely to choose the simplest method for quantifying capital requirements.

6.1.1. Basel II overview

After five years of work, the Basel Committee published the final version of the New Capital Accord or Basel II (BIS, 2004) in June 2004. The objective of the document is to enhance risk management and corporate governance framework for banks, thus strengthening financial stability as well. Basel II is based on three mutually reinforcing pillars: (i) minimum capital requirements, (ii) the supervisory review process, and (iii) market discipline.

(i) The First Pillar lays down the capital requirements for credit, market and operational risk.

Basel II focuses on **credit risk** and provides banks with a wide range of options for calculating capital requirements depending on the exposure types. Three methods are available for this purpose: the standardised approach, the basic indicator approach, and the advanced internal ratings-based (IRB) approach.

The standardised approach closely follows the present risk management framework (Basel I), by establishing fixed risk weights by type of portfolios (central banks and authorities, credit institutions, companies, etc.). The difference is made by (a) promoting a higher risk sensitivity (by refining the respective categories), (b) using external ratings, since the supervisory authority is in charge of recognising external rating agencies based on qualitative criteria, and (c) expanding the range of accepted instruments and operations with a view to mitigating credit risk.

IRB approaches stand out as a novelty based on asset valuation theories⁵⁶. Capital requirements are calculated depending on the following risk parameters: probability of default (PD), loss given default (LGD), exposure at default (EAD) and maturity (M). Capital requirements are determined by deducting the expected loss (EL) from the value at risk of bank exposures (for a one-year time horizon and a 99.9 PERCENT confidence interval). Expected loss is compared to the level of provisions and the result influences own funds. Expected loss is calculated as follows:

$$EL = PD \times LGD \times EAD$$

In the IRB approach, credit institutions determine the PD and the supervisory authority establishes the remaining risk parameters. In the advanced approach, credit institutions calculate by themselves all parameters with a view to determining capital requirements. In this latter case, the gap between economic and regulatory capital is narrowed to the minimum.

* Florian Neagu, Angela Mărgărit and Arpad Andrassy.

⁵⁶ The possibility of an obligor default is determined as the difference between the value of assets and that of debts. The probability of default measures the risk for this difference to enter negative territory (Gordy, 2003).

Capital requirements for **operational risk** stand out distinctly for the first time. Risk is defined as the likelihood of incurring losses as a result of inadequate internal procedures, human or system errors, or external events. Credit institutions have three methods for calculating capital requirements:

- Basic indicator approach: banks must hold capital equal to a fixed percentage (15%) of average annual gross income over the previous three years;
- Standardised approach: the bank's operations are split out over eight different business lines, while capital requirements are determined after multiplying the net income obtained from each business line by a percentage ranging between 12% and 18%;
- Advanced Measurement Approach: allows the use of internal models for quantifying capital requirements pertaining to the operational risk.

Market risk has not undergone any significant changes compared to the 1996 amendments to Basel I.

- (i) The Second Pillar provides a qualitative approach to prudential requirements through the supervisory review process. The supervisory authority is assigned further competences in assessing banks' internal procedures concerning their capital adequacy in relation to their risk profile. Credit institutions should be capable of identifying, measuring and reporting all risks they are exposed to and hence make the necessary capital allocations. Aside from the risks captured under the First Pillar, the following risks are laid down under the Second Pillar: liquidity risk, interest rate risk in the banking book, credit concentration risk, residual, reputational and strategic risks. Where these risks are not adequately controlled and/or the bank has not implemented adequate control systems, supervisors may impose additional capital charges. Last but not least, supervisors should build early intervention mechanisms preventing bank capital from falling below the minimum threshold.
- (ii) The Third Pillar is aimed at making effective use of market discipline by developing a more detailed set of disclosure requirements to the supervisory authority and to the public. The increase in transparency diminishes informational asymmetry and thus risks may be more easily assessed. Disclosure requirements are both qualitative (e.g. consolidation level, shareholding structure, the bank's strategy for certain exposures, etc.) and quantitative (e.g. the value of capital components, capital requirements for all risks, etc.).

On the other hand, Basel II has come under **criticism** particularly for the possible procyclicality of capital requirements and for the fact that the recognition of internal models for credit risk has only been confined to a single risk factor model. Procyclicality may emerge from the application of internal models for credit risk, yet these possibly negative effects have been mitigated by flattening out the risk weighting functions and by requiring that additional capital be maintained under the Second Pillar. Furthermore, risk management techniques undergo continuous development, with major progress in modelling correlations and diversification effects, which might facilitate the use of models based on several risk factors.

6.1.2. Particulars of implementing Basel II in Romania

Basel II is to be transposed into the legislation of the European Union by redrafting the Directives issued in this field⁵⁷. The legislation incorporates a number of differences from the provisions of the Basel Committee following the negotiations held between the Member States and are tailored to the specifics of European economies. First, the European regulation will, as a rule, be applied on a consolidated and unconsolidated level to all credit institutions and financial investment companies, regardless of the complexity of their activities, whereas Basel II refers to internationally active banks. Second, co-operation between supervisory authorities is brought to the fore, with particular emphasis on increasing financial integration at EU level. The European approach is aimed at providing unitary conditions for the pursuit of activity for all credit institutions.

In the case of Romania, implementation of Basel II implies substantial challenges both for credit institutions (adjusting risk management and the IT system, staff training, database availability, etc.) and the National Bank of Romania (supervision adjustment, drafting of the new regulatory framework, staff training, etc.).

The central bank drew up a four-stage **strategy** to implement Basel II:

- stage one: to initiate and carry on exchange of information with national entities (Romanian Banking Association, the Ministry of Public Finance, the National Securities Commission) and international institutions (other supervisory authorities) involved in using Basel II;
- stage two: to develop the means for achieving banking sector supervision at Basel II standards, especially through (i) transposition into national legislation of Directives and adjustment of the prudential reporting system; (ii) drafting of guidelines for the validation of internal models, and (iii) unfolding of assessment missions regarding Basel II implementation conditions at the credit institutions' head offices;
- stage three: to validate the internal rating models of credit institutions;
- stage four: to perform on-site inspections focusing on the application of Basel II provisions.

The **regulatory framework** will undergo sweeping changes. The laws governing banking activity, credit co-operatives, savings banks for housing and mortgage banks will be subject to review. Furthermore, secondary legislation will be amended and supplemented to meet the requirements under the three Pillars of Basel II.

For the provisions of the European Directive to be implemented, the Steering Committee⁵⁸ adopted the method of exercising **national discretions** (specifications leaving to national discretion the manner of implementing some of the EU provisions). Options are circumscribed particularly to (credit, operational, and market) risks, own funds and supervision on a consolidated and unconsolidated level. The National Bank of Romania chose to take a prudent approach to national options.

Table 6.1.1. provides the key changes to risk weights, as they result from exercising national discretions⁵⁹ for the standardised approach. The key change will affect mostly retail exposures

⁵⁷ Directive 2000/12/EC relating to the taking up and pursuit of the business of credit institutions and Directive 93/6/EEC relating to capital adequacy of investment firms and credit institutions.

⁵⁸ The Steering Committee is the main decision-making body for implementing Basel II and encompasses representatives of the National Bank of Romania, the National Securities Commission, the Ministry of Public Finance, and the Romanian Banking Association.

⁵⁹ As established during the talks held by inter-institutional working groups.

(individuals and SMEs treated as retail) and residential mortgage exposures. A simplified estimation reveals a reduction of nearly 16 percent in risk weighted assets (balance sheet exposures) in the case of retail-sector⁶⁰ and corporate loans, which will lead to an increase in credit institutions' solvency. Last but not least, lending to regional and local governments could become more expensive under the new framework, although the financing requirements of such entities will grow sizeably given the EU accession.

Table 6.1.1. Risk weights specific to standardised approach of Basel II compared to Basel I

Exposure	Risk weights associated with exposure	
	Basel I	Basel II
Central banks and governments, financial institutions similar in nature (for exposures other than those denominated and funded in local currency)	0	50
Credit institutions (exposures longer than 3 months)	20	50
Local and regional governments	20	100
Retail exposures (including individuals and SMEs treated as retail)	100	75
Residential mortgage exposures	50	35
Higher risk categories	100	150

The **impact of the regulatory framework** transposing Basel II into national legislation on credit institutions and financing of the economy is difficult to assess. Banks grapple with the restructuring of their databases according to the categories of exposures set forth in Basel II and therefore the central bank was unable to conduct a quantitative analysis during 2005 for perfecting national options.

In 2007, few banks operating in Romania are likely to adopt IRB approaches for the following reasons: (i) banks' capital is considerably higher than the minimum requirement of 12 percent so that credit institutions are not interested in saving their own funds by resorting to more advanced methodologies; (ii) the Romanian banking market could be considered too small for a group to sustain the costs attached to the implementation of Basel II, as banks have mainly been seeking to expand their market shares; (iii) statistical data underlying the models could be of poor quality; (iv) some banks could have treated Basel II proposals as unsupportive of modern risk management; (v) the regulatory framework will allow banks to use the current approach to calculate capital requirements (Basel I) until 2008 so that the time horizon for the implementation of Basel II is considered even more remote.

Actually, the feedback on the latest questionnaire sent to credit institutions shows that half of them will stick to Basel I (Table 6.1.2.) in 2007 as well. Most of the banks choose the standardised approach for the credit risk and the basic indicator for operational risk. Only two banks stated their intention to shift to internal model based methods in quantifying capital requirements starting January 2007.

⁶⁰ The mitigation of credit risk by debtors' using collateral or guarantees was left out of account. The test is relevant for June 2005.

Table 6.1.2. The approach indicated by credit institutions in Romania to be used starting 2007 for the calculation of capital requirements for credit and operational risk

Approach	Approach		
	07/2005	11/2005	05/2006
Credit risk			
Standardised (or simplified standardised) approach	13	30	31*
Internal ratings models – basic approach	3	2	2
Internal ratings models – advanced approach	1	0	0
Undecided credit institutions	17	2	0
Operational risk			
Basic indicator	11	17	20
Standardised approach	10	13	13
Advanced measurement approach	4	2	0
Undecided credit institutions	9	2	0

* Including also the banks that declared their intention to use Basel II approach in 2007 as well.

For a credit institution to be able to use another approach rather than the standardised approach in determining capital requirements, its **internal models must be validated** by the supervisory authority. The National Bank of Romania is drafting validation guides for each type of risk included in Pillar I, i.e. credit risk, market risk, and operational risk. The validation process hinges on the following principles: (i) primary responsibility during the validation process lies with the credit institutions, as the supervisor only assesses the manner in which the bank performed its own validation; (ii) validation basically constitutes an assessment of the predictability of a bank's risk estimates; and (iii) validation is a recurrent process which takes account of both quantitative and qualitative aspects.

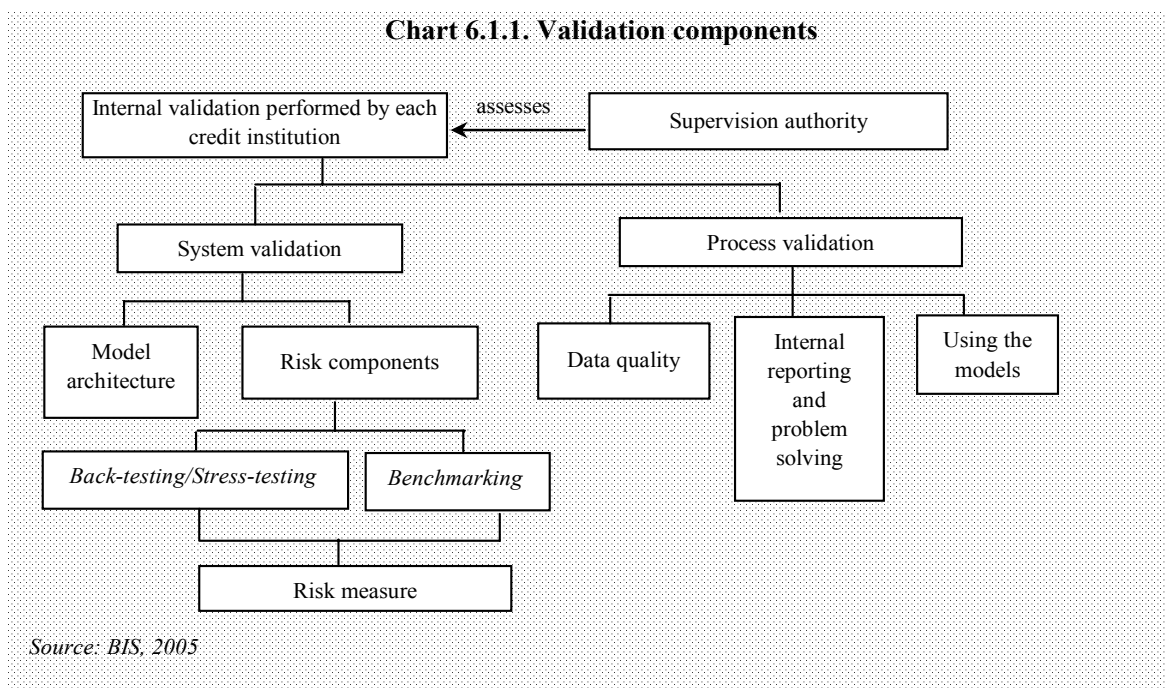
Chart 6.1.1. Validation components

Chart 6.1.1. provides an in-depth look at the validation components. For the Romanian banking system, validation could be more difficult to implement from the perspective of the rating process and the rating system itself. In this vein, three aspects are due for consideration. First, even though the model was designed by the parent undertaking and validated by the home supervisory authority,

the local management must be able to prove that the model captures accurately the features of risks prevailing on the Romanian banking market. The model could well be reliable within the group, yet it may fail to capture the minor risks at aggregate level, which are relevant for Romania. Second, local management should not be a mere operator using an internal model as a black box but must know it satisfactorily. In fact, the management should have full control over the risks to which the entity it runs will be exposed. Last but not least, feeding models with databases is yet another challenge. At present, there is no long-lasting track record for databases needed in quantifying capital requirements. Such imported databases must prove their capability of capturing the structure and the dynamics of risks to the Romanian banking market.

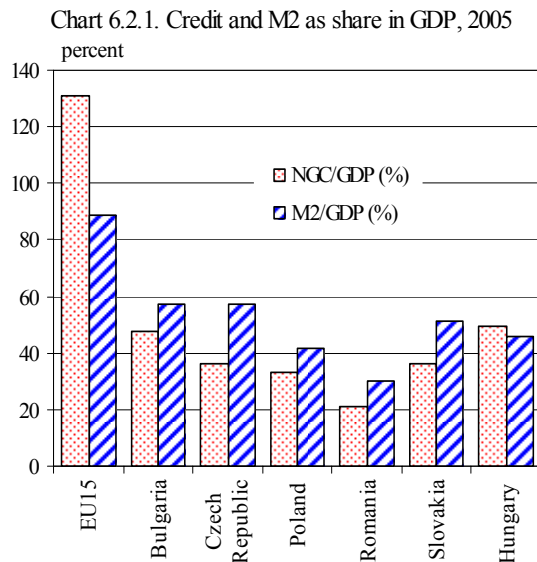
As a rule, the approval of an internal model to assess credit risk calls for the use of the rating system for at least three years. The National Bank of Romania exercised its option of reducing this period to at least one year provided that the credit institution chooses to implement the basic internal models by 31 December 2009 or to at least two years if the advanced approach is introduced by 31 December 2008.

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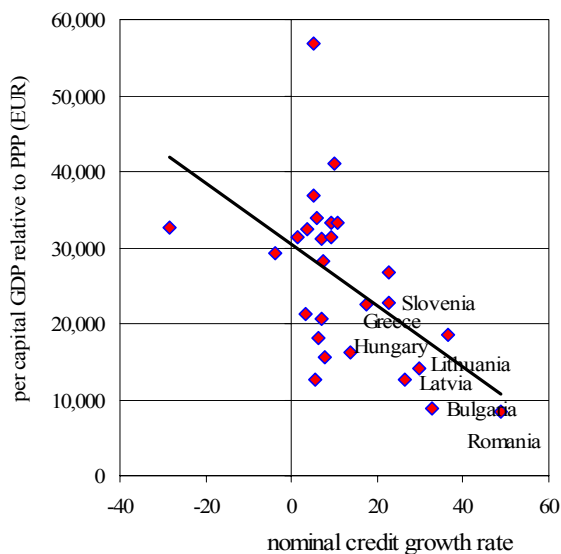
6.2. The nature of credit growth in Romania: financial deepening or credit boom*⁶¹?

Although the analysis has pointed to the absence of a credit boom process in Romania, the favourable conditions fostering financing both on the demand and supply side call for a closer monitoring of the phenomenon. Besides, even though the system witnesses a financial deepening and convergence process to the EU credit levels, the adjustment speed is high. These dynamics were fundamental in adopting the measures for containing credit growth.



Source: EUROSTAT, NIS, NBR calculations

Chart 6.2.2. The relationship between credit growth and economic development in the EU, Romania and Bulgaria, 2005



Source: EUROSTAT, NIS, NBR calculations

Non-government credit witnessed high growth rates in recent years in most CEE countries. The main causes are: banking sector reforms, heightened competition, enhanced macroeconomic framework and robust demand. The starting point was quite low and, in spite of recent developments, financial intermediation lagged way behind the EU-15 level (Chart 6.2.1). The credit boom⁶² was accompanied by developments with potential negative effects on macroeconomic and financial stability: current account deficits got wider, banks turned to external resources amid flagging domestic saving, heightened pressures on inflation and exchange rate evolution, as well as significant rises in household indebtedness and in prices for non-financial assets.

Countries with the lowest per-capita income display the fastest credit growth rates, reflecting – aside from the structural elements of the economy – optimistic expectations on income developments (Chart 6.2.2). If we accept the idea of these countries' convergence towards financial intermediation levels existing in developed countries, the convergence pace is the major source of concern that called for prudential measures. In order to pinpoint the accelerated credit growth, some rating agencies have adjusted their sovereign risk calculation methodology by including the credit growth indicator.

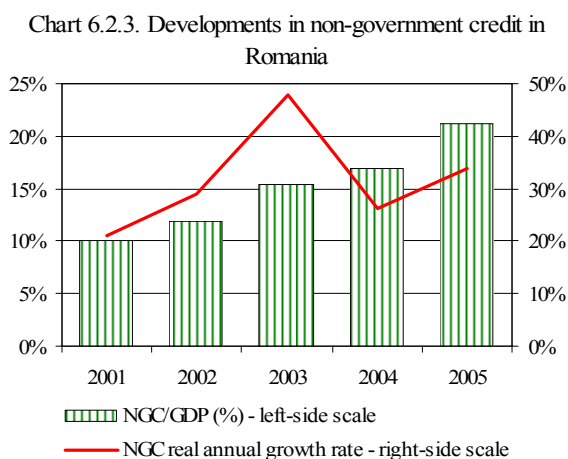
The weight of non-government credit in GDP witnessed a steady rise, actually doubling from the 2001 level (Chart 6.2.3). The following factors favoured credit supply and demand economy-wide: (i) sustained economic growth and declining inflation and interest rates; (ii) privatisation and strengthening of the banking sector leading to keener

* Mihai Copaciu and Irina Racaru.

⁶¹ For an overview, see Kaminsky, Lizondo and Reinhart (1998).

⁶² Developments have not been homogenous, displaying particular features for each country.

competition among credit institutions; (iii) the hike in disposable incomes and optimistic expectations on their future developments, and (iv) restructuring of the real sector and the investment financing need.



Source: NIS, NBR, NBR calculations

developments are considered dangerous when the boom is followed by a bust. The return to normal expansion rates of non-government credit in the post crisis period is combined with negative deviations of real GDP from its trend of approximately 5 percent (IMF, 2004). Furthermore, the literature⁶³ shows credit busts are associated with banking crises in around 75 percent of the cases and with currency crises in 80 percent of the cases.

The most frequent reasons⁶⁴ for the occurrence of a boom include: (i) the economic cycle, where credit demand displays high elasticity in relation to GDP, (ii) financial liberalisation amid poor credit risk management, also fuelled by implicit and/or explicit guarantee (that might deter banks from adopting a prudential stance), (iii) excess liquidity also as a result of capital account liberalisation, and (iv) shocks conveyed through the balance sheet channel. Other possible causes comprise (i) dwindling of the public sector's financing demand following consolidation of the fiscal stance (especially in CEE countries with a view to meeting the EU accession requirements), thus boosting private sector access to financing, (ii) implementing a macroeconomic stability programme through exchange rate pegging⁶⁵.

Being the main propagation mechanism for the credit boom, the financial accelerator is most mentioned in the literature. Accordingly, shocks that affect asset prices are amplified through balance sheets effects⁶⁶. This is the result of market imperfections that appear due to informational asymmetries, liquidity constraints or institutional problems. Moreover, a similar pattern might be due to shocks that affect the prices of goods and services. Considering that the supply of non-tradable goods is less elastic than that for tradable goods, an increase in the price of the former against the latter, due to stronger aggregate demand (influenced for example by capital inflows), leads to an increase in the profitability of the firms that sell non-tradable goods. Strengthening of

Therefore, it is of paramount importance to determine whether recent developments in non-government credit in Romania were due to the lasting development of the financial system – given the low weight of non-government credit in GDP – or we are dealing with what the literature calls *credit boom*.

6.2.1. Definitions, causes and propagation mechanism

There is no clear distinction between the financial deepening and the credit boom phenomena. According to the generally-accepted definition for the latter process, credit

⁶³ For an overview, see Kaminsky, Lizondo and Reinhart (1998).

⁶⁴ For example, Gourinchas (2001).

⁶⁵ Boissay, Calvo and Kozluc (2005) show that emerging countries with a pegged exchange rate generally display a higher credit growth rate, above the level explained by domestic conditions or financial liberalisation.

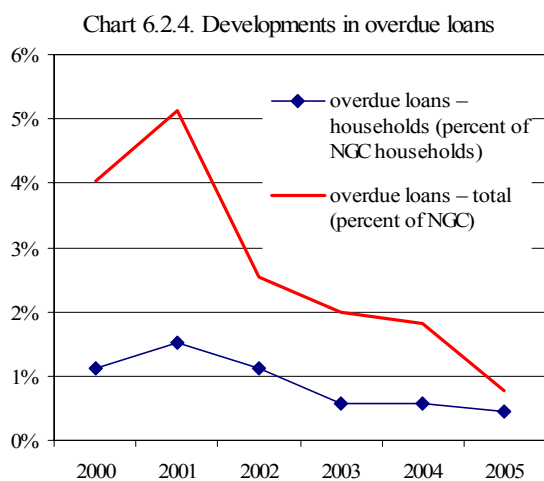
⁶⁶ Positive expectations on future incomes might generate an increase in asset prices, leading to increases in the value and indebtedness capacity of the firm. The respective process is unsustainable if the expectations proved incorrect leading to a readjustment in asset value, the above-mentioned process going backward.

balance sheets leads also to higher borrowing capacity and increased leverage. Sudden stops in capital inflows or capital flights will generate a decrease in the prices of non-tradables, the process evolving in this case also backwards (Caballero, Krishnamurthy, 2001).

Given the negative effects of a credit boom on financial stability, it is of utmost importance to identify the nature of credit growth in Romania. Financial deepening, although it goes together with economic development, does not induce the negative effects mentioned earlier.

6.2.2. Quantitative methods for identifying a possible credit boom in Romania

The non-performing loans analysis is a first indicator for distinguishing credit boom periods from financial deepening ones. The ratio of overdue loans to total loans is dwindling in Romania, thus proving the absence of a dangerous expansion process (Chart 6.2.4). The decline is much smaller in the case of household loans. However, these developments should be interpreted warily, because the debt level could be undervalued given the brief track record of credit.



Source: NIS, NBR, NBR calculations

Leading indicators employed in the literature⁶⁷ for detecting financial deepening fail to clearly identify the nature of credit development in Romania. Thus, we chose to analyse the ratio of currency outside banks to deposits, M2/GDP and M2/M1 (Chart 6.2.5). It can be easily noticed that monetisation is still low compared to developed countries, while the ratio between monetary aggregates (M2/M1) and that between currency outside banks and deposits have remained relatively constant, pointing to the financial development potential of the Romanian banking sector.

Furthermore, the share of other sources than deposits, and especially external borrowing, increased in the domestic banks financing. This aspect is also characteristic for the construction phase of a credit boom insofar as it is correlated with an increase in the: (i) leverage and (ii) relative prices of the firms producing non-tradables. If, at price level, there is a relative increase for the non-tradables sector when compared with the tradables one, leverage decreased over the last three years in almost all non-tradables sectors, except financial intermediation and construction companies (Table 6.2.1).

Resorting to the first methodology proposed by the IMF (2004), there are aspects indicating the possibility of a credit boom in Romania. Thus, there is a positive correlation between the evolution of the real credit and real effective exchange rate and a negative correlation between current account balance and domestic saving (Chart 6.2.6).

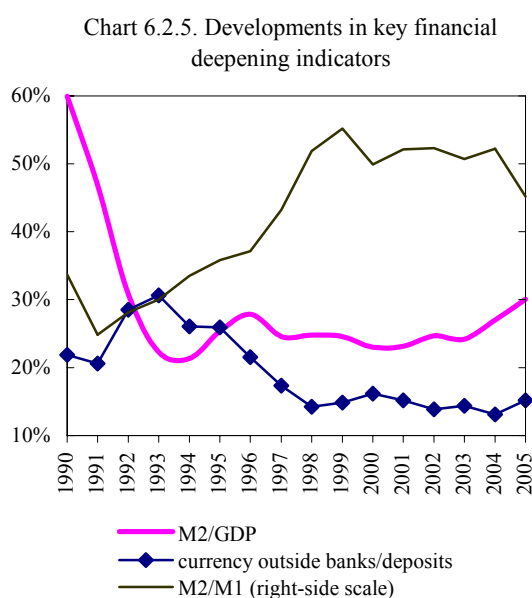
⁶⁷ For example, Eltony (2003).

Table 6.2.1. Developments in leverage (debt/equity ratio)*

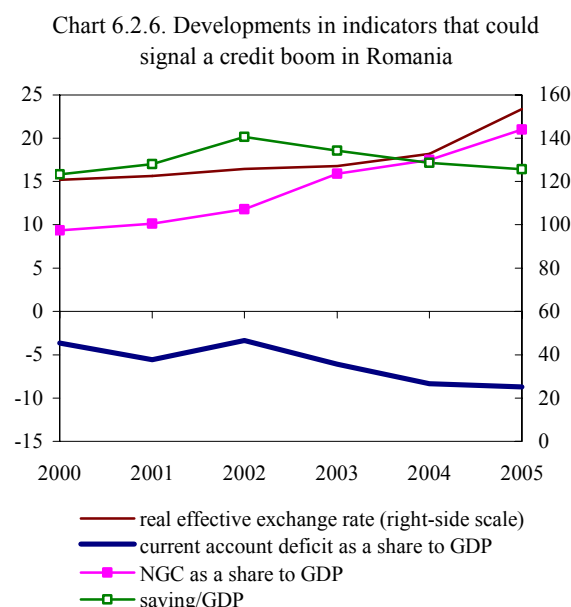
Sector	2003	2004	Jun-05
Agriculture	4.68	5.85	3.01
Mining industry	n.a.	10.55	n.a.
Manufacturing	2.62	2.13	2.06
Energy, gas and water	0.54	0.72	0.72
Constructions	1.88	2.64	2.92
Retail trade	4.77	4.17	4.04
Hotels and restaurants	4.75	2.3	2.37
Transport, storage and communications	2.51	2.23	2.2
Financial intermediation	4.13	4.29	3.36
Real estate transactions	2.93	2.28	2.48

* Data reported as of December of the respective year. Leverage was calculated as an average of the degree of indebtedness of companies in the relevant business sectors.

Source: MoPF and NBR calculations



Source: NIS, NBR, NBR calculations



Source: NIS, NBR, NBR calculations

On the other hand, another IMF approach (2004) indicates that financial deepening is much more likely. The said methodology considers that the evolution can be defined as a credit boom if it exceeds the standard deviation of real credit around a trend by a factor of 1.64⁶⁸. Using a Hodrick Prescott filter and deseasonalised data⁶⁹ for the period 1993:01-2005:08⁷⁰, the process currently taking place in Romania is not indicative of a credit boom. It should be mentioned that, although the procedure has some *ad-hoc* elements⁷¹, it identifies correctly the credit boom of 1996 and early 1997, followed by a bust that accompanied the structural reforms of 1997.

⁶⁸ If the evolution of credit followed a normal distribution, there would be a 5 percent chance for these extreme values to occur.

⁶⁹ 12-month moving average, thus removing seasonal elements from the series.

⁷⁰ The period was chosen taking into account the average duration of a credit boom. Considering a smaller interval, to avoid major structural changes that might appear, would have led to an 'undervaluation' of the trend (had it begun in 2000, it would have incorporated much more of the recent credit growth, leading to a smaller deviation).

⁷¹ For instance, not using an iterative Hodrick Prescott filter, assuming normal distribution and a 95% confidence level, a relatively short series considering the average duration of a credit boom.

Another element taken into account when trying to assess the nature of non-government credit growth is the average duration of a credit boom. The study conducted by the IMF (2004) estimates the average duration of a credit boom at three and a half years, with a standard deviation of one year and a half. Duration is measured as the number of years in which the evolution of real credit is higher than standard deviation around a trend with a factor of 1, conditional on the respective process as being a credit boom. Thus, for the current situation the duration concept as defined here is irrelevant. Instead, for the process identified earlier as being a credit boom for Romania (1996-1997), applying this methodology results in an estimated duration of one year and a half, starting in October 1995.

The absence of a credit boom in Romania is sustained also by the study of Racaru, Copaciu and Lapteacru (2006). The authors show, using a multinomial logit model to estimate the crisis probability for a panel of 20 emerging economies, that credit growth to GDP ratio represents an important factor for determining the crisis probability, together with credit busts in the post crisis periods. Crisis probability for the Romanian economy estimated at June 2005 based on this model does not change significantly, provided the current pace of credit growth is maintained (and the other variables remain unchanged⁷²).

Another argument in favour of financial deepening is the study prepared by Boissay, Calvo and Kozluc (2005). Based on an error correction model, the study determined how much of the non-government credit boom in CEE is explained by domestic economic conditions (economic growth, real interest rate) and by the catching-up following financial liberalisation⁷³. Accordingly, non-government credit developments in Romania are explained by the above-mentioned factors. In a breakdown analysis by various credit components, credit to households is 5.6* percentage points⁷⁴ above the optimum level, in the upper part of the standard deviation among the selected countries⁷⁵. The other components lying significantly above the expected optimum level are *leu*-denominated credits, with 4.2** percentage points, and long-term credits, with 1.2*** percentage points.

Given the recent developments in non-government credit, namely its swift pace of increase and the related adverse effects, the central bank took several measures to counteract any excessive credit expansion and foster financial development⁷⁶.

The set of measures that the authority may resort to yields mixed effects in the medium and long run. Backé and Zumer (2005) provide a detailed analysis of the efficiency of the said instruments. Using the interest rate to tighten monetary policy may render external sources more attractive, thus leading to export of financial intermediation and the occurrence of currency risk. On the other hand, excessive regulation could determine foreign banks to turn from subsidiaries into branches so

⁷² The results of this analysis should be interpreted with caution because credit expansion scenarios do not imply a change in the other indicators (this is a *ceteris paribus* analysis).

⁷³ The optimum level of the credit growth rate was defined by: (i) resorting to the standard credit elasticities (based on a group of countries with a stable credit-to-GDP share) and (ii) setting certain constant elasticities for the selected CEE countries (based on a panel data analysis). Unlike the first method, the optimum level of the credit-to-GDP share is on the rise.

⁷⁴ *, **, *** denote 10%, 5%, 1% significance respectively.

⁷⁵ Namely Bulgaria, Croatia, Estonia, Hungary, Latvia, Lithuania, and Slovenia.

⁷⁶ Such measures were described in detail in Box 2.2.1. under Chapter 2.

as to circumvent domestic prudential measures. Regulating non-bank financial institutions diminishes the competitive edge they might have over banks. Dynamic provisioning and other measures aimed at softening the powerful pro-cyclical fluctuations in the lending activity also have a high degree of efficiency. Although they have short-term effects, administrative measures for limiting lending are not recommended and are inefficient over the medium and long run amid financial liberalisation. Fiscal and income policies – whose pro-cyclical character should be avoided – also play a major role in credit expansion.

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