National Bank of Serbia

May 2009

FINANCIAL STABILITY REPORT

Outsourced translation

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FINANCIAL STABILITY REPORT

NATIONAL BANK OF SERBIA
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The maintaining of financial stability has been established by Article 3 of the Law on the National Bank of Serbia ("The Official Herald of the RS," no. 72/2003 and 55/2004), as one of the goals of the central bank of the Republic of Serbia. Namely, in addition to its basic goal – achieving and maintaining price stability – the National Bank of Serbia also has for its goal the maintaining of financial stability.

For the National Bank of Serbia, financial stability entails the existence of healthy and stable financial institutions, the resistance of which to the risks inherent to financial operations, as well as to the disturbances in the environment, enables an efficient implementation of financial mediation and ensures stability and confidence in the overall financial system it supervises.

Therefore, the objective of the *Financial Stability Report* is to identify in a timely fashion the existing and potential risks to which this system, and in particular the banking sector, is exposed and to assess the ability of that system to absorb them while remaining stable and capable of unhindered functioning, and to meet all of the undertaken commitments within contractual deadlines.

By using the available financial supervision instruments, the National Bank of Serbia makes sure that financial institutions have the resistance to the risks at a level which concurrently also insures the protection of interests of the users of their respective services and their sustainable development. Within this framework, the National Bank of Serbia gives great significance to a wide and transparent communication with the general public which it informs about the situation in the financial system of Serbia. In addition to its meeting the legally stipulated obligation to inform the legislative authorities on the situation in the financial system – with this report the National Bank of Serbia also informs the participants within that system and the general public on the financial stability in the Republic of Serbia.

Contents

Introduction

The National Bank of Serbia presents its third edition of the *Financial Stability Report* for the period December 2008 – May 2009.

The first chapter is the summary of the basic findings.

The second chapter shows global macroeconomic and financial trends. The consequences of the global financial crisis are still in the centre of attention, in addition to which a particular significance is given to its effects not only on the regional financial stability, but also on the financial stability in Serbia. The chronological overview of the crisis is accompanied with a detailed review of the specificities of the form its takes in the highly developed European countries and the ways of its transfer to the region of Central, Eastern and South-Eastern Europe. The influence of the crisis on Serbia is given here in sketches, while more detailed considerations are provided in the rest of the chapters.

The third chapter lays down the trends of the basic domestic macroeconomic indicators. Taking into account their significance regarding the business operations of financial institutions, we have pointed at the possible risks which, owing to an evident deterioration of these indicators during the observed period, can reflect negatively on the stability of financial institutions.

In the next two chapters, the trends relevant for the state of financial stability in Serbia are analysed separately for the first time, in the household and real sectors respectively. As the confidence of the general population in the financial system is one of the mail pillars of its stability, the fourth chapter considers the effects of financial turbulences on the financial assets and commitments of the general population, and points at the basic financial risks this sector is exposed to. In the centre of the attention of the fifth chapter there is the financial position of enterprises in Serbia, with the analysis of the real sector business operations' aspects the sensitivity of which would enable the appearance of certain risks of importance for the system. In this, it is not only the direct exposure of banks that is being analysed, but also the international exposure of domestic enterprises to the credit and currency risks that could, indirectly, weaken the stability of the banking sector.

The sixth chapter points at the trends in the financial markets and financial infrastructure of Serbia: in addition to the review of the development aspect of the financial system, this chapter is also used to consider the risks that may appear at the stock exchange and money markets, and it also provides an insight into the most significant trends in the payment system of the country and assesses its ability to absorb the risks.

The following chapters provide more detailed analyses of individual segments of the financial system. In particular, here is where we considered the ability of financial institutions to resist consequences of the global financial crisis and assessed the focal points of the risks in the forthcoming period. The biggest attention is paid to the banking sector because of one obvious characteristic of the domestic financial system which is that it revolves around banks. On the other hand, as opposed to the previous editions, here the stress is put on the analysis of the banking sector's liquidity and the quality of the assets sources, as well as to the effects of the spill-over of the crisis to this segment of banks' operations. In addition, potential risks of decelerating credit activity and the effects of the recent turbulences on the quality of banks' portfolios are identified. Despite the relatively low share of the insurance, financial leasing and voluntary pension fund sectors, respectively, in the overall system of financial mediation, a special chapter is dedicated to them – because of their significance for the maintaining and strengthening of confidence in the overall financial system.

Since this report monitors and analyses the trends of the relevant indicators during the period December 2008 – May 2009, we studied the situation as of 30th April or as of some later date, if the data existed, and when we did not have the data for the observed period, we used the previous available data. The National Bank of Serbia does not take the responsibility for the accuracy of the data the source of which are not its organizational units.

The *Financial Stability Report* has been approved by the Governor of the National Bank of Serbia and it is also available on the National Bank of Serbia's website – www.nbs.rs.

I. Summary

The financial system in the Republic of Serbia has been kept in a stable state since October 2008 when a more intensive spill-over of the effects of the global financial crisis to Serbia began. While the economy at the global level has been going through recession in 2009, there are also signs of a mild recovery of financial markets that could mark a beginning of the strengthening of the banks' credit activity. Macroeconomic indicators of Serbia have deteriorated seriously since October 2008. In addition to the expected drop in the economic activity, as well as the still high inflation, the balance of payment position also got aggravated, since the unfavourable international liquidity makes the financing of the current transaction deficit more difficult (the deficit will, nonetheless, be reduced in 2009). Owing to the worsening of macroeconomic outlooks, particularly as far as the economic activity, employment and earnings are concerned, but also due to depreciation pressures – the household sector will finance its growing financial commitments with difficulties. Also, the liquidity of the real sector has been significantly decreased, but the change of this trend will depend on the possibility to find additional sources of assets in an environment of reduced availability and more expensive money, both at the international and domestic markets. As a consequence, the banking sector, as the largest portion of the financial system of Serbia, has been facing blows against liquidity and portfolio quality since October 2008, which it has been resisting successfully, with an adequate and timely support from the central bank and the state. In 2009, the main hurdle for a more serious endangerment of the stability of banks in Serbia will be their strong capitalization and solid liquidity position, which is additionally strengthened by the support programmes rendered by the Government of the RS and the central bank. Non-banking financial institutions still mark a growth, but 2009 will reflect a deceleration of that growth as the consequence of the financial and economic crisis.

In 2009, the world economy will enter recession from which it may recover in 2010. Developed countries face an increased risk of deflation that could, with an additional reduction in spending, transfer the effects of the crisis to the economic activity as well. The unconventional and ample measures of central banks and national governments have contributed to a partial lifting of the blockade from the money market, while the confidence still continues to be at a very low level. The capital markets, after six months of continuous decline, experienced a mild recovery in March 2009. The reduced inclination towards risk still continues to cause *flight* of the capital from the countries whose markets are still in the creation and development phase, with the Central, Eastern and South-Eastern European countries being particularly exposed in this regard to the effects of the crisis due to their high dependency on foreign capital.

The aggravation of macroeconomic indicators has surpassed the expectations voiced in the October edition of this report. The basic risk for the financial stability in the forthcoming period will be the additional deceleration of the economic activity – caused by the reduction in the world demand and unfavourable trends in the international liquidity of the country. If the negative macroeconomic trends from Q1 2009 intensify, the originally estimated 2% annual drop of the economic activity will probably be adjusted in negative terms. The current transactions deficit will be reduced, but, owing to incomparably smaller availability of foreign assets, its financing will be more difficult.

The effects of the reduced capital have, through depreciation pressures, increased the risk of deterioration of the banks' portfolios quality, the assets of which are predominantly indexed in foreign currency.

The household sector has also been considerably exposed to the effects of financial turbulences. The deceleration of borrowings of the general population will continue, but the burden of servicing liabilities will grow owing to the drop in the economic activity, negative outlooks in the labour market and weakening of the domestic currency. The high exposure to the currency and interest risks will represent the basic source of risk for the financial position of the household sector during 2009, while the realization of this risk would reflect negatively on the banks' portfolios quality.

The real sector of Serbia mostly feels the consequences of the crisis when it comes to its liquidity, which is basically caused by exaggerated reduction in domestic and foreign demands, problems in the collection of liabilities, smaller availability of new sources of assets, as well as an inadequate structure of financing during the previous years. The trend of intense foreign borrowing by companies, used to a large degree to finance long-term endeavours, slowed down during the last quarter of 2008. The weakening of the domestic currency, in addition to the reduction of the short-term receivables liquidity owing to poor collection and reduced demand, has additionally decreased the liquidity and ability of the economy which is predominantly unprotected in currency terms to service its liabilities. The reduced accessibility of new sources of assets (foreign and domestic) will make the financing of companies more difficult in 2009, which may exceptionally unfavourably influence the corporate portfolio of the banking sector in Serbia.

The role of the money market in the redistribution of the dinar liquidity has grown bigger since October 2008. In addition to the monetary policy instruments, the interest rate trends during this period were predominantly influenced by the liquidity of banks. Despite the reduction of the interbank reference interest rates, the interest rates of the banks in Serbia have gone up due to the risk premium growth. The capital markets continued to decline, although it is less prominent in the case of the bond market than in the case of the stock market. On the other hand, the financial infrastructure in Serbia continues to contribute to the financial system's resistance to disturbances thanks to the successful functioning of the payment system.

The banking sector in Serbia is still stable, despite the numerous risks caused by the reduced liquidity and the spill-over of the financial crisis to the real and household sectors. The liquidity of the banking sector was strengthened at the end of Q1 2009, but the risks for the foreign exchange liquidity still exist because of the insufficient recovery of the deposit base and the (still) low global liquidity. As far as the assets sources are concerned, 2009 will be marked by attempts to build up the deposit base and reduce the relying of the banks on foreign sources of financing which will continue to be expensive and predominantly short-term. The quality of assets has deteriorated, as expected, while the currency induced credit risk is still the basic balance risk for the stability of the sector. The good capitalization, proactive central bank and state support measures, as well as the positive financial result of the banks in 2008 will continue to represent the basic hurdle in the next period for the destabilization in the banking sector.

The insurance, financial leasing and voluntary pension fund sectors have marked growth in 2008 as well, but there are also signs of the deceleration of that growth owing to the negative consequences of the financial and economic crisis. Despite their low relative share in the financial system and the low degree of ties with the banks, possible risks in some of these sectors may reflect on the overall stability of the financial system, primarily through a negative influence on the confidence in the financial institutions.

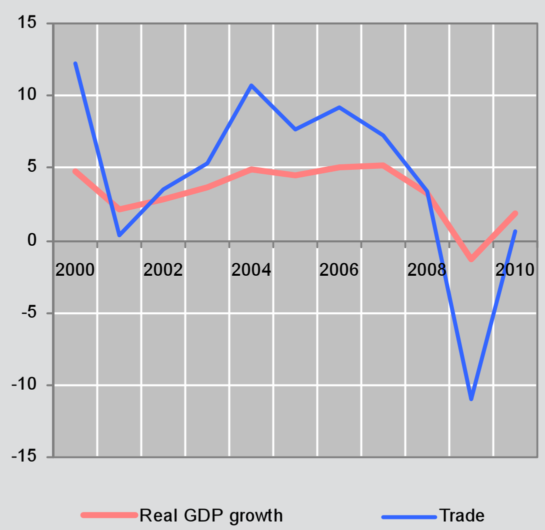
II. International Environment

The negative trends in the international financial environment caused by subprime mortgage crisis in the USA still continue to deteriorate, despite the associated efforts of the leading world economies to face such trend. The year 2009 will be marked by further aggravation of macroeconomic indicators, since the world economy will go through the biggest recession in the last 60 years; in the forthcoming period there will be an increased risk of deflation in developed economies, which will additionally deepen the effects of the crisis. In spite of the partial stabilization in the (short-term) money markets, there are still no signs of the return to the traditional forms of financing. The countries that depend to a large degree on foreign sources of assets are particularly susceptible to the more striking consequences of the crisis.

1. International macroeconomic environment

Since the publication of the last issue of this report (in December 2008), the effects of the spilling over of the financial crisis onto the real sector have gotten additionally stronger; in 2009, the world economy entered recession which it could recover from in 2010.

Chart 2.1 **Real GDP growth and world trade**
(in %, p.a. growth)



Source: International Monetary Fund, World Economic Outlook.

There is an increased risk of deflation in developed countries that could deepen the effects of the crisis through an additional reduction in spending and its transfer to the economic activity.

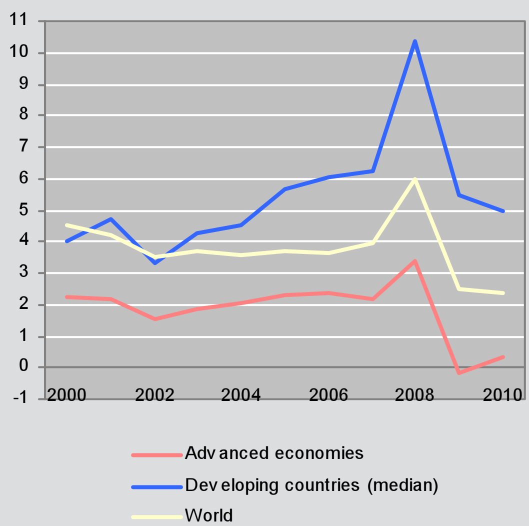
The financial institutions deleveraging trend which started in October 2008 has led to the same type of trend in the real sector, since that sector, as well as household sector, have responded to the excessive decrease of the credit activity and making the credit conditions stricter with a decreased level of borrowings, as well as with a reduced spending. The reduction of credits, particularly those aimed towards the real sector, has reflected negatively to the economic activity very quickly. In the reverse direction, continuous negative corrections of the economic growth have led to a situation in which financial mediators have become cautious also when approving placements, which greatly annuls the positive effects of the stabilization in the money and capital markets achieved at the beginning of 2009.

The latest IMF assessments say that the global GDP went down by 6.25% (at the annual level) just in the last quarter of 2008, while the USA and the Euro zone marked a decline of as much as 6% during the same period. The intertwining of global trade and financial roads has quickly caused in most of the less developed countries that the reduction in the demand at the world level, together with the reduction in the availability of credits, got reflected to the GDP growth.

The stated trends also continued in Q1 2009, and thus this year (it is now inevitable) the world crisis will experience a contraction for the first time in the last six decades, which is estimated to be around 1.3%[1]. A mild recovery may be expected in 2010 in which, according to the IMF assessments, the world economy could mark a growth, but the probability of realizing such assessment is caused by numerous factors, such as the successfulness of the fiscal support programme aimed at the alleviation of the turbulences in the financial markets or a gradual recovery of the banks' credit activity.

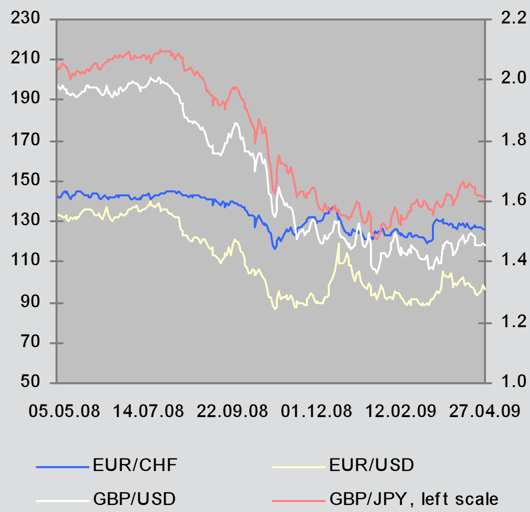
On the other hand, the inflation goes down parallel with the reduction of the global growth. The drop in the prices of goods, as well as the expectation of a further decline, especially in the developed countries – will cause the general population to postpone spending. Such postponement would again cause pressure aimed at reducing prices, leading thus some of these countries to the danger of deflation that could deepen and prolong the effects of the crisis. In those terms, even the fact that the central banks have fully used up the monetary policy instruments by the end of the first trimester in order to support spending and remove deflation by lowering interest rates to a minimum and bringing in additional liquidity does not seem positive.

Chart 2.2 **Consumer prices**
(annual percent change)



Source: International Monetary Fund, World Economic Outlook.

Chart 2.3 **Currency exchange rates**
(daily data)



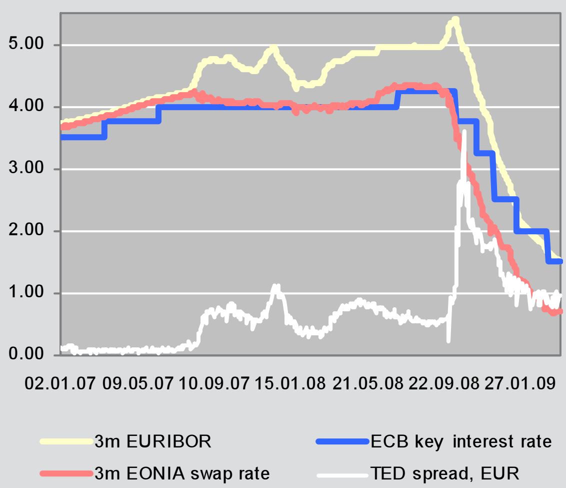
Source: Bloomberg.

[1] IMF, "World Economic Outlook," April 2009, p 4.

2. Global Liquidity and the Conditions in the International Financial Markets

Unconventional and numerous measures of central banks and national governments have contributed to a partial lifting of the blockade from the money market; short-term interest rates and margins have been reduced, while the confidence has remained very low. The capital markets, after six months of continuous decline, experienced a mild recovery in March 2009.

Chart 2.4 **Interest rates in European 3-month money markets**
(in %)



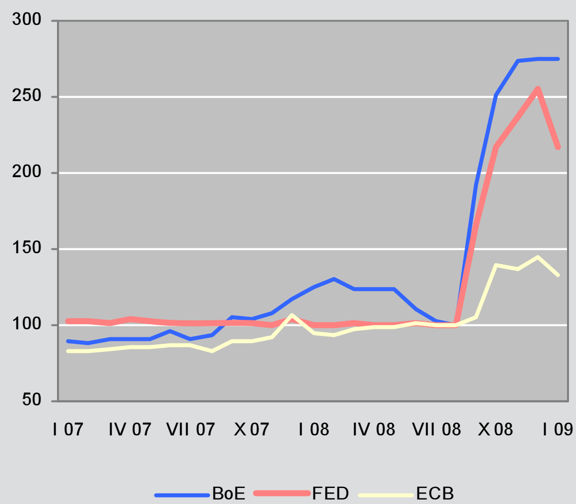
Source: EBF, ECB, Bloomberg.

Since the arrival of the strongest wave of global financial and economic crisis, started off by the bankruptcy of investment bank *Lehman Brothers* in September 2008, the world financial markets have been marked by additional deepening of the lack of confidence among financial mediators and the consequent drying up of liquidity. The fear of recession and public exposure of the problems with liquidity and solvency faced by the leading global financial institutions have led to a record high aversion towards risk and to high interest rates in money markets, which until the end of 2008, due to the decreasing of maturity periods, were practically markets of only short-term money. The perception of the credit risk in the money market was at its highest in October 2008, after which, thanks to the measures undertaken by central banks, there was a partial improvement reflected in the TED spread[2] trend during Q1 2009 (graph 2.4).

Both the manner and volume (quantity) of reactions of the central banks have been unprecedented since October 2008.

In order to strengthen the liquidity, the central banks have almost simultaneously started to reduce reference interest rates, which continued until April 2009. At the same time, the quantity of collaterals that the central banks were ready to accept for securing liquidity support has been expanded, numerous forms of repurchasing assets have been created in order to bring down the leverage of banks and new monetary policy instruments have been introduced. By observing the enormous increase of both deposits (primarily the overnight ones) at the central banks and credit arrangements for supporting liquidity, it may be noticed that the balance sheets of the central banks in the USA and the United Kingdom grew swiftly and continuously until the end of 2008, or in the case of Europe until February 2009. In this way, the central banks used their respective balance sheets as a replacement for the interbank market, which certainly contributed to the

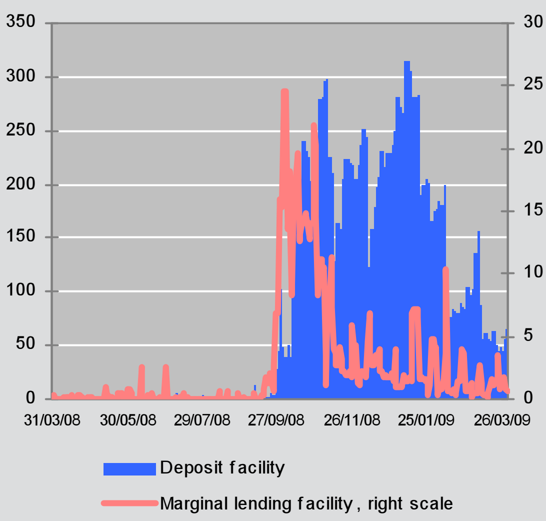
Chart 2.5 **Central Bank Assets, January 2006 - March 2009**
(August 2008 = 100)



Source: Cental bank reports.

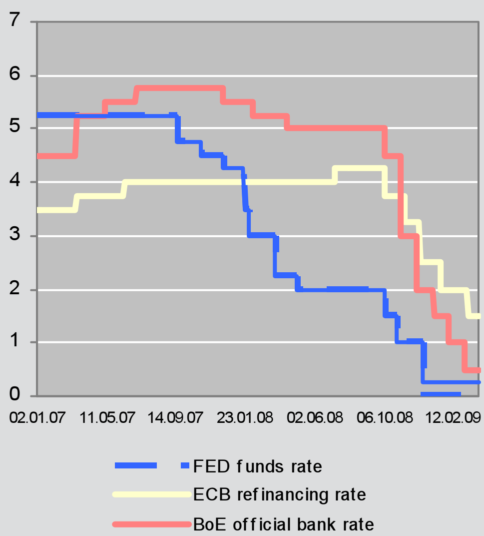
[2] The TED spread represents the difference between the interest rates in the interbank market and the T-bills securities of the US government.

Chart 2.6 **ECB deposit and lending facility**
(in EUR billion, daily stock)



Source: European Central Bank.

Chart 2.7 **Central bank key interest rates**
(in %)



Source: Bloomberg.

settling of the situation and gradual return of confidence in the interbank markets in Q1 2009 (graphs 2.5. and 2.6).

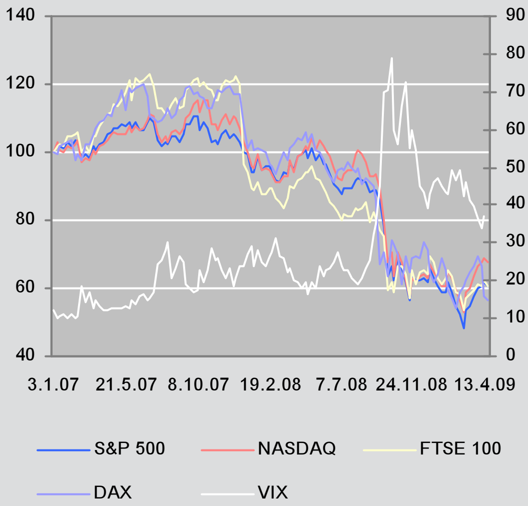
On the other hand, in order to return the confidence to the markets, it was necessary to also engage significant budget assets and strengthen capital bases of the banks that had experienced the biggest losses from the impact of the crisis. In addition to raising (or abolishing) limits in the deposit insurance schemes, the assets were allocated for direct state interventions in the form of building up the capital of some banks or by guaranteeing debt securities issued by these banks. This process which, as far as the amount of the provided assistance is concerned, reached its peak at the end of 2008, continued intensely in 2009 as well, as it appeared that the amount of the banks' losses greatly surpassed the amounts used in the assistance packages. Namely, only in Q4 2008, the banks in the USA and Europe received assistance packages from the states for the support of solvency in the amount that exceeded 400 billion US dollars, while the total capital build-up on these two continents in Q4 amounted to a little more than USD 840 billion. At the same time, in Q4, there were also write-offs of receivables in the amount of over USD 1,000 billion. In April, the IMF estimated that the total write-offs in the USA alone will amount to USD 2.7 thousand billion[3] and that this amount reached the level of USD 4 thousand billion if it included the receivables created in other markets.[4]

Despite the stated ample actions of the central banks and national governments, the effects are still limited. Namely, since the end of 2008, the situation in the money markets has improved somewhat, primarily through the lowering of interest rates and spreads with short-term placements. Nevertheless, the confidence levels are still low and almost no longer-term financing is possible without the guarantee from the state. A lot of time will have to pass before we return to the traditional forms of financing and the renewed stronger relying of the banks on the interbank markets, needed mainly in order to verify the successfulness of the assistance programmes and the banks' capital build-up.

An abrupt reduction in the inclination towards risk at the beginning of the last quarter of 2008, as well as the uncertainty when it comes to the spill-over of financial turbulences to the activity of the real sector, have forced investors to start getting their assets from the world stock exchanges soon after the downfall of the US mortgage market. The consequence of that was that the most

[3] Correction of USD 500 billion compared to the January projection.
[4] Almost two thirds of these write-offs will be borne by banks.

Chart 2.8 **Equity market indices**
(index, January, 3 2007=100, weekly data)



Source: Bloomberg.

significant exchange indices had a precipitous decline in 2008 regardless of their location.

In the USA, in the course of a year, the Dow Jones index lost 33.8% of its value, while the losses of the S&P 500 and NASDAQ were even more significant – 38.4% and 40.5%, respectively. The European continental indices marked an exceptional drop and thus Frankfurt's DAX lost 40.4%, while at the end of 2008 the EURO STOXX had a 44.3% lower value than at the end of the previous year. The biggest losses were, however, suffered in the east hemisphere. While the Chinese HANG SENG and the Indian SENSEX indices reduced their values by around 50%, the Russian MICEX index, owing to catastrophic effects of the crisis during the fourth quarter, was as much as 67.6% lower at the end of the year in comparison with the end of 2007.

The negative trend also continued in Q1 2009, with short-term positive shifts that happened during the periods when the markets reacted affirmatively to the stimulus package proposals, that is, to the short-term recovery signals in the form of acquisitions or mergers. Yet, the world capital markets started with a mild recovery phase in March. The announcements of improved quarterly results of individual global banks[5], as well as an increasingly more aggressive approach of the national governments to the crisis, have led to a situation in which most of the exchange indices (with the exception of the DAX) experienced an average 15 to 20% growth from the beginning of March to the end of April. An additional indicator of this trend – the VIX[6] volatility index, returned around mid-April to the value from the beginning of October 2008, which is a sign of a partial calming down of the short-term uncertainty in the markets during this period (graph 2.8).

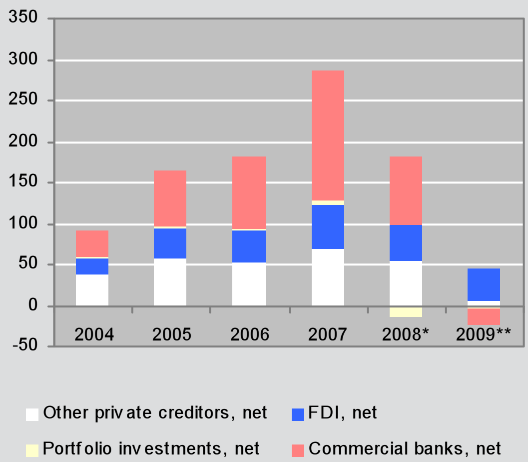
[5] It is necessary to point out that the recovery of the statement of operations of some global banks has mostly been the result of the market impairment of individual items, which had a positive impact on the financial result through writing down their expenditures.

[6] The index created and published by the Chicago Board Options Exchange and an indicator of the market expectations when it comes to a 30-day volatility. http://www.cboe.com/micro/vix/introduction.aspx

Capital Flight from Central and South-Eastern Europe, and Foreign Financing

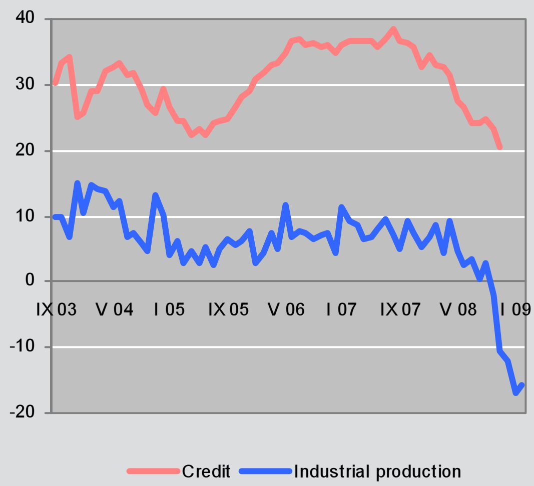
Immediately after the onset of the crisis, the turbulences have changed the basic tendencies in the international investment flows. The *search for yield* trend, which under favourable conjunctive and financial conditions resulted in massive inflow of capital to profitable markets in the creation and development phase, has been replaced by the *flight to quality* trend when investors, because of an abrupt drop in the inclination towards risk, take their capital from more risky markets and find refuge in safe investments, such as government debt securities.

Chart B2.1 **Capital inflow to European emerging markets**
(in EUR billion)



* Estimate.
** Forecast.
Source: Institute of International Finance.

Chart B2.2 **Real credit growth industrial production in emerging Europe**
(in %, year-on-year)

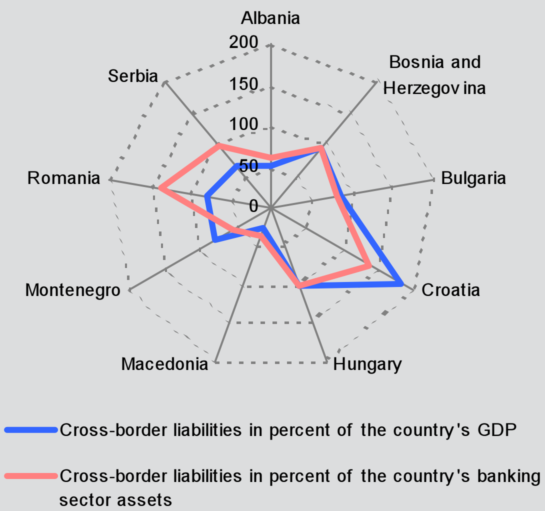


Source: International Monetary Fund.

Under such circumstances, the countries with high foreign borrowings and high current transaction deficit are particularly vulnerable. This group includes most of the countries in south-eastern Europe which owed their strong economic growth during the past several years (as well as other countries with the markets still in the creation and development phase) precisely to the voluminous influx of capital that strengthened domestic consumption and industrial production as the catalysts to such growth (graph B2.2). Unexpectedly fast transmission of the negative effects of the crisis was caused specifically by the significant dependency of most of the countries in this region on foreign financing (graph B2.3). The inflow of capital into such countries has been significantly slowed down since October 2008, which in most of the countries in the region led to a strong depreciation that reflected on the ability to finance debts both of the real and the household sectors, and which influenced the decline in the foreign reserves. At the same time, risk premiums for these countries went up suddenly, thus increasing the price of the anyhow poorly available sources of foreign assets. Nonetheless, some data show that net capital flows were improved in some countries during Q1 2009, which is also supported by temporary strengthening of the national currencies during this period. On the other hand, due to an even more prominent deceleration of the outflow caused by stagnating exports, most of the countries in the region will go through a period of narrowing down the current payments deficit. Despite that, the balance of payment risks will continue to be a serious threat to the financial stability, since the financing of the growing foreign liabilities, as well as the rollover of such liabilities, present one of the basic problems of the Central, Eastern and South-Eastern European economies. It is estimated that the international liquidity gap in the countries of the region will move within the scope from 5 to as much as 20% of the GDP, even if it is supposed that the debt rollover will be 100%.

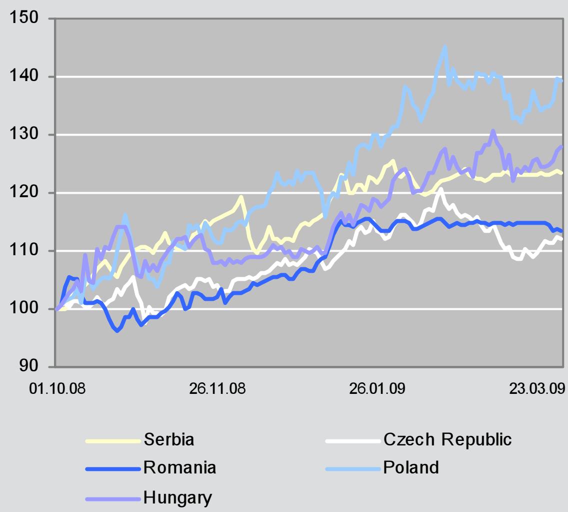
By looking at the examples of some countries, it seems that strategic challenges, as well as the options for overcoming stated difficulties, will be similar in the whole region. First of all, the central banks of the

Chart B2.3 **Cross-border liabilities of selected countries**
(in %)



Source: International Monetary Fund, National Bank of Serbia.

Chart B2.4 **Movements of exchange rates against the Euro in selected transition countries**
(Oct 1 2008 = 100, growth impiles depreciation)

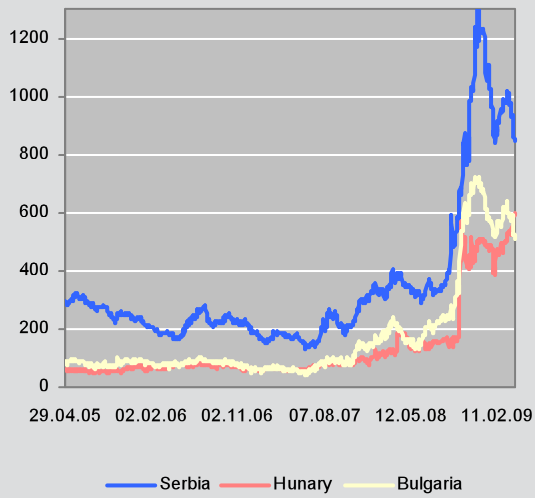


Source: Bloomberg and National Bank of Serbia.

countries with prominent needs for foreign financing will have a very complex task in carrying out their monetary policy. On the one hand – it will be necessary to ensure additional relaxation in order to contribute to the additional liquidity and restore the capacity of the domestic credit activity, and on the other hand – attention will need to be paid to ensure that such relaxation does not diminish the stimuli for additional inflows of foreign capital and does not cause sudden depreciation pressures that could serve as a trigger for major balance risks. A support from international financial institutions, in particular the IMF, but also others, will play an important role in the next period. The support from the IMF has already been ensured by Hungary (which has also ensured additional institutional assistance from the European Union), Poland (by using new *flexible credit line*), as well as Serbia as of recently, while several other countries are in the process of negotiations and approval of that support.

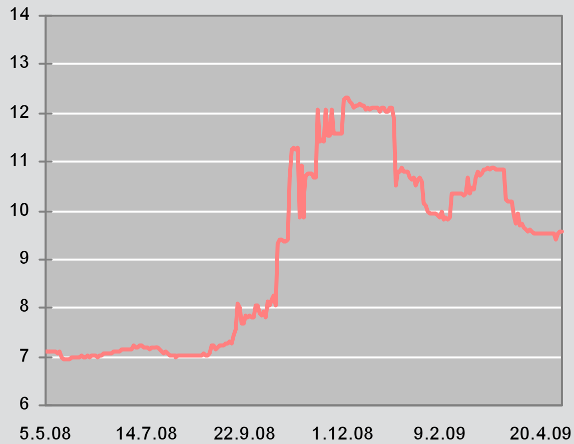
Finally, the banking groups that operate in the countries of central and south-eastern Europe will play a particularly important role. The maintaining of their exposure to the region, both in the form of domestic credit activity, which the members of these groups provide, and in the form of direct foreign crediting of companies – will have a decisive significance for overcoming the problems that relate to the position of the international liquidity of the said countries. Several support packages for the financial stability were observed in Q1 2009, directly caused by the maintaining of the overall exposure of the banking group. Such packages,

Chart B2.5 **EMBI for selected countries**
(in b.p.)



Source: JP Morgan.

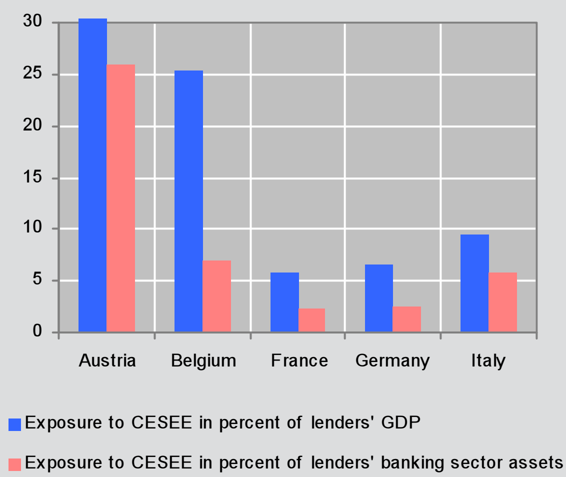
Chart B2.6 **Yield on Republic of Serbia dollar bond**
(in %)



Source: Bloomberg.

like the one in Hungary or Serbia (the so-called special support measures package for the financial stability), created with a support from the IMF, stipulate the commitment of the banking groups' shareholders that, among other things, the total exposure, as well as the solvency and liquidity indicators, in the forthcoming period will be kept at the level from the end of 2008. If these conditions are met, such groups may expect a government support in the form of applying certain number of instruments for stimulating their local liquidity, as well as in the form of regulatory relaxation that would contribute to the maintaining of their solvency.

Chart B2.7 **Lenders' Credit Exposure to CESEE, end-2007**
(in %)



Source: International Monetary Fund.

III. Domestic Macroeconomic Environment

The intensity of the macroeconomic indicators' deterioration has surpassed the expectations from the October issue of this report. The basic risk for the financial stability in the forthcoming period will be the deceleration of the economic activity caused by the reduction of the world demand and unfavourable trends in the international liquidity of Serbia; the current transaction deficit will be reduced in 2009, but its financing will become much more difficult owing to the incomparably lower availability of foreign assets.

1. Economic Activity

The drop in the domestic and world demand, deceleration of the credit activity and foreign direct investments will cause a decline in the Serbian economy in 2009 of at least 2%.

Despite the overall GDP growth of 5.4% in 2009, the abrupt spilling over of the effects of the global turbulences already in Q4 of that year led to a decline of the Serbian economy of 6.5% (at the annual level). The volume and duration of such contraction in Serbia will be determined several basic factors.

First of all, the decline in the world (and then the domestic) demand, particularly for metal as the key element of the Serbian exports, hit hard the industrial production which already in Q4, due to a drop in sales, marked a decline of 5.1% in comparison to the same quarter of the previous year. The decline also continued with a stronger intensity in Q1 of this year and thus at the end of March the industrial production, on a y-o-y basis, was as much as 17.0% lower.[7] A strong negative pressure also comes from the y-o-y 14% decrease in the retail and wholesale trading, particularly if we bear in mind that this sector, together with the financial mediation, telecommunications and transportation, was the main catalyst of the economic growth of Serbia during the several past years.

Table 3.1 **Key macroeconomic indicators**

	2008				2009
	Mar	June	Sep	Dec	Mar
Consumer prices (y-o-y growth, in %)	13.6	14.9	10.9	8.6	9.4
Core inflation (y-o-y growth, in %)	10.2	14.2	11.4	10.3	10.2
Belibor (90 days, monthly average, annual level)	14.1	16.4	16.4	18.5	17.6
M3 (y-o-y growth, in %)	42.5	33.7	24.5	9.8	6.5
GDP (y-o-y growth)[1)]	8.5	6.0	4.9	2.8	-5,2[2)]
Consolidated fiscal result (% of GDP)[1)]					
Ministry of Finance methodology	2.1	-3.1	-0.7	-6.5	-1.9
IMF methodology	1.2	-3.2	-0.7	-6.5	-1.9
Balance of goods and services (% GDP)[1)]	-24.4	-24.9	-22.0	-21.9	-20.5

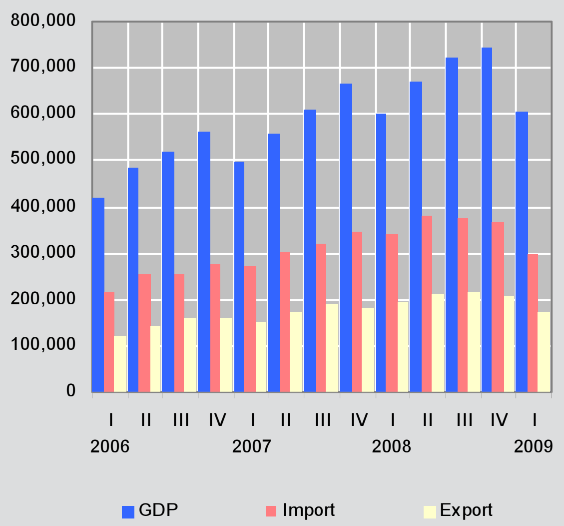
1) Quarterly data.

2) NBS estimate.

Source: National Bank of Serbia.

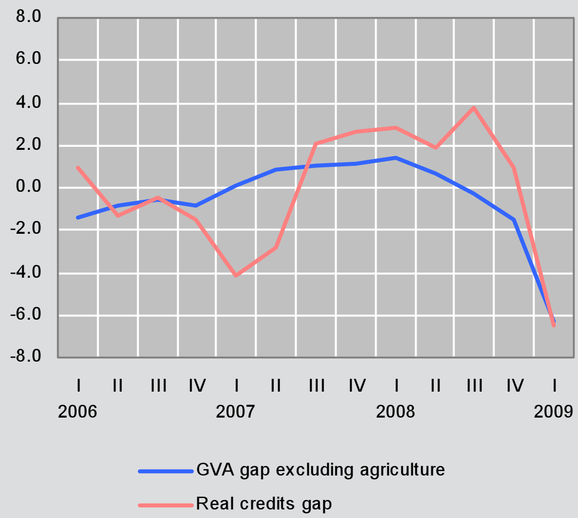
[7] Within the scope of the industrial production, a particularly drastic decline during this period was experienced by the processing industry; at the end of March, the y-o-y decline was 21.9%.

Chart 3.1 **GDP – estimates by quarter**
(in RSD milion)



Source: National Bank of Serbia.

Chart 3.2 **Relationship between real credits to the private sector and economic activity**



Source: National Bank of Serbia.

Second, the capital inflow has been notably slowed down since October 2008. The volume of foreign direct investments was significantly reduced in the last quarter, while the amount of foreign borrowings of companies dropped to a record low level (owing to unfavourable conditions, both in terms of volume and in terms of maturity periods and the prices of foreign credits). These trends had adverse effects on the liquidity of the predominantly import-oriented economy that had already been partially hit by a significant weakening of the domestic currency and the effects such weakening had on the ability to service the existing exchange liabilities. As a consequence, the problems with the collection of receivables among domestic companies got intensified and, taking into account the wide distribution of the effects of the crisis that had spread to most of the economic sectors, they lead to a creation of a chain of illiquidity.

Finally, the growing risk premium, decline in the availability of foreign (particularly the long-term) asset sources of banks, as well as the general increase of cautiousness when investing assets, have significantly decelerated domestic credit activity. This trend that also continued in Q1 2009 is more prominent in the case of household loans, which through the reduction of domestic consumption reflects negatively on the economic activity. On the other hand, corporate credits continue to grow at a minimum level, but considerably more slowly in comparison to Q1 of the previous year. Also, it may be noticed that maturity periods for approved placements are being cut down, which additionally points at the reduction of liquidity of the real sector.

If the negative macroeconomic trends from Q1 2009 intensify, the originally estimated annual decrease in the economic activity of 2% will probably be corrected in negative terms.

Taking into account all of the stated factors, the expectations of the National Bank of Serbia are that the y-o-y drop of the GDP in Q1 could be 5.2%, while in comparison with Q4 2008 it could be as much as 11.6% (at the annual level). The realization of the original estimate of the 2% GDP decline in 2009 will therefore, bearing in mind the unfavourable beginning of the year, primarily depend on the degree of successfulness in building the current capacity of Serbia with regards to foreign and domestic sources of financing and, consequently, on the strengthening of the real sector's liquidity.

2. Balance of Payments Trends

The increase of the current deficit in 2008 has, along with unfavourable trends in the financial account (particularly in the last quarter), led to a total balance of payments deficit in 2008 of 19.6%. The accelerated slowing down of exports will have an influence on the reduction of the current deficit in 2009, but the negative trends in the financial account will represent one of the basic risks for the financial stability of the country.

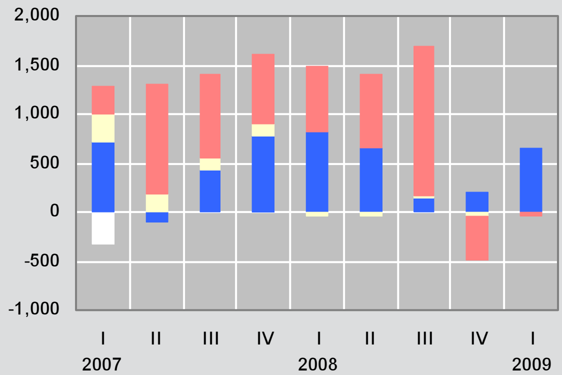
At the end of 2008, the balance of payments deficit amounted to 19.6% of the GDP – owing to the annual increase in the current deficit of 27.3% and the insufficient surplus of the financial account.

Strong corrections in the balance of payments trends that started in Serbia in October 2008 have greatly influenced the final annual indicators of the balance of payments position of the country. These corrections have mostly hit precisely the financial account. Namely, the drop in the foreign reserves caused by the withdrawal of the so-called new hard currency savings and exceptionally decelerated foreign borrowings of the companies (EUR 316 million compared to EUR 1 billion in Q3) were sufficient for the financial account to be negative for the first time in 2008 in the last quarter (deficit of EUR 283 million). These aggravations directly induced by international turbulences, then the outflow of portfolio investments (also intensified in the last quarter), then the insufficient inflow of foreign direct investments, as well as the deceleration of the net inflow on the basis of trade credits during 2008, have led to the total financial account surplus to go down by 23% compared to 2007.

The decrease in the trade deficit, caused by a faster decline of the imports than that of the exports, started in the last quarter of 2008 and continued in Q1 2009 when a record low current account deficit was registered (EUR 797.8 million), which is 38% compared to the same period of the previous year. In this was the current account deficit share in the GDP has been reduced to 12.4%.

On the other hand, the exceptionally negative expectations when it comes to the development in the financial account have been partially alleviated in Q1, although there are still unfavourable trends. Namely, there

Chart 3.3 **Structure of net capital inflows**
(in EUR million)



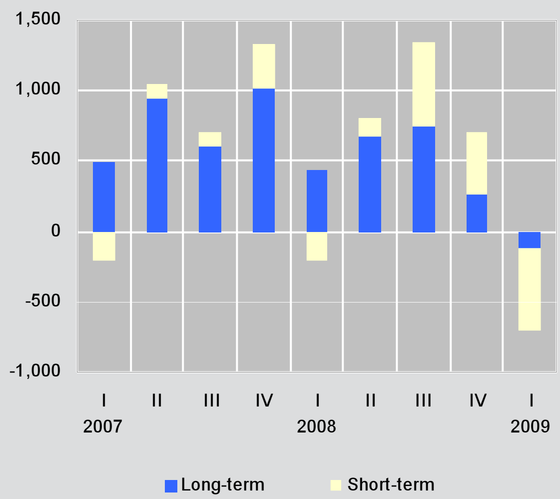
Source: National Bank of Serbia.

Table 3.2

	IV 2007	IV 2008	I 2008	I 2009
Current account	-16.2	-14.8	-18.0	-12.4
services	-24.4	-21.9	-24.5	-20.5
Income	-2.6	-4.1	-1.9	-1.9
Current transfers	10.8	11.2	8.4	10.1
Capital account	0.0	0.0	0.1	0.0
Financial account (excluding changes in foreign exchange reserves)	18.6	-3.2	19.7	9.3
Direct investment - net	9.1	2.4	11.3	10.0
Portfolio investment - net	1.2	-0.4	-0.7	-0.1
Commercial credits - net	1.8	2.5	1.4	1.4
Financial credits - net	15.2	8.3	3.2	-10.9
Currency and deposits - net	-8.8	-16.0	4.8	8.8
Other	0.1	0.0	-0.2	0.0
Errors and omissions - net	-0.4	-1.6	-1.3	-0.6
Overall balance	2.0	-19.6	0.4	-3.7

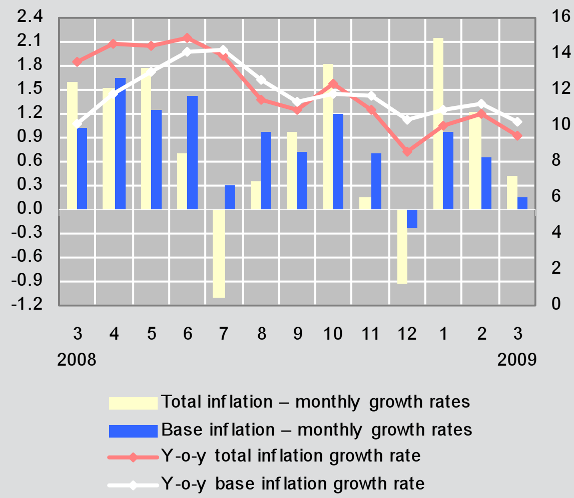
Source: National Bank of Serbia.

Chart 3.4 **Net disbursement of financial loans**
(in EUR million)



Source: National Bank of Serbia.

Chart 3.5 **Total and base inflation trends**
(in %)



Source: National Bank of Serbia.

has been a solid inflow of foreign direct investments, primarily on the basis of the privatization of the Oil Industry of Serbia (EUR 400 million), but also on other grounds (EUR 243 million). The global process of reducing leverage has not left any bigger impact in Q1 in the outflow regarding the portfolio investments – the outflow was only EUR 4 million. However, it may be noted that there is a further deceleration of foreign borrowings among banks and companies. As the support of parent institutions to the banks at the time of the impact against the liquidity from the previous years has predominantly been in the form of short-term credits, the repayment of these credits started in Q1 2009. The result was that the repayment for the first three months of the current year was significantly higher than the new borrowing.[8] (Thus the banks had the net repayment in the first quarter in the amount of EUR 557). A similar trend may also be observed in the case of companies, where the borrowing is significantly slower owing to the unfavourable conditions in the financial markets. In Q1, the companies had net repayments in the amount of around EUR 144 million. What is common both for the banks and for the companies is the shortening of the borrowing date, which is an indicator of a high risk perception of creditors with regards to Serbia and the generally poor liquidity because of which foreign creditors do not want to invest their assets for a longer period of time.

As the consequence of such a trend, the financial account surplus was not sufficient to cover the deficit in the current and capital accounts, which resulted in the fall of the foreign reserves by EUR 240 million. However, the level of these reserves was still sufficiently high; significant deceleration of imports meant that EUR 8.1 billion of foreign reserves could cover 7.7 months of imports, which is a significant improvement compared to the same period of the last year. This ratio will be additionally improved after the realization of the arrangement with the IMF, which has ensured that, after the withdrawal of the first tranche of the assets, the foreign reserves go back to the level of around EUR 9 billion. The estimates say, however, that because of the negative trends in the financial account and the practically neutral net effect of the new inflow of foreign assets – the financing of the current payments deficit (which is estimated to be around 13% of the GDP) will lead to a decrease in the foreign reserves.

[8] Except in March, when the banks had net borrowings in the amount of EUR 123 million, primarily in the form of short-term credits.

3. Inflation

Inflationary pressures have been going down over the past period; despite the high inflation rates in Q1 2009, it is expected that the reduced demand, along with the stabilization of the exchange rate, will have a disinflationary effect.

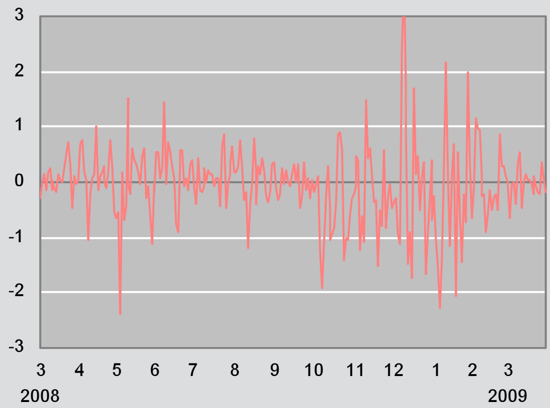
At the end of 2008, the base inflation was 10.1%, which was above the upper limit of the targeted scope. While the first half of 2008 was marked by the rise of the prices of oil and primary products, in the second half of the year, the observed prices moved in the opposite direction, reaching historic minimums. In the last quarter there was a more prominent drop in the prices of agricultural products and food, as well as a drop in the aggregate demand, thus the disinflation factors at the end of the year were stronger than the inflationary pressures caused by the drop in the value of the dinar. Q1 2009 was marked by high inflation rates. The increased consumer prices index of 2.1% in January and 1.2% in February was primarily caused by the movement of the regulated prices, while the growth of the base inflation over the same period was the consequences of the depreciation of the dinar. The deceleration of these two trends occurred in March, which contributed to Q1 price growth of 3.8%. It is estimated that the reduced domestic demand, along with the stabilization of the exchange rate on the one hand, and the postponement of the rise of the regulated prices on the other, will mean that the second quarter will be marked by a significantly lower growth of consumer prices.

4. Exchange Rate

After the period of depreciation, which started in October 2008, the movement of the exchange rate was finally stabilized in March 2009 without any interventions on the part of the central bank. It is expected that the programme with the IMF will contribute to the stability of the domestic currency in 2009.

Significant fluctuations of the exchange rate during 2008 were caused by two groups of factors. During the first half of the year the political instability of that period was responsible for the depreciation pressures, while the second half was primarily characterised by the dinar depreciation caused by an increased risk premium and

Chart 3.6 **Daily fluctuations of the dinar exchange rate against euro**
(in %)



* Negative rates show depreciation and the positive ones show appreciation of the dinar.
Source: National Bank of Serbia.

unfavourable balance of payments trends. Additional pressure on the foreign exchange liquidity was exercised by the psychologically induced withdrawals of around 17% of the hard currency savings of the general population. During the entire year, while trying to reduce the exaggerated daily fluctuations of the exchange rate and increase the liquidity of the market, the National Bank of Serbia exercised net sales of EUR 1,285 million at the interbank market. During 2008, in comparison with the euro the dinar depreciated nominally by around 11% and in the last quarter by around 14%.

The weakening of the domestic currency continued in Q1 2009 when the dinar weakened on an average by 6%, despite the interventions of the National Bank of Serbia. The three-month depreciation is primarily the result of the movements in the first two months of that year, when most of the interventions took place. During this period, banks and companies had more difficulties getting external liquidity sources which, in addition to the other factors, significantly slowed down the inflow of foreign currency from abroad. On the other hand, in line with their contracts, during this period the banks had to repay the short-term credits for liquidity approved three-four months earlier, which, alongside the increased clients' demand for hard currency, significantly pressured the foreign exchange liquidity.

After more prominent depreciation trends in the first two months, the exchange rate got stabilized in March, without any interventions on the part of the central bank. The pressures against the foreign exchange liquidity died out already in February, which had a positive impact on the stabilization of the exchange rate. As a consequence, the banks were provided the space to increase foreign borrowings already in March thus stabilizing the exchange rate even more: this process was additionally contributed to by a significant net repurchase of foreign exchange from exchangers

In the scope of the trading in the foreign exchange market, October 2008 clearly stands out – this was the month when the foreign exchange liquidity was disturbed more significantly. Namely, that month, the average daily turnover of the interbank trading declined noticeably, while the spread in the banks' quotation concurrently spread to around 100 paras. While this spread was reduced in the first quarter, the average daily scope of trading also went down.

In the following period, the movement of the dinar exchange rate will continue to play a very important role in the achievement of financial stability, taking into account the already mentioned high currency indexation of the banking sector balance. The exchange rate stability could be contributed to by several basic factors. First of all, it is expected that the programme with the IMF (approved in May 2009) will have a positive impact on the stability of the domestic currency, not only through its support to the foreign reserves of the country. The arrangement should also reflect positively on the risk premium for Serbia, which would make the inflow of assets into the country – both on the basis of new investments and on the basis of new borrowings – less expensive. Also, the agreement with commercial banks within the scope of the so-called Vienna Initiative is also very significant and thus the keeping of the exposure level from the end of 2008 will not only ensure additional foreign exchange inflows, but also reduce the outflow of assets from the economy related to the settlement of liabilities that have become due on the basis of cross-border credits.

IV. Household Sector

In the following period, the borrowing of the general population will continue to be decelerated, but the burden of servicing liabilities will grow – owing to the decline in the economic activity, negative outlooks in the labour market and weakening of the domestic currency. The high exposure to the currency and interest risks will represent the basic source of risk for the financial position of the household sector during 2009, which will reflect negatively on the banks' portfolios quality. The hard currency savings have been recovering since the beginning of the year, while the building up of the confidence of the general public in the financial system will continue in 2009 to be one of the basic priorities of the central bank.

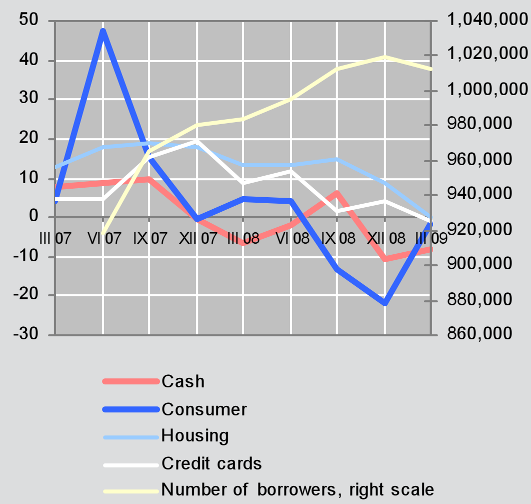
Due to the deceleration of the credit activity, the overall financial commitments of the household sector grew more slowly during 2008, while that trend also continued in Q1 2009.

The household loans in 2008 grew in real terms by 20%, which is significantly below the 54% of the real growth marked in the course of 2007. Although the deceleration during 2008 was mostly contributed to by a sudden "drying up" of the global liquidity and, consequently, a reduction in the inclination of banks towards risk in the last quarter – this deceleration was nonetheless gradual during most of the year. The decline of the household borrowing at the banks started already in the last quarter of 2007, thanks to the central bank's measures enacted because of the (then rapid) expansion of household lending.

The deceleration of the growth which was gradual was favourable from the financial stability point of view, for, on the one hand, the exposure of this sector to economic and financial turbulences today is less than it would have been had the growth continued until October 2008 and, on the other hand, because an excessively abrupt decrease of the exposure of banks towards the population has been avoided. In comparison with the other counties in the region, the population of Serbia used to be one of the least indebted, if we take into account household loans in relation to the GDP. While this ratio in Serbia, Macedonia and Albania moves between 12 and 15%, in Romania, Hungary and Bulgaria it reaches the scope of 20-25% (in Croatia, it goes even as high as 40%).

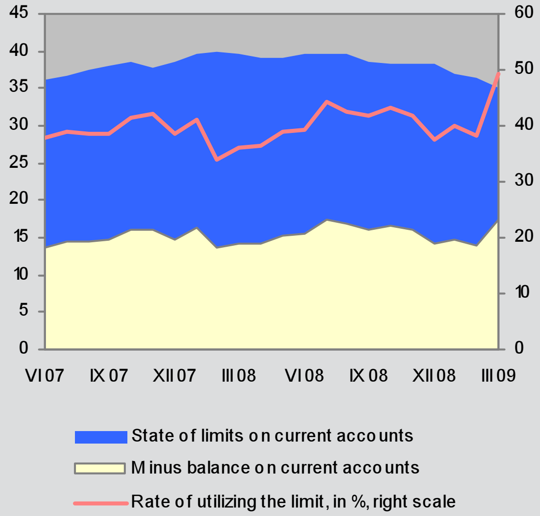
The decline of the credit activity is most evident in the case of consumer and cash credits, which were targeted by the 2007 prudential measures. While these credits were only 1% nominally higher in March 2009 compared to the year before, the consumer credits were even nominally lower, by 23%. Since these credits are predominantly indexed (with 89.7%), their reduction during 2008 was to a certain degree contributed to by the increase of capital requirement for currency induced credit risk, which reflected on the demand as well through a more real valuation of the risk premium for such credits. Housing credits, on the other hand, had a stable growth over the entire year and it was only since the last quarter that the

Chart 4.1 **Household loan growth**
(in %, quarterly growth rate)



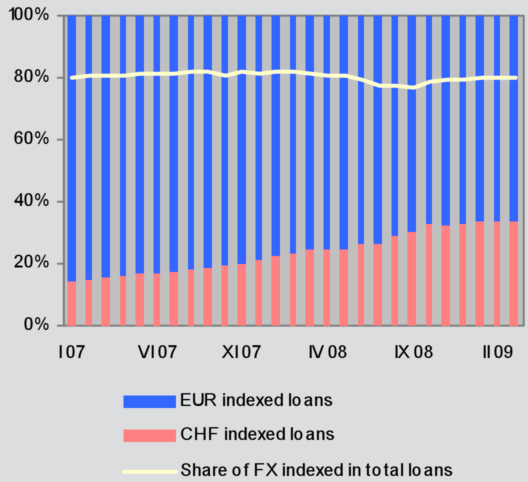
Source: National Bank of Serbia.

Chart 4.2 **Household overdrafts**
(in RSD billion, %)



Source: National Bank of Serbia, Association of Serbian Banks.

Chart 4.3 **Currency denomination of household FX indexed loans**
(in %)



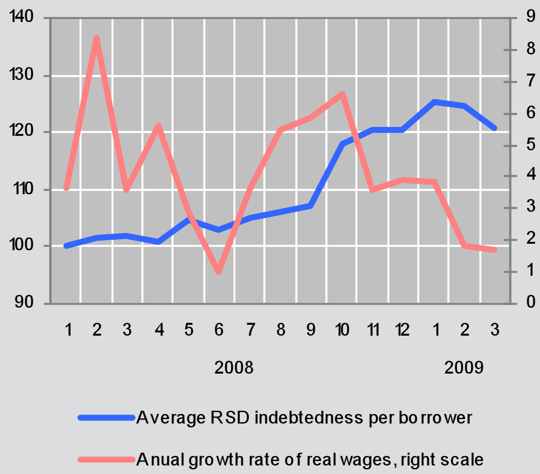
Source: National Bank of Serbia.

consequences of reduced liquidity, increased risk premium, reduced demand and factual stoppage of the state subsidies through the National Corporation for the Insurance of Housing Credits – have reflected on them as well.

The deceleration of the credit borrowing of the general population continued in the first quarter. The 1% nominal growth of housing credits is still sufficient for these credits to be 62% higher at the end of March than one year earlier. During this period consumer credits, supported by the measures of the Government of the RS for stimulating consumption, decelerated their decline, while the decline of cash credits remained almost unchanged.

Nevertheless, it could be concluded that the unfavourable economic events had an influence on a stronger utilization of those forms of borrowing that are most accessible to the household sector – credit cards and the so-called admissible overdraft of the current account. Although small in their volume, these categories are significant, for they can be a certain kind of an indicator of the current liquidity of the general population. Because of their accessibility and the speed of approval, the general population in Serbia frequently relies on these forms of crediting in case of financing seasonal consumption, as well as when solving their problems with the current liquidity. In those terms, the rise in the utilizing of limits of the current accounts (the use0 of the *admissible overdraft*) of 12. p.p. in Q1 2009 could point precisely at the aggravation of the liquidity of the household sector.

Chart 4.4 **Households exposure to FX risk**
(index, January 2008 = 100, %)

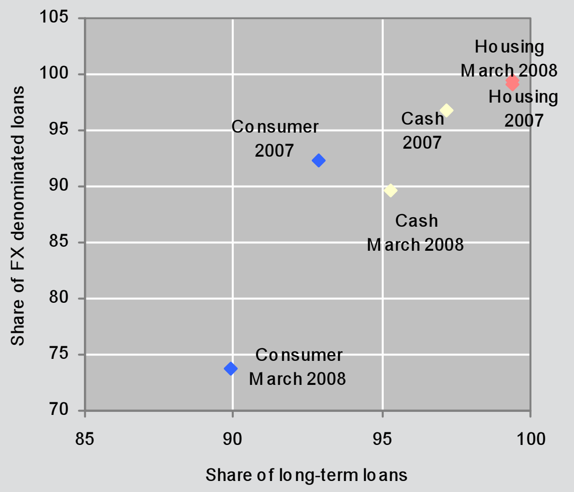


Source: National Bank of Serbia.

Large currency exposure in respect of credits will make the servicing of liabilities of the population predominantly unprotected in currency terms more difficult.

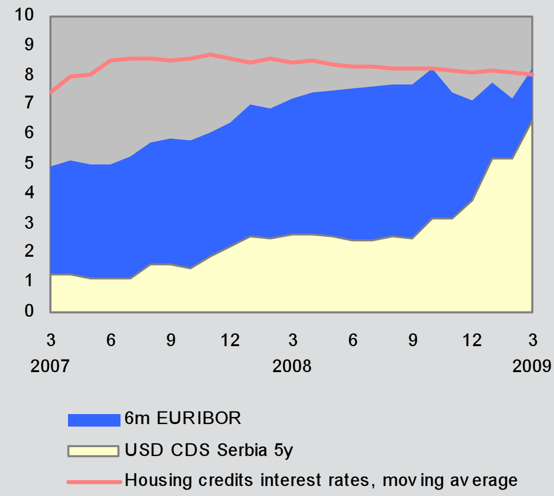
Although there are still no reliable data, it is estimated that the majority of the natural persons in Serbia are unprotected in currency terms, i.e., that they do not have any of the natural barriers against the realization of a currency risk, the best example of which being the

Chart 4.5 **Concentration of long-term and FX denominated household loans**
(in %)



Source: National Bank of Serbia.

Graph 4.6 **EURIBOR, housing credits risk premium and interest rates**
(in %)



Source: National Bank of Serbia.

currency-indexed regular monthly income. Also, it is estimated that the number of remittances to natural persons from abroad, that used to represent an informal currency protection instrument for a number of clients, will go down in the next period. In those terms, the currency structure of household loans continues to be very unfavourable. These loans are predominantly indexed in foreign currency (around 80%). During 2007 and 2008, there was a significant rise in the loans indexed in Swiss franc (today 27% of the total loans) that caused a particularly high vulnerability of the population to depreciation pressures, which has come into being since October 2008.

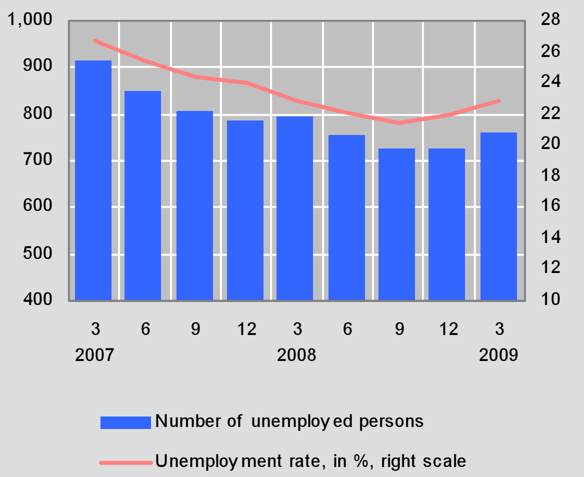
So far, the share of indexed loans in the overall household loans has not been significantly reduced since the beginning of the period of the weakening of the domestic currency, but it may be expected that the discontinuation of approving credits indexed in Swiss franc, as well as a higher cautiousness on the part of the general population when borrowing in foreign currency, may contribute to an increase in the dinar loan share in the overall credits, which would be very favourable for the financial stability. The new regulations of the National Bank of Serbia, enacted in order to provide support for the financial stability of the country, within the scope of the Vienna initiative, have given a particularly significant support to that. Namely, the special financial stability support measures will be available to those banks which, among other things, allow debtors to convert foreign currency loans and those indexed by a currency clause into dinar credits, without charging additional costs.

High interest rates on household loans will additionally reduce demand, while the increase of margins on credits in use, because of the increased risk premium, will present an additional burden for the population indebted at variable interest rates with a flexible margin.

Despite the reduction of interest rates at the European money markets, the active interest rates for household loans have remained almost unchanged since October 2008 – because of the rise in the margin caused by a higher risk premium. As for the credits in use, it has been observed that some banks have increased interest rates stating the growth of the margin caused by growth of the risk premium as the reason, which practically neutralized the effect of reducing reference interest rates. It must be pointed out that such practice of banks when the loan agreement stipulates a fixed margin (which is the most frequent case) is contrary to the provisions of those agreements. The National Banks of Serbia has taken a clear negative position on such amendment of the terms of agreement, and it has been announced for Q4 2009 that new regulations will be passed that will regulate in more detail the conditions and manner of announcing and applying general operating conditions of commercial banks, and provide additional stimulation for good business practices.

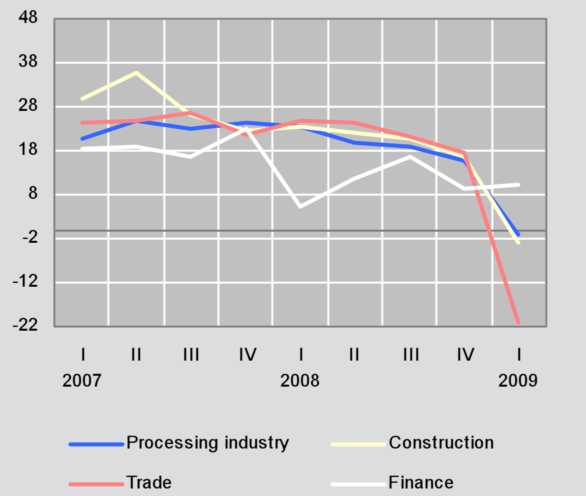
The deceleration of the growth of household borrowings has not reduced the risks in connection with the burden of repaying liabilities, since the negative earnings and employment trends influence the increase of that burden in 2009.

Chart 4.7 **Unemployment**
(in thousands, %)



Source: Serbian Bureau of Statistics and National Employment Service.

Chart 4.8 **Net average wages**
(y-o-y growth, in %)



Source: Serbian Bureau of Statistics.

The decline of the economic activity also reflected on the labour market and thus since Q3 2008 there has been a decrease of employment and employing, as well as a significant increase in the unemployment figures. In March, in comparison with December, the number of employees at legal entities went down by about 11.5 thousand. The biggest reductions are marked in the sectors of processing industry, transportation and construction activities, but there is a similar situation also in public enterprises and public administration (which, in line with the Plan of the Government of the RS for maintaining economic stability, expects a decrease in the number of employees by 10% by the end of the current year).

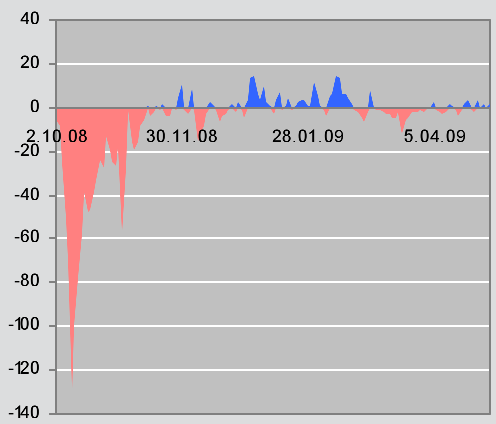
The y-o-y growth of the nominal net earnings at the beginning of 2009 amounts to 12.3% (2.7% in real terms), which is the lowest level in the past several years[9], while the real growth was experience only in some sectors. It is clear that such deceleration of nominal salaries makes the servicing of existing liabilities significantly more difficult, particularly in the case of users of foreign currency indexed credits. Since the dinar burden of repayment has considerably increased its share in the average net salary, further deterioration of the household credit portfolio quality may be expected.

The population disposes with large financial assets which strengthens the financial position of that sector vis-à-vis banks.

The household financial assets consisting primarily of the deposits held at banks have been reduced since October due to a large (psychologically induced) withdrawal of the so-called new hard currency savings. The inflow of this type of savings recovered during the first two months of 2009, but there a 45 million net outflow again in March and at the end of April the overall savings amounted to EUR 4.9 billion. The negative trends in the capital market during 2008 had a negative impact on the assets of natural persons, while it may be claimed with good reasons that a part of the deposit inflow at the banks during 2008 was precisely the consequence of the closing of positions of natural persons at the Belgrade Stock Exchange. Still, one should not neglect the piece of data that the financial

[9] Such low level is partially a consequence of the change in the methodology of calculating average salaries. Namely, a new methodology has been applied since January 2009 and it relates to the expansion of coverage of the observed units. In addition to the data on the salaries paid out to employees at legal entities, which are obtained through regular monthly statistical surveys, the data on the salaries of employees at natural persons (entrepreneurs), taken over from the Tax Administration records, are also taken into account. The inclusion of the data on the salaries of these employees resulted in the decrease of average salaries.

Chart 4.9 **Daily net flow of new FX savings, October 2008 - April 2009**
(in EUR million)



Source: National Bank of Serbia.

assets of natural persons at the domestic capital market at the end of Q1 of 2009 amounted to around RSD 100 billion, which is one fifth of the overall market capitalization of the Belgrade Stock Exchange. Despite the negative trends in this market, that part of the natural persons' assets (predominantly in the form of share, and at least in its major part) is liquid, which is very important for observing the position of the household indebtedness. If the most liquid household deposits, those *at sight* (RSD 177 billion), and the assets natural persons have on the basis of life insurance and share in voluntary pension funds are added to this amount of liquid assets – then we come to the amount close to RSD 300 billion of directly available financial household assets which is sufficient to cover close to 75% of the overall household indebtedness on the basis of credits. The cash which households do not keep in any of the stated forms (since October 2008 it also includes a part of the cash from hard currency savings still not returned to banking flows) should certainly be added to this amount. In those terms, the building of confidence in financial institutions will play a key role in the forthcoming period.

V. Corporate Sector

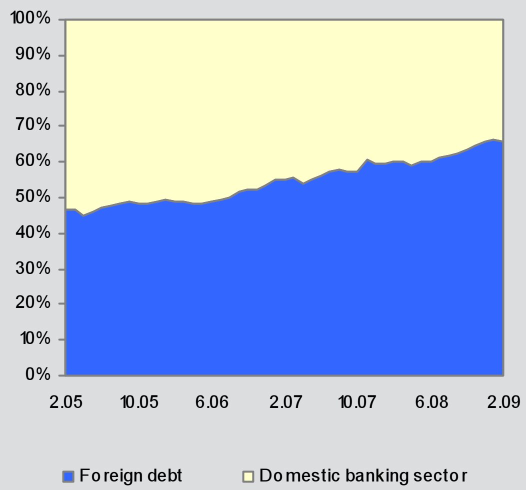
The liquidity of the economy went significantly down owing to a drastic reduction of demand, problems in the collection of claims and less availability of new sources of assets. The trend of intensive external borrowing of enterprises, which started in 2005, was slowed down in the last quarter of 2008 due to the "drying out" of liquidity at the global level and the simultaneous reduction in the inclination towards risk taking in case of Serbia. The weakening of the domestic currency additionally reduced the liquidity and the ability of the economy predominantly unprotected in currency terms to service its liabilities; the reduced accessibility to new sources of assets (foreign and domestic) will make the financing of enterprises in 2009 more difficult, which may have exceptionally unfavourable consequences for the corporate portfolio of the banking sector in Serbia.

The structure of the real sector in Serbia did not change during 2008. The most important part of this sector continues to be the processing industry and the wholesale and retail trading, which have he biggest share also in terms of the number of entities (60%), number of employees (55%), total assets (48%), as well as the earnings (62%). Beside these, the important economic sectors in Serbia are also construction sector, activities in connection with real estate, leasing and business activities, then transportation, warehousing and communications, as well as the production and distribution of electric power, gas and water. These are at the same time the sectors to which the domestic banking sector is mostly exposed.

During 2008, the effects of the financial crisis on the real sector reflected on a significantly reduced liquidity and they are directly connection with the manner in which enterprises were financed in the last several years.

Given the shallowness of the capital market in Serbia, when it comes to the source of financing, in the past several years the enterprises mostly turned to credits. The dominant sources were foreign credits, since the banks, avoiding the mandatory reserve for external borrowing, directed a part of the potentially domestic corporative portfolio to their associated institutions abroad. Through the end of 2008, enterprises accumulated around EUR 11.5 billion of foreign debt, which is a growth of over 350% during a period of only three years. Parallel to the accelerated foreign borrowing, until October 2008, the domestic banks also used to be a very stable source of assets for enterprises.

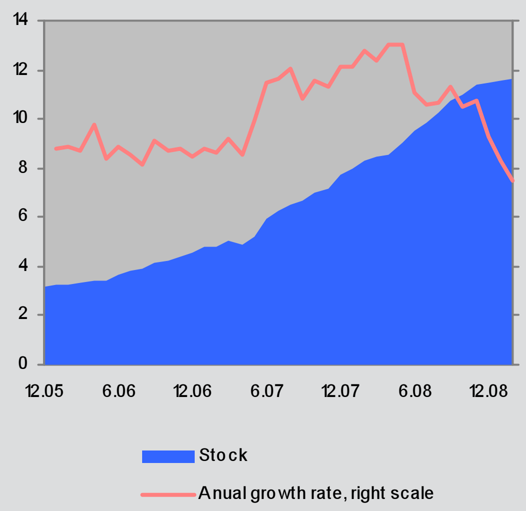
Chart 5.1 **Corporate debt**
(in %)



Source: Nataional Bank of Serbia.

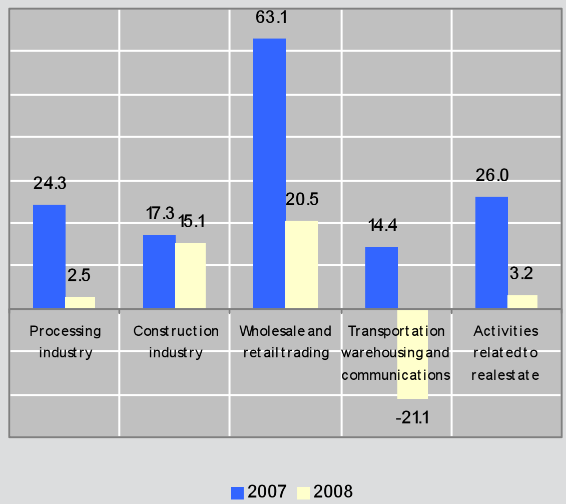
During 2008, the real sector in Serbia had a negative net operating capital of RSD 86.7 billion and this amount was used to finance non-current assets (76% of which

Chart 5.2 **Corporate foreign borrowing**
(in EUR bln, %)



Source: National Bank of Serbia.

Chart 5.3 **Net result by sectors**
(in billion dinars)



Source: National Bank of Serbia.

are fixed assets – real estate, plants, etc.) from short-term sources, which points at an unfavourable financial structure and insufficient liquidity.

The general liquidity ratio that represents the ratio between the current assets and short-term liabilities is reduced in comparison to the end of the previous year and is 0.99, which means that it will be necessary to finance matured short-term liabilities from new borrowings. When analysing the liquidity, however, it should be taken into account that over a half of the current assets are short-term receivables whose becoming collectable by October 2009 falls under a question mark because of the illiquidity in the whole real sector, that made the degree of collecting receivables fall drastically. This form of financing at the level of the sector used to be sustainable until the moment when the drying out of the global and domestic liquidity of creditors made unobstructed rollover of short-term

Table 5.1. **Certain indicators of the real sector operations**

	2007	2008
General liquidity ratio	1.02	0.99
Interest coverage ratio	1.69	0.89
Own capital ratio	40.10	45.40
RoA	2.00	0.90
RoE	1.50	-1.00

Source: National Bank of Serbia

liabilities impossible. Parallel to the problem on the side of the assets, the problems have also been created by the effects of the crisis on the operations of business entities in Serbia, and thus the reduced demand and more difficult collecting of receivables led to long chains of illiquidity. On top of that, the burden of servicing current liabilities to foreign creditors and domestic banks has grown significantly because of the concurrent onset of the currency and interest risks.

Taking into account that credits have become more expensive, which led to an aggravated position of enterprises, it may be justifiably argued that finding new or rollover of existing sources of borrowing will be the basic problem of 2009. Namely, the ability of the real sector to ensure new borrowing has been significantly reduced since the last quarter of 2008, due to the resistance of banks and foreign creditors to risk in Serbia. The real sector has started to show record-low amounts of foreign assets since October 2008, but the deceleration of the external borrowing growth had started earlier that year. The fact that this is a case of a weaker offer and not a slowed-down demand for credits is shown by the reduction of corporate deposits held at domestic banks, which is caused by the need for additional liquidity. The increased resistance of creditors is also accompanied by a reduced capacity of the real sector to finance a possible new borrowing from the regular business operations. Namely, when we look at the 2008 financial results, we may notice that the ratio of the interest coverage had already in that period been considerably reduced compared to the previous accounting period – as opposed to 2007 when the interest coverage by net profit from regular business operations amounted to 169%, the net profit during 2008 was not enough for that.

With the reduced liquidity of the real sector, the servicing of the burden of liabilities during 2009 will be conditioned by the potential of enterprises to renew their liabilities, that is, by the readiness of foreign creditors to keep their exposure towards Serbia, and they will also depend on the effects of the financial support from the state and international financial institutions.

The noticeably reduced capability of providing direct external borrowing will turn enterprises towards domestic credit activity, which itself has been significantly slowed down since October 2008. This trend should be reversed to a certain degree, particularly bearing in mind the positive outcome of the negotiations with the IMF which very soon after the arrangement had entered into force managed to influence the reduction of the risk premium and consequently the strengthening of the rating of the debtors from Serbia, as well as to reduce the borrowing price itself.

In addition to the support from the state in the form of measures for stimulating credit activity, the aim of which is to reduce the costs of financing the real sector, a very important role in financing domestic economy will be played by the readiness of foreign creditors (primarily the banking groups that operate on the domestic banking market) to keep their exposure towards Serbia, which also includes direct cross-border corporate credits. In this sense, the result of the negotiations within the scope of the Vienna Initiative is very favourable, with an agreement reached with ten biggest banking groups in Serbia about a set of measures that will contribute to a financial stability in Serbia. Among other things, the stated groups, as well as some banks that are not members of these groups, have accepted the conditions and undertaken to keep the exposure towards Serbia.[10] However, it should be taken into account that such arrangement does not entail refinancing of liabilities of individual enterprises, but that concrete arrangements for maintaining their liquidity will depend on their financial position and the readiness of creditors to renew the existing liabilities, in compliance with their procedure, that is, to provide new sources of financing.

In 2008, the corporate sector experienced a RSD 37 billion loss. Although enterprises managed to cover operating expenditures from operating income in 2008, that was not the case with total expenditures and total income. The financial loss caused by significant interest expenditure from the period of rapid borrowing, was as much as 20% higher than the positive result from regular

Table 5.2 **Return on equity and return on assets in the corporate sector**
(in %)

	2008		2007	
	ROA	ROE	ROA	ROE
Processing industry	1.8	0.4	3.4	4.2
Electric power, gas and water production and supply	-3.8	-5.4	-12.8	-17.1
Construction industry	4.2	7.1	5.0	8.9
Wholesale and retail trade	2.4	2.9	5.1	9.1
Transportation, warehousing and communications	-0.5	-4.2	2.8	2.9
Activities in connection with real estate, renting and business activities	1.8	1.1	5.6	10.8

Remark: Indicators after taxation.
Source: National Bank of Serbia.

[10] In line with the decision of the National Bank of Serbia on special support measures for the financial stability of the country of 5th May, 2009, the exposure of a banking group means a sum of (1) receivables of the members of the banking group with the seat outside the Republic of Serbia from legal entities with the seat in the Republic of Serbia, as well as from natural persons with residence in the Republic of Serbia, in respect of credits or debt securities, reduced by the liabilities of the banking group in respect of credits or debt securities to banks and other entities in the financial sector with the seat in the Republic of Serbia, and (2) the state of deposits which the members of the banking group with the seat outside the Republic of Serbia hold at the banks with the seat in the Republic of Serbia, reduced by the state of deposits which the banks and other entities in the financial sector with the seat in the Republic of Serbia hold at those members of the banking group – expressed in euros according to the balance as of 31st December, 2008.

Table 5.3 **Lost capital rates**
(in %)

	2008	2007
Processing industry	42.0	39.5
Electric power, gas and water production and supply	25.6	22.6
Construction industry	19.7	17.8
Wholesale and retail trade	19.0	14.2
Transportation, warehousing and communications	27.5	22.7
Activities in connection with real estate, renting and business activities	23.2	17.2

Source: National Bank of Serbia.

operations. If we look at this by individual sectors, the biggest losses were marked in the sectors of transportation, warehousing and communications, as well as the production and distribution with electric power, gas and water. However, it should be noted that other sectors, such as processing activity, and wholesale and retail trading, despite the success in 2008, significantly reduced such result because of the negative effects of the financial crisis. In addition, as the consequence of the high amount of cumulated losses there was a reduction of own capital (at the rate of 27.5% at the level of the sector, last year 23.8%), whereas it was precisely the processing industry sector that had the highest rate of lost capital of 42.%.

VI. Markets and Financial Infrastructure

The role of the market in the redistribution of the dinar liquidity sources has become more significant since October 2008. In addition to the monetary policy instruments, the movement of interest rates was greatly influenced by the liquidity of banks; despite the reduction of the interbank reference interest rates, the interest rates of the banks in Serbia have been increased due to the risk premium growth. The capital markets have continued with the decline, which is in case of the securities market less prominent than in the case of the stock market.

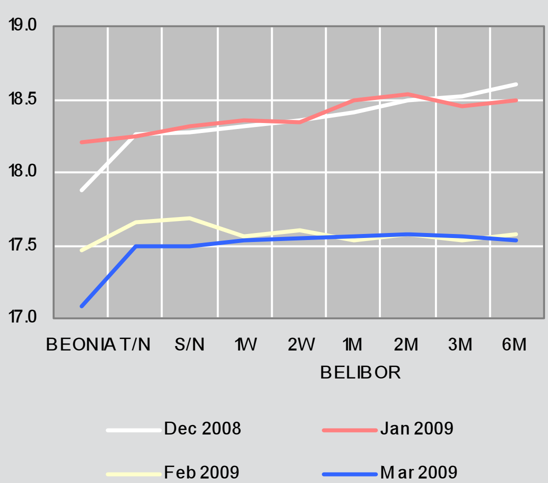
1. Money Market

Since October 2008, the movement of interest rates was, in addiction to the monetary policy instruments, also determined by the liquidity of banks; the liquidity problems have increased the importance of the domestic money market. The active interest rates of the banks have been increased because of the increase in the risk premium, while the passive rates are still on the rise.

Gradual relaxation of the central bank's monetary policy has led to a reduction of the reference interest rate to the level of 14%; in the first four months of 2009, the National Bank of Serbia cut down its reference interest rate three times, adjusting it from 17.75% to 14% at the annual level.

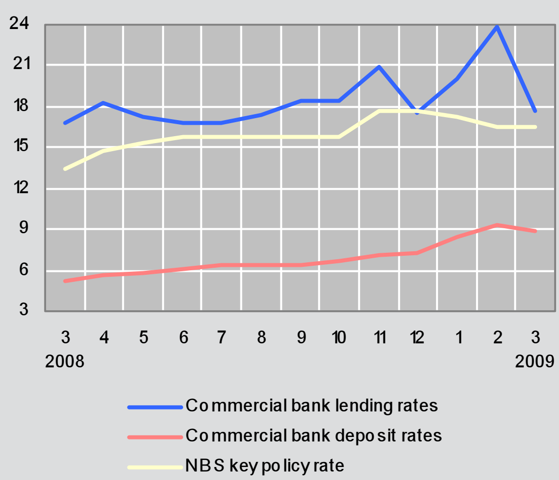
Parallel to the reduction of the reference interest rate, the level of the banks' investments in commercial notes also went down and at the beginning of February, for the first

Chart 6.1 **Interbank money market yield curve**
(monthly average, p.a, in %)



Source: National Bank of Serbia and Reuters.

Chart 6.2 **NBS key policy rate and commercial bank interest rates**
(weighted average, p.a, in %)



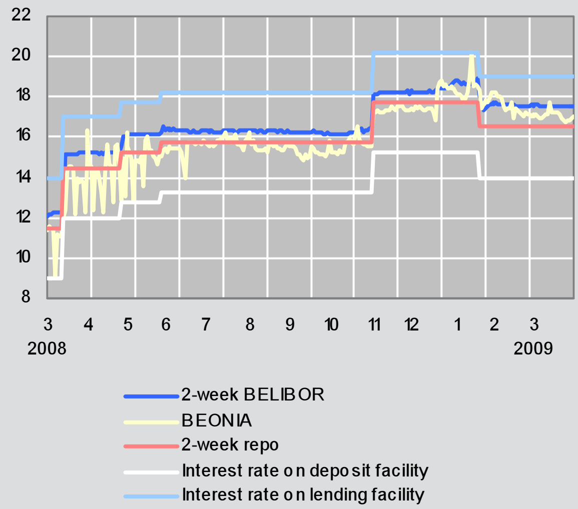
Source: National Bank of Serbia.

time since August 2006, it came down to the level of RSD 62 billion. The decrease of these investments was also influenced by the decrease of the real yield because of the acceleration of the y-o-y price growth and the depreciation of the dinar.[11] The risk premium for Serbia is still, however, very high and has not been favourable for the attractiveness of these investments. Finally, domestic banks had to meet the requirement of the National Bank of Serbia for expanding the base for the calculation of the dinar part of the hard currency mandatory reserve, so they reduced the purchase of commercial notes. In the second half of February and in March, the liquidity of the banks went up which reflected on the increase of their placements in these securities (RSD 98.4 billion). However, these placements went down again in April (by RSD 6.9 billion), after the state intensified the sale of treasury bills, that provide higher yield than the reference interest rate.

At the last auction of the National Bank' six-month notes, that took place in January, the interest rate was reduced on an average by 1.3 p.p. compared to the previous year, thus reaching the level of 17.92%. The higher level of this interest rate in comparison to the reference rate is not unusual, taking into account the longer maturity period of these securities. However, the difference between these two rates was smaller compared to the December auction, which goes to show that the banks expected the decrease of the interest rates and that did not happen.

The interest rates at the money market have not entirely followed the movements of the reference interest rate. On an average, BEONIA marked a higher level than the reference interest rate (17.55% annually). On the other hand, BELIBOR reached the lowest level for the Spot Next maturity (17.79%) and the highest level for the six-month maturity (17.86%). In comparison with the previous quarter, BELIBOR experienced a growth for the shorter-term maturities (highest for Tomorrow Next – 17 b.p.), with this growth declining evenly as the maturity period got longer. Such movements have reduced the slope of the yield curve in respect of BELIBOR, that still continues to be positive, which is mostly interpreted as an

Chart 6.3 **Interest rate movements**
(daily data, p.a, in %)



Source: National Bank of Serbia and Reuters.

indicator of the expected reduction of interest rates and the deceleration of the inflation and economic activities.

The average increase of the BEONIA and BELIBOR interest rates, despite the mild decline of the reference interest rate, is partially a consequence of the reduced liquidity of the banks – if it is observed at the level of a quarterly period. According to the monthly data, the drop in the banks' liquidity started in October last year and lasted until February, which caused more financing of the banks at the money market and thus BEONIA, despite the relatively shorter maturity period, kept going up compared to the reference interest rate. Their scope in February, when the liquidity of the banks was at its lowest, reached the level of 1 p.p. on an average, while the average daily volume of borrowing reached the record-high RSD 13.8 billion. The bank's liquidity marked a recovery in March and April, which influenced a gradual decrease in the volume of overnight interbank lending, as well as the reduction of the scope which was 5 b.p. in April.

[11] When calculating the real yield on the NBS repo bills in dinars or euros, we have used y-o-y ratios between the three-month moving averages of the basic retail price index and the basic euro exchange rate index, respectively.

[12] The banks' liquidity indicator has been obtained by establishing the ratio between the sum of the averages of the banks' free reserves and the state of the NBS securities, with the average value of the overall transaction deposits at the banks. The supposition was that the investment in the substitute repo securities was close to the banks' free reserves, since the banks met their needs for the short-term dinar liquidity on several occasions by withdrawing from the NBS securities, and vice versa. By looking at the monthly data from June 2008 to April 2009, the liquidity of the banks measured in this way had a negative correlation with the scope of the BEONIA interest rate and the NBS reference interest rate in 88% of the cases, and in 83% of the cases – with the average volume of the interbank overnight loans.

Despite the reduction of the reference interest rate and a relatively low level of the EURIBOR and LIBOR interest rates, in March the banks on average increased interest rates for credits from 17.56% to 17.65% at the annual level compared to December. The fact that this growth was relatively modest even with a significant rise in the risk premium for the country – is owed to the measures of the Government of the RS which at the end of February started to implement a programme of subsidised loans, as a part of the package of measures for overcoming the effects of the global economic crisis. On the other hand, on average the banks offered the interest for deposits of 8.05% annually, which is by 73 b.p. more than in December. The interest margin was brought down to the level of 9.6 p.p.

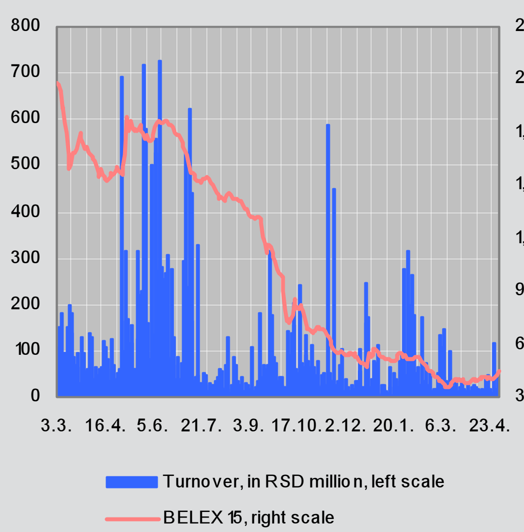
2. Capital Market

The negative trends present at the Belgrade Stock Exchange since the second half of 2007 became more intense from the moment when the global disturbances transferred to the region of the south-eastern Europe; the beginning of 2009 was marked by a further decline of the domestic exchange indices, continued decrease of the liquidity and the withdrawal of foreign investors. The decline of the securities market was more moderate.

The beginning of the declining trend in the movement of the stock exchange indices was visible already in May 2007, so it may be claimed that the effects of the global financial crisis on the capital market only accelerated it. While the causes of the reduced liquidity and the drop in prices in the first half of 2008 may also be found in the negative expectations of investors caused by the political instability, the decline from the last quarter of that year and Q1 2009 are fully caused by the record-low inclination towards risk and the flight into more secure forms of investment. The October events strengthened the negative expectations of the investors at the domestic capital market. The historically low values of the Belex 15 index have made foreign investors and large domestic investors practically the only remaining participants in the market, with even their exchange activities at a minimum level, which exaggeratedly reduced the trading volume in the last quarter of 2008.

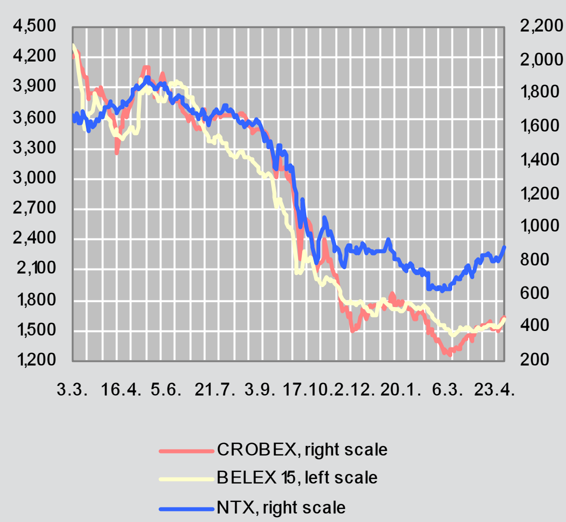
In Q1 2009, the Belex 15 index, which lost 75% of its value in 2008, continued its decline and moved considerably below its basic values (380 at the end of March). Similar trends may be seen in the case of Belex line, which had a smaller decline and completed Q1 with the value of 844 index points. In comparison with the other stock exchanges in the region (the stock indices of which also marked a decline), these two indices had the worst results by far. The smallest decline was marked by the MB I10 index of the Skopje Stock Exchange (9.1%), while the biggest one, if we disregard the domestic indices, was marked by the Sofix index of the Sofia Stock Exchange (22.4%).

Chart 6.4 **BELEX 15**



Source: Belgrade Stock Exchange.

Chart 6.5 **BELEX15, CROBEX and NTX**



Source: Belgrade Stock Exchange, Zagreb Stock Exchange, Bloomberg.

The price drop was considerably contributed to by the continued *flight into quality* by foreign investors who had significantly influenced the stock prices and liquidity in the previous year by occasional increased participation at the market. Since October 2008, the foreign investors have increased their participation in the overall turnover, and thus in December they accounted for over 50% of the overall stock turnover. Due to an increased withdrawal in February, they reduced such participation during Q1, when, as opposed to the previous quarter, they traded until March predominantly on the side of the sale; in Q1 the foreign investors had net sales of around RSD 587 million, thus contributing to the drop in the stock prices. In comparison with this decline, the capitalization of the stock listed at the Belgrade Stock Exchange was reduced at the end of March to RSD 689 billion.

The decrease of the liquidity is also purported by a visible decline of the turnover at the stock exchange. The stock trading in Q1 (RSD 4.2 billion) was halved in comparison with the last three months of 2008, that is, it was as much as four times lower than in the same period of the year before.

The reduced inclination towards risk is also responsible for a somewhat more moderate reduction of the securities trading volume in comparison with the stock trading, given their relatively smaller risk (they were issued by the state) and the absence of the currency risk. The overall bond turnover in Q1 2009 went down by 6.3%, while the number of performed transactions during the same period was reduced by 7.1%. Out of the total trading volume of around EUR 15.9 million, almost a half relates to the A2016 (47%) and A2010 (16%) series, whereas other series had a significantly lower share in the trading. The yields from the bonds of the so-called old hard-currency savings of the Republic of Serbia have been reduced in line with the reduction of the reference interest rate for all series of bonds, except for the A2009 series, which happens every year ahead of the collection of the bond series that is first to become due. Taking this into account, as well as the fact that the A2016 series was more liquid than the rest, the increase in the yield curve slope in Q1 may be considered to be expected.

3. Payment System

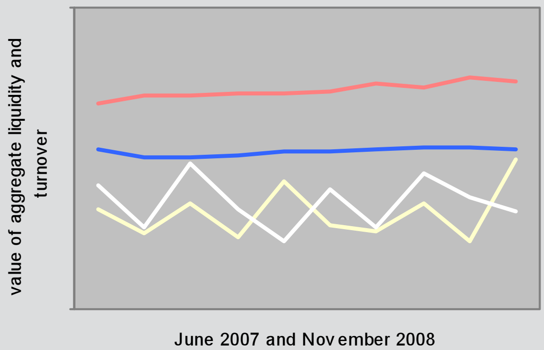
The way in which payment systems are organized in the Republic of Serbia enables a very efficient risk reduction. The availability of the RTGS system and the clearing system of the National Bank of Serbia during 2008 amounted to 99.95%, that is, 254 working days (within 137,000 minutes of production, there was only 63 minutes of work interruptions).

While executing transactions, the participants in the payment systems have been exposed to different risks – credit risk, liquidity risk, operational and legal risk. Because of their mutual connection, there is a danger that the realization of these risks may lead to systemic shocks and endangerment of the financial stability of the country. On the other hand, the problems in the very functioning of the payment systems, particularly those that are important in systemic terms, may have a negative impact on their participants and the financial system in its entirety.

The manner in which the payment systems in Serbia are organized enables the reduction of risks to which those who participate in the work of those systems are exposed. Namely, the so-call lesser payments (up to RSD 250 thousand) are executed in the clearing system of the National Bank of Serbia, and those whose individual amount is RSD 250 thousand or more are obligatorily executed in the RTGS system of the National Bank of Serbia. Because of the manner in which the settlement of payment transactions is done (in real time according to the gross principle), the participants in the RTGS systems are not exposed to the credit risk, but are exposed to the liquidity risk, i.e., for the execution of payment transactions, at every moment they must have sufficient liquid assets at their disposal. The RTGS system provides the participants with different possibilities for the liquidity risk management: execution of payments according to the relevant priorities, placing in the central waiting line of those payments for which there isn't sufficient coverage in the account for the settlement of participants, change of the priority or recalling of the payments that are in the waiting line, as well as the online monitoring of the account balance. In addition to the stated services and in order to manage the liquidity risk, the National Bank of Serbia also provides the banks with a possibility to use loans on the basis of collaterals for maintaining liquidity that are interest-free if they are returned by the end of the working day of the RTGS system (the interest-free *intraday* loans).

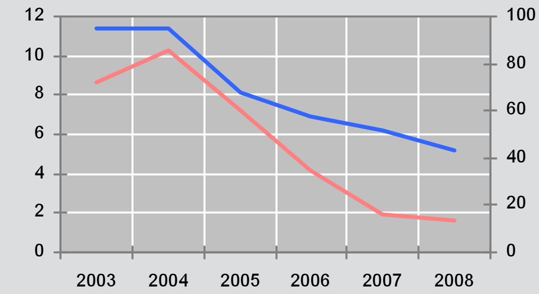
Although the RTGS systems significantly reduce the systemic risk, because of the large requests for liquid assets, the so-called gridlock situation may appear – this

Graph 6.6 **Ratio between the aggregate liquidity and the turnover value in June 2007 and November 2008**
(in RSD)



Source: National Bank of Serbia.

Graph 6.7 **Turnover value and the number of transactions in the clearing system**
(in %)



Source: National Bank of Serbia.

is when, because of the failure of one (or more) participants to execute their payments, other participants in the system are also not able to do that.[13] Such situation may appear when the aggregate liquidity in the system is insufficient, but not as a result of the behaviour of the participants whose interest is to postpone or hold on to their payments. The possibility of having the gridlock situation requires different complex mechanisms for resolving it. So far, in the RTGS system of the National Bank of Serbia there has been no need to activate the procedures for resolving this situation – primarily because of the high level of aggregate liquidity in the system, but also because with its price policy the National Bank of Serbia stimulates payments in the earlier part of the working day of the RTGS system, in order to discourage the postponement of the payments by participants.

The fact that the liquidity in the payment system was not disturbed by the impacts against the banks' currency liquidity in October 2008 is also proven by the relation between the aggregate liquidity and the value of the turnover in the RTGS system of the National Bank of Serbia during analysed periods June 2007 and November 2008 (graph 5.6)[14]. During the analysed periods the level of the aggregate liquidity in the system was sufficient for executing all payment transactions in the RTGS system. Also, the movements in the number and value of the payment transactions processed in the payment systems

Table 6.1 **Number and value of payment transactions in the RTGS system and the clearing system of the National Bank of Serbia**
(in %, annual growth)

	2006	2007	2008
RTGS system of the NBS			
Transaction value	81.4	111.7	11.8
Transaction number	53.8	28.0	29.4
Clearing system of the NBS			
Transaction value	4,19	1.57	-10.84
Transaction number	-0.95	3.28	-8.91

Source: National Bank of Serbia.

also contributed to the claim that the economic activity has significantly declined since the last quarter of 2008. Namely, their number and value had kept going up since 2005, but in 2008 this growth significantly slowed down, which also confirmed the deceleration of the economic activity in Serbia (Table 5.1).

As opposed to the RTGS system, clearing systems contribute to the saving of liquid assets for executing payments, because they are based on the settlement of payments, that is, the calculation of the amounts which

[13] The BIS Report, "Real-Time Gross Settlement Systems", March 1997

[14] Typical days in the months with the average activity of the RTGS system.

each participant owes to the other participants or claims from them (bilateral or multilateral net calculations). Still, because of such manner of settling payments, the participants in clearing systems are exposed to the credit risk, that is, the risk which, because of the impossibility of one participant to settle its negative net position in the system, jeopardizes the execution of the same positions by the other participants.

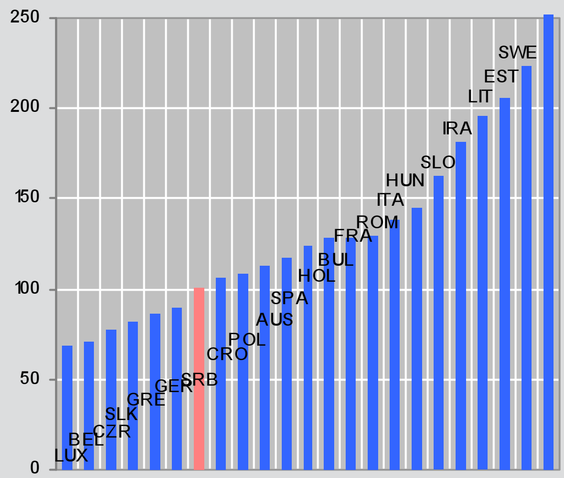
The clearing system of the National Bank of Serbia, in which the settlement is done in three clearing cycles, uses the limit technology for the credit risk management. Namely, before the beginning of each clearing cycle, the participants have a limit approved (reservation of funds in the account for the settlement of participants in the RTGS system) for the negative net position from the multilateral net calculation, which must not be higher than the approved limit at any given moment. The participants of the clearing system assess the limit level in accordance with the number of payments they send to the clearing system for execution, as well as the projection of money flow and experience, whereas the reserved funds may not be used for the execution of payments in the RTGS system. In addition, in line with their needs the participants may increase or reduce the limit if their net position requires so, but only when this is allowed by the balance of funds in the account for the settlement in the RTGS system. Finally, the participants are in the position to recall the sent payments until the moment when each of the clearing cycles begins, that is, until the calculation of the net positions and their settlement begins. As in the case of the RTGS system, the value of the payment transactions in the clearing system went up in 2006 and 2007, while in 2008 there was a significant decline (10.8% compared to 2007)[15].

[15] One of the reasons for the reduction in the number and value of the payment transactions in the clearing system in 2008 is the frequent re-direction of the execution of the “small” payments from the clearing system to the RTGS system of the National Bank of Serbia.

VII. Banking Sector

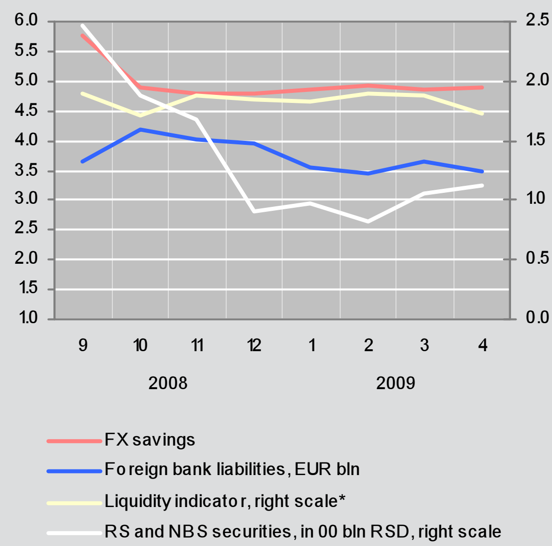
The banking sector in Serbia remains stable, despite the numerous risks caused by the spill-over of the financial crisis to the real sector and the household sector. At the end of Q1 2009, the liquidity was improved, but the risks for the exchange liquidity continue to exist – because of the insufficient recovery of the deposit base and the still low global liquidity. The quality of assets is going through the expected deterioration, while the currency induced credit risk is still the basic risk for the stability of the sector. In the following period, good capitalization and proactive support measures on the part of the central bank and the state will represent the basic hurdle for the destabilization in the banking sector.

Chart 7.1 **Loan to deposit ratio across European banking sectors**
(in %)



Source: ECB, National Bank of Serbia.

Chart 7.2 **Sources of banking sector liquidity**



* Monthly average, regulatory minimum = 1.
Source: National Bank of Serbia.

1. Liquidity Risk

After the strong impacts on the liquidity, particularly in October of the last year and February 2009, the liquidity of the banking sector is still very good. The special support measures for the financial stability will additionally contribute to the dinar and foreign exchange liquidity of the banks.

The banking sector in Serbia used to depend a lot less on the foreign sources of assets than the other banking sectors in Europe, which considerably contributed to its overall stability: over 75% of the total liabilities of the banks come from domestic sources. Despite this fact, the “drying out” of the global liquidity and sudden changes at the world money markets also reflected on the liquidity of the domestic banks since the deposit bases, albeit stable, have become more vulnerable under the conditions of the crisis. The reputation risks of the parent companies of some banks that operate in Serbia served as a trigger for a (psychologically induced) withdrawal of significant amounts of hard currency savings of the general population and that certainly had a considerable influence on the foreign exchange liquidity.

Although the sudden withdrawal of hard currency savings stopped at the end of 2008, new net inflows have not been sufficient for a complete recovery of the banking sector's deposit base, in addition to which there were even shorter periods of net outflow in the second half of February. At the same time, the banks' repayments in Q1 in respect of short-term external liabilities taken during the peak of October turbulences additionally jeopardized the foreign exchange liquidity that reached its lowest level since the beginning of the spill-over of the effects of the crisis.

After the initial October and later February blows, the maintaining of the banks' liquidity was influenced by several basic factors (graph 7.2). Namely, the central bank reacted very quickly already around mid-October by relaxing its mandatory reserve policy for foreign borrowing, as well as by other (later) measures that enabled commercial banks to get less expensive foreign borrowing. The other instrument for strengthening the liquidity was provided by the parent institutions of the banks themselves, whose timely liquidity support was very important and significantly contributed to the stabilization of the foreign exchange liquidity. Specifically, in October and November the parent institutions provided over a very short period of time a significant amount of short-term sources of assets for domestic banks. This process was decelerated when the liquidity indicators got stronger and repeated during the periods when they got weaker. Third, a very good position of the liquidity prior to the arrival of crisis helped the banks alleviate the October and later-day turbulences. The liquid assets, predominantly in the form of the central bank's securities have been used on several occasions to meet the increased requirements for dinar and foreign exchange liquidity. Finally, it is important to point out that, despite all of the stated factors for the maintaining of a stable liquidity, the significance of the domestic money market has been increased during the period since the arrival of crisis, and this market is used by the banking sector for the redistribution of the dinar liquidity. It may be observed that during the periods of reduced liquidity, particularly in February 2009, there was a significant

Table 7.1 **Liquidity indicators**

	2003	2004	2005	2006	2007	9. 08	12. 08	3. 09
Average monthly liquidity indicator	3.5	2.2	2.1	2.4	2.1	1.9	1.8	1.9
Liqud assets/total deposits	0.3	0.3	0.5	0.7	0.6	0.6	0.5	0.7
Liqud assets/total household deposits	2.5	1.3	1.8	2.5	2.0	1.3	1.2	1.5
Liqud assets/total household a vista and short-term deposits	0.9	0.7	1.2	2.0	1.6	1.4	1.2	1.6

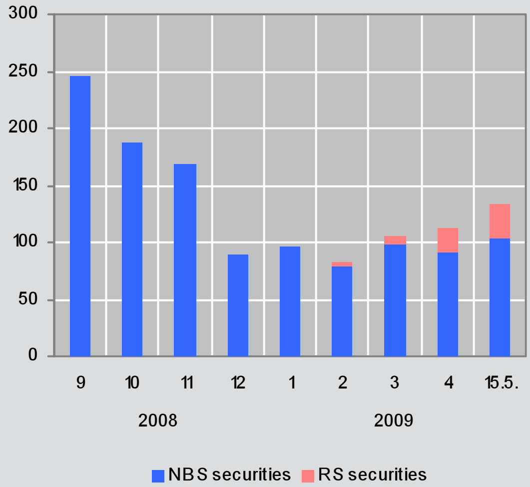
Source: National Bank of Serbia.

Table 7.2
(in percent)

	2005	2006	2007	6. 08	9. 08	12. 08	3. 09
Total loans/total deposits	94.9	86.7	89.3	95.2	96.1	104.3	105.9
Total loans/term deposits	196.6	163.4	154.0	160.6	205.2	206.5	197.0
Loans to households/household deposits	58.5	66.3	70.4	71.9	71.1	84.3	81.0
Long-term deposits/long-term loans	14.9	15.9	12.0	14.4	8.6	7.6	7.0

Source: National Bank of Serbia.

Graph 7.3 **Portfolio of the National Bank of Serbia and the Republic of Serbia securities at the banks** (in billion dinars)



Source: National Bank of Serbia.

growth in the volume of overnight interbank loans, as well as that the scope of the BEONIA interest rate and the reference interest rate at some points in time reached 1 p.p. Along with the increased needs for the dinar liquidity during those periods, the exposure limits for the participants of this market towards each other have been reduced which has, through the reduction of the available dinar liquidity volume, pushed up the price of the interbank borrowing. The improvement of the liquidity in the last several months is also reflected in the renewed interest on the part of the banks for the investments in the securities of the central bank and the state. These portfolios that used to be adequately used until recently as the source for meeting the needs for direct dinar and foreign exchange liquidity, have gone up again since April 2009, because the banks have decided to redirect the renewed liquidity surpluses, because of the continued high perception of the credit risk, to the safest domestic placements, which is the case at most of the banking markets. Although the structure of these investments has been changed in favour of the government securities (due to a more attractive interest rate), the total amount of these placements of RSD 113 billion reflects a strengthening of the liquidity.

The new instruments of the central bank for the strengthening of the dinar and foreign exchange liquidity will additionally strengthen the liquidity of the banking sector in 2009.

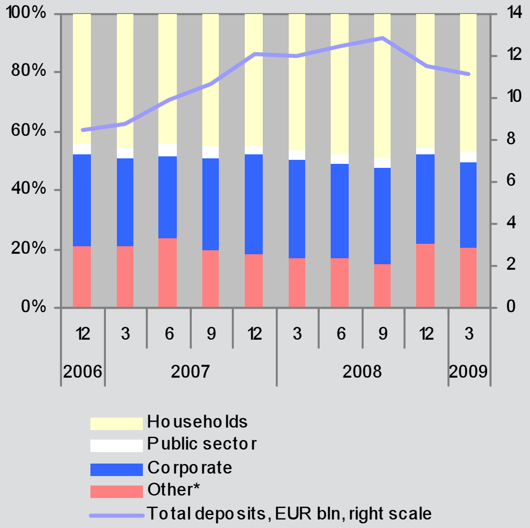
Taking into account that the liquidity risk under unstable financial conditions will continue to be very important for the resistance of the overall financial system – the National Bank of Serbia, within the special programme for the financial stability support, has earmarked a group of measures precisely for the strengthening of the liquidity and the facilitating of the process of liquidity management. Through the new measures, the National Bank of Serbia has offered to the banks additional ways of securing dinar and foreign exchange liquidity, by approving dinar loans with the maturity period of up to one year and by foreign exchange swap transactions at the interbank foreign exchange market. The National Bank of Serbia will approve short-term loans for liquidity on the basis of the pledge of the securities issued by the central bank and the Republic of Serbia, free foreign currency assets which the bank pledges on a special account held at the central bank, as well as the receivables of the bank on the basis of approved mortgage credits, and receivables from the Republic of Serbia and budget users. The second group of measures provides a possibility to act in both directions – securing foreign exchange and dinar liquidity through swap trading with hard currency. The goal of these measures is solely to maintain the financial stability by securing liquidity (the dinar and the foreign exchange one) of the banks that have occasional problems in connection with that and does not influence their profitability.

Banking sector assets sources

As far as the sources of assets are concerned, the year 2009 will be marked by attempts to build up the deposit base and reduce the reliability of the banks on external sources of financing that will, in the course of the year, continue to be expensive and short-term.

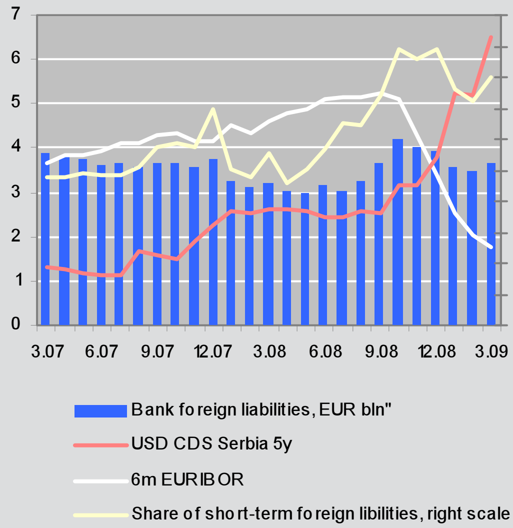
Although the position of the banking sector showed that domestic banks relied on stable domestic sources as far as the coverage of the overall loans with total deposits are concerned – the very structure of those sources had several weak points. Specifically, it is noticeable that a half of the domestic deposits during previous years was at sight which made the maturity disharmony of the sources and placements more intense through the withdrawal of the hard currency savings that was most frequently of the time-deposit savings type. The coverage of the overall loans with fixed-term deposits has been reduced by around 13 p.p. since the end of 2007, with an approximately same reduction in the coverage of loans with long-term domestic deposits.

Chart 7.4 **Deposit distribution by sectors**
(in percent)



* Includes deposits by financial institutions.
Source: National Bank of Serbia.

Chart 7.5 **Bank foreign liabilities**
(in EUR billion, percent)



Source: National Bank of Serbia, Bloomberg.

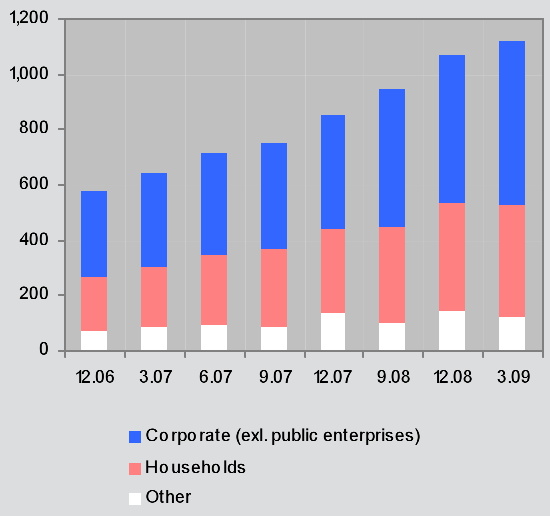
The adversity of such relation is reflected in the fact that even under the conditions of reduced external liquidity it is necessary to increase the coverage of loans with deposits as much as possible, thus reducing the reliance on expensive and short-term foreign sources. Looking at the domestic banking market, it may be noticed that the banks are aware of this need and that, in order to increase this coverage, they act both on the side of liabilities and on the side of receivables. Thus, on the side of liabilities, there has been a continuous increase of the passive interest rates since October that were used in order to gain domestic deposit base (and partially) return the liquidity lost by the withdrawal of the hard currency savings. On the side of receivables, however, the banks reduce their exposure by slowing down their credit activity in order to reach an optimal relation with the domestic asset sources and additionally reduce the share of foreign liabilities in the overall liabilities. On the other hand, one should bear in mind that such restructuring of the banks' balance items further reduces the credit activity which is risky for the financial stability, especially for the economic growth and the possibility of the rollover of the real sector and household liabilities, which additionally deepens the effects of the crisis.

The financing of the banks from abroad will continue to be more difficult in 2009 despite the stabilization at the international money markets (graph 7.5). Because of the global cutting down of maturity periods, domestic banks have almost solely short-term assets at their disposal. The significant decline of interest rates at the short-term money markets does not reduce the borrowing price for the banks operating at the domestic market, since such reduction of prices is still being setoff by the high risk premium for Serbia. Given that such balance-sheet securing of the liquidity through foreign borrowing will be more difficult, a very important role during 2009 will be played by the off-balance-sheet securing of foreign exchange liquidity through swap transactions. With these transactions commercial banks protect their balance-sheet currency items – by replacing their dinar liquidity with the liquidity in the currency in which they are exposed owing to their receivables. Even until now the banks most frequently used these instruments with their parent institutions, while in the forthcoming period they will have a possibility to do that with the National Bank of Serbia as well.

2. Credit Risk

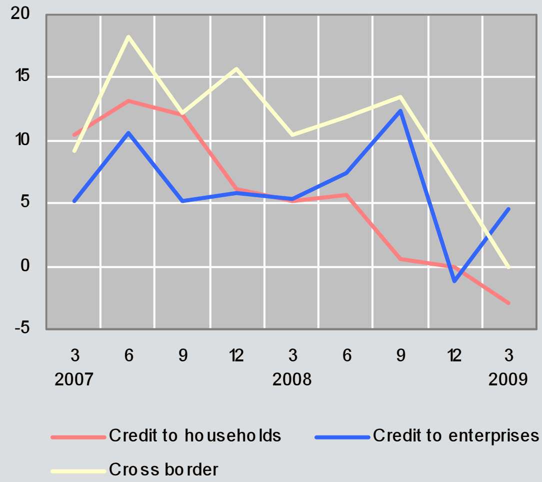
The credit activity has been significantly decelerated since October 2008, which made the National Bank of Serbia and the Government of the RS enact numerous measures by which they want to stimulate a renewal of that activity. Credit risk keeps being the most frequent one in the banking sector. During the last six months, there

Chart 7.6 **Sectoral distribution of loans**
(in RSD billion)



Source: National Bank of Serbia.

Chart 7.7 **Real domestic credits and cross border**
(quaterly growth rate, in %)



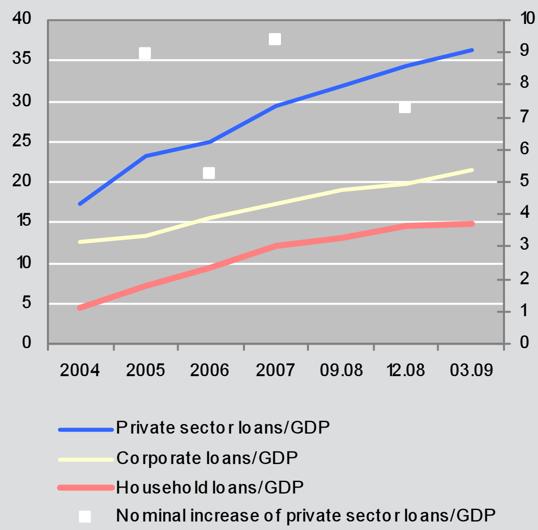
Source: National Bank of Serbia.

has been an expected deterioration of the banks' portfolio quality, with the deceleration of the credit activity having such an impact that the process of this deterioration seems even more rapid.

The period of rapid credit expansion that had lasted since the end of 2004 ended in the last quarter of 2008. Since then, the credit activity has marked a minimal real growth in some of the months (primarily in the portfolio of enterprises), while there has even been a nominal decline in the household sector. The causes of such trend are well known: the reduced demand for credits caused by negative macroeconomic outlooks was accompanied by a reduced offer because of the still very bad situation when it comes to the sources of liquidity and the minimized risk appetite of the banks. As it has been pointed out earlier, one of the side effects of the necessity to restructure maturity periods and liability structure of the banks is the reduction of the exposure on the side of receivables, which banks are prone to do in order to adequately adjust such exposure with the reduced volume of available sources of assets.

At the end of Q1 2009, total credits in comparison with the end of September 2008 were nominally higher by merely 7.3%. While the corporate placements started with a new moderate real growth in March, as the consequence of the measures of the Government of the RS aimed at building up the credit activity, household placements are still not recovering and in the last month of Q1 they even went down in nominal terms.

Chart 7.8 **Share of private sector loans in GDP**
(in %)



Source: National Bank of Serbia.

At the same time, owing to the decline of the economic activity, loans to private sector continue to increase their share in the GDP, although it is real to expect a deceleration of such process. During the period from 2004 to 2008, the accretion of credits to the private sector was even over 9% of the GDP which may be considered as the borderline value for entering a rapid expansion whose abrupt interruption could lead to more serious consequences for the financial stability. This ratio has been reduced since October 2008 and thus at the end of Q1 of the current year, the annual accretion of credits to the private sector was 7.3% of the GDP.

From the financial stability point of view, the revival of credit activity growth is exceptionally significant. Except for the obvious effects which crediting has on the overall economic growth through facilitating investments and consumption – the maintaining of credit activity growth is also important from the point of view of the financial institutions themselves. Sudden deceleration or stopping of this type of financing could also have a negative impact on the quality of the existing receivables whose regular servicing could be jeopardized by depriving users of the possibility to finance their current activities from which they obtain funds for settling their liabilities. For this reason, the National Bank of Serbia and the Government of the RS (see the frame) have undertaken many measures which are expected to have a positive impact on the further credit activity trends. Their final goal is, on the one hand, to ensure strong liquidity of the banking sector and, on the other, to return again such renewed liquidity to the credit activity scope and, consequently, to the economic flows.

Measures of the Government of the RS for alleviating negative effects of the global financial crisis in Serbia

After the first set of measures for stimulating domestic savings and trading at the stock market (increase of the guaranteed level of saving deposits from EUR 3,000 to EUR 50,000, abolishment of the capital gains tax and the hard currency savings interest tax) enacted at the end of last year – the Government of the RS adopted additional measures in January and February aimed at alleviating the effects of the global economic crisis and the revival of the economic activity. They were enacted with the primary goal to stimulate credit activity and continue with the implementation of the Action Plan for the Construction of Corridor X. They are expected to contribute to the stopping of the economic recession and the maintaining of the macroeconomic and financial stability.

TYPE OF LOAN	Financing structure	Terms	Purpose	Total amount of loan
SUBSIDIZED LOANS FOR LIQUIDITY MAINTENANCE AND FINANCING OF DURABLE WORKING ASSETS	● RSD 2 billion in government interest subsidies ● RSD 80 billion from bank lending (total support planned: RSD 80 billion)	● Interest rate up to 5.5% p.a. (1 m EURIBOR + 3%) ● Repayment period up to 12 months ● Currency clause	● At least 50% of interest subsidies is allocated to export loans ● The rest is allocated to interest subsidies in respect of loans for other business activities, of which up to 30% may be used for rescheduling of loans with the same bank	● Entrepreneurial shop: up to EUR 20,000 ● Small-sized enterprise (up to 50 employees): up to EUR 50,000 ● Medium-sized enterprise (50-250 employees): up to EUR 0.5 million ● Large enterprise (more than 250 employees): up to EUR 2 million
INVESTMENT LOANS WITH PARTICIPATION OF THE DEVELOPMENT FUND	● The Development Fund provides RSD 5 billion to cover 30% of each loan ● Banks lend RSD 12 billion to cover 70% of each loan (the Guarantee Fund guarantees 75% of bank's loan) (total support planned: RSD 17 billion)	● Interest rate up to 3 m EURIBOR + 4% p.a. ● Repayment period: 3-5 years ● Grace period: 6-12 months ● 3-month repayment after expiry of grace period ● Currency clause	● For investment co-financing	● Entrepreneurial shop: up to EUR 30,000 ● Small-sized enterprise (up to 50 employees): up to EUR 0.2 million ● Medium-sized enterprise (50-250 employees): up to EUR 1.5 million ● Large enterprise (more than 250 employees): up to EUR 4 million
SUBSIDIZED CONSUMER LOANS AND FINANCIAL LEASING FOR PURCHASE OF DOMESTIC PRODUCTS	● The state provides RSD 1 billion in interest subsidies ● Banks and leasing companies invest RSD 20 billion in loans and financial leasing (total support planned: RSD 20 billion)	● Fixed interest rate up to 4.5% p.a., for "Punto" produced in Kragujevac, and up to 6% p.a. for other products ● Repayment period up to 7 years for cars and up to 5 years for other products ● Currency clause	● For purchase of some durables produced in Serbia	
INTERNATIONAL LOANS	● EIB: EUR 250 million ● KfW: EUR 100 million ● EBRD: EUR 100 million ● Loan of the Italian Government: EUR 30 million (total support planned: EUR 480 million (c. RSD 45 billion))	● Under the terms more favourable than the prevailing market terms	● For SMEs	

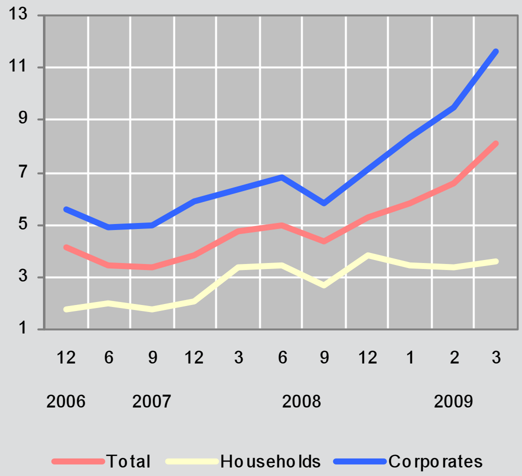
On this occasion, we will look back at the package of measures for stimulating credit activity, the overview of which (by types of credits, with more detailed conditions for approval) is provided in the following table. These measures have been enacted in order to reduce the costs of financing, keep the existing number of employees while stimulating additional employment, stimulate demand for certain domestic products of the sectors that employ a large number of workers, as well as to keep the dynamics of the exports under the conditions of reduced foreign demand.

The reduction of financing costs is achieved by direct subsidizing of interest rate, that is, of one part of the credit. The maintaining of the existing level of employment is ensured through making conditional upon credit users to keep at least the same number of employees during the period of using the credit, which entails a prohibition of laying off employees with indefinite employment and employees hired for a period longer than one year. The state subsidizing of interest rate for consumer credits intended for the purchase of products manufactured in Serbia (cars, agricultural mechanical equipment, household appliances and furniture, carpets and floor coverings) is used to stimulate a demand for domestic products. The total financial support for the economy and general population planned on the basis of this programme of measures is RSD 122 billion, and until 7th April, the banks approved EUR 170 million (around RSD 17 billion) on these grounds.

From its side, the National Bank of Serbia enacted in February numerous measures in order to stimulate credit activity of the banks. Firstly, the gross household placements indicator, i.e., the ratio between the placements given to the population and the capital assets, went up from 150% to 200%, and then, as a support to the Programme of Measures of the Government of the RS, a decision was taken to exempt from the basis for the calculation of the mandatory reserve those credits which the banks, in line with that programme, approved for enterprises (for investments) and general population (for the purchase of durable consumer goods manufactured in Serbia). Further, the banks were given a possibility to extend the repayment term for cash credits approved before 30th September, 2008, by up to twelve months from the originally set maturity date, provided that they have been converted into dinars, without any additional costs for the debtor in connection with that. Finally, the banks have no further need to require natural persons to lay down a deposit in the amount of 30% of the credit value (for the receivables put into circulation since the beginning of 2009), since the National Bank of Serbia exempted them from the obligation to classify these receivables in that case as more adverse.[16]

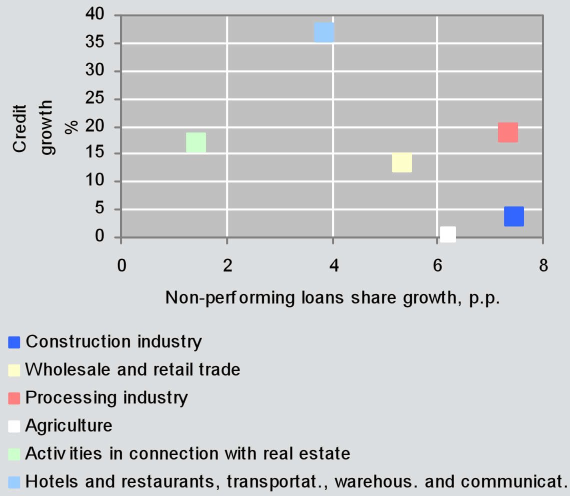
[16] With the exception of approved housing credits, credits approved in dinars that are not indexed by a foreign exchange clause and liabilities in respect of credit cards.

Chart 7.9 **Share of NPL in total loans**
(in %, net)



Source: National Bank of Serbia.

Chart 7.10 **Corporate NPL distribution by sectors**
(September 30, 2008 - March 31, 2009, in p.p, percent)



Source: National Bank of Serbia.

Portfolio Quality

The negative macroeconomic trends, particularly the deceleration of the economic activity, weakening of the domestic currency and the aggravation of the situation in the labour market – have caused the deterioration of the banks' portfolio quality.

The deterioration of the credit portfolio quality in Q1 2009 was expected. Namely, the deceleration of the economic activity, earnings deceleration and the weakening of the domestic currency are the causes for the decreasing of the capacities of the economy and general population to service their liabilities to the domestic banking sector.

When it comes to the corporate portfolio of the banks, its deterioration has been contributed to by several basic factors. The weakening of the liquidity caused by unfavourable maturity and currency structures of the enterprises' balance sheets was additionally prominent after the depreciation that had started in October. Although the currency structure of domestic placements to enterprises is not equally unfavourable as in the case of the household portfolio (around 65% of the corporate credits are with the currency denomination), one must bear in mind that the accelerated borrowing of the real sector during the previous years was completely in foreign currencies which has, under the conditions of the domestic currency weakening, visibly weakened the liquidity of enterprises. Import-oriented and predominantly unprotected in currency terms, the Serbian enterprises came into a situation in which it was very difficult to collect existing receivables, while the financing of current liabilities was made additionally more difficult by the drying out of the domestic and foreign liquidity sources active until then. As a result, the capacity of enterprises to finance their liabilities to banks has gone down, which is also confirmed by the growth of the non-performing credits share in the overall credits since October 2008. Although there are no reliable data on the rate of non-performing foreign credits of enterprises, it may be firmly supposed that they have gone up, that may also reflect on the domestic banking sector which stood as guarantor for around 30% of foreign corporate credits.

If we look by sectors, it seems that when it comes to the capacities for servicing liabilities the strongest effects have been experienced by the construction and processing activity sectors. This trend has been expected, since the said sectors have had the biggest drop in activities since October, in addition to which the currency protection in them is very low. For the same reasons, these sectors have been exposed the most to the problems with finding new (borrowed) assets. Specifically, taking into account the negative tendencies in these sectors since October 2008, the banks and foreign creditors have been much less ready to invest their funds in them. This additionally aggravated the liquidity, because the renewal of the existing liabilities was either completely made impossible or was made possible with a significant rise in the margin. The receivables quality deterioration trend will probably continue in the next period, but its intensity may be alleviated by the measures of the Government of the RS aimed at strengthening the liquidity of the economy and the effects of keeping the exposure of the banks that has been agreed by the Vienna Initiative.

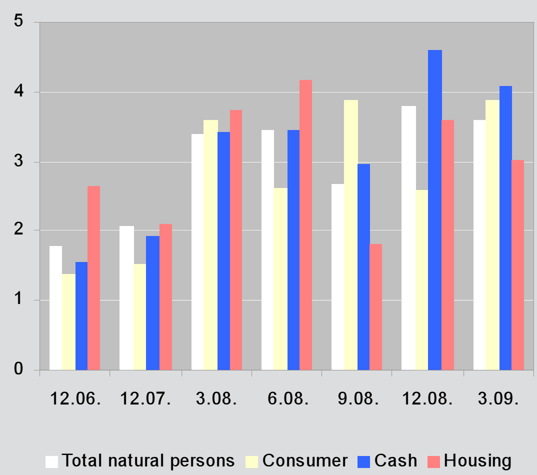
The household credit portfolio has also deteriorated, although this is still more moderate than in the case of enterprises. The household credit portfolio is mostly indexed in euro and Swiss franc (over 75% of the portfolio), meaning that the weakening of the domestic currency, together with negative trends in the nominal earnings level, has significantly increased the burden of the credit repayment. If we look by the credit purpose, it may be observed that the share of non-performing credits in the overall credits has gone up the most in the cases of consumer and cash credits, but that there is still high discipline in the repayment of housing credits, which is favourable from the financial stability point of view, since these credits make up for the biggest share in the overall household portfolio.

An important hurdle for further deterioration of the quality of household receivables will lie in the efforts within the scope of the Vienna Initiative. According to the new regulations, that were created as a consequence of these efforts – some conditions for the utilization of financial stability special support measures are linked to the readiness of banks to alleviate the burden of repayment in one of the foreseen manners for quality clients who are facing difficulties due to the effects of the financial crisis. Specifically, the obligations which the banks should take relate to enabling debtors to carry out a conversion of foreign exchange credits and the credits indexed in FX clause into the dinar ones without charging any additional costs. Also, the banks that have accepted the initiative have undertaken to allow debtors to amend the repayment terms – through extending the repayment period by at least twelve months, that is, by at least one fifth of the remaining period, in the manner that ensures reduction of the monthly liability or by changing the repayment terms – in such a way that the monthly liability of a debtor is reduced by at least 20%.

The deceleration of the credit activity contributes to the rise of the indicators of the non-performing credits share in the overall credits.

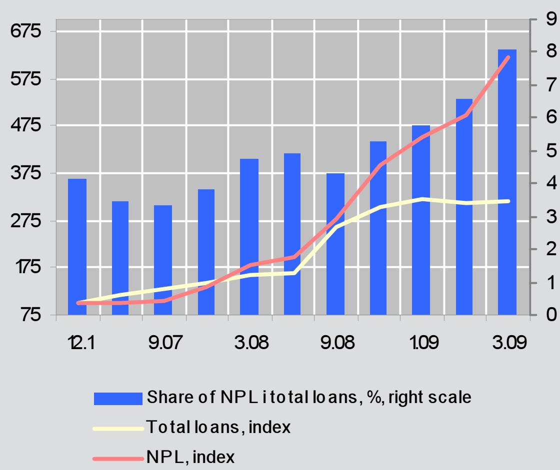
In the previous editions of this report it has been pointed out several times that the indicator of the non-performing credits share in the overall credits is not a fully adequate indicator of the assets quality at the times of rapid expansion of the credit activity, since it used the state of credits with rapid absolute annual growth as the numerator. On the other hand, because of the short credit history in Serbia, the newly-approved credits have most frequently been classified in better risk classification categories, since problems with credit servicing by the rule appear only in the latter phases of the repayment.

Graph 7.11 **Household non-performing loans, by purpose**
(in %, net)



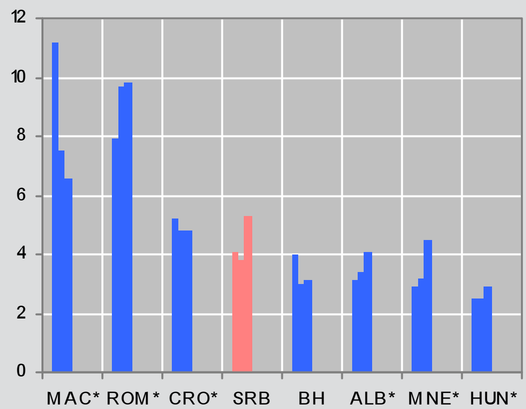
Source: National Bank of Serbia

Chart 7.12 **Credit slowdown effect on share of NPL**
(index 2006 = 100, percent)



Source: National Bank of Serbia.

Chart 7.13 **Bank Nonperforming Loans to Total Loans in selected countries, 2006 - 2008**
(in %)



*Data as of September 30, 2008.
Note: Due to differences in national accounting, taxation, and supervisory regimes, data are not strictly comparable across countries.
Source: International Monetary Fund.

A similar rule also applies to periods of exceptional deceleration of the credit activity. Because of such deceleration since October 2008, the numerator has significantly reduced the growing trend for this indicator that could lead to a conclusion that the portfolio quality deteriorated abruptly, which is not entirely correct.

Although the portfolio has deteriorated visibly, this deterioration was not as rapid as it may be concluded from the simple ratio between the non-performing and overall credits. It is, in fact, necessary to observe the ratio between the absolute growth of these credits, from which it may be concluded that the credit portfolio deterioration trend for certain purposes or sectors started before the arrival of the October turbulences and that the effect of those turbulences on the portfolio quality did not reflect at the same time.

The last available data from the surrounding countries (that have also gone through a period of rapid credit activity growth prior to the arrival of the crisis) reflect a similar trend in most of the countries of the south-eastern Europe, as far as the portfolio quality of the banks is concerned. In the case of Serbia, non-performing loans are, despite their growth, still sufficiently covered with the necessary reserve for the estimated losses and that coverage, through March 2009, amounted to around 200%. Taking into account the said indicator, as well as the still high capital adequacy indicator – it may be reasonably concluded that a credit risk of a wider scale could not seriously threaten the issue of stability of the overall banking sector.

3. Capital Adequacy

Since October 2008 the capital growth has gone through a deceleration phase. The capital adequacy indicator has been reduced since the beginning of the October turbulences – because of a faster growth of risk assets in comparison with the capital. The indicator level of 20.8% continues to be almost 9 p.p. above the prescribed minimum. Stress tests, stipulated by the Vienna Initiative, will reveal if there is a need for a possible capital build-up of some of the banks.

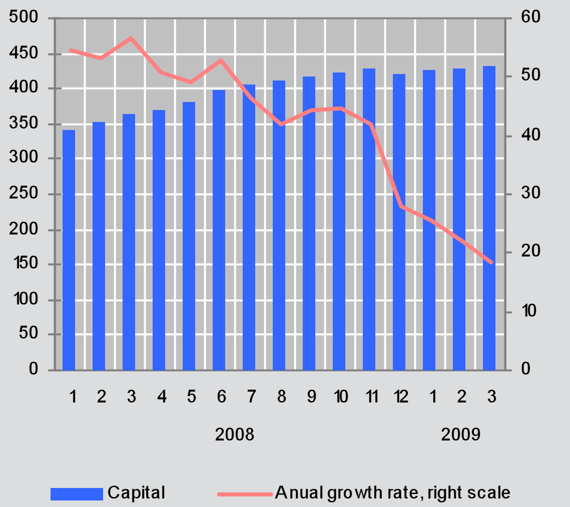
At the end of March 2009, the capital of the banking sector amounted to RSD 432 billion which is an 18% growth compared to the same period of the previous year. The beginning of the capital base growth deceleration (as well as the changes in most of the other indicators) coincides with October 2008. Until that time, the y-o-y growth rate moved from 45% to 60%.

The strong capital build-up of the banking sector during the previous years, applied as a consequence of strict regulatory demands of the National Bank of Serbia and an adequate support of the banking system for the expanding credit activity, have made domestic banks more resistant to the turbulences from the last quarter of 2008. In those terms, even the deceleration of the capital growth did not jeopardize the endurance of the banking sector, since the existing supplies were quite sufficient to alleviate the negative effects on the portfolio quality. Namely, just since the end of 2006 the banking sector's capital has been doubled, while it is particularly important that the equity capital went up by 85% during that period. As a consequence of this, even today the capital makes up for 24% of the overall balance-sheet sum of the banking sector.

At the end of March, the capital adequacy indicator was at the level of 20.8%. The cause for the 1.2 p.p. decrease in comparison with the end of 2008 is the fact that the risk assets grew more rapidly than the capital. The tendency of the decline of the capital adequacy indicator's value, that may be observed in most of the countries in the region, existed in Serbia also in 2008, but not as a consequence of a slower capital growth, but of the change in the regulations that (in July 2008) not only included additional risks for the calculation of this indicator, but also expanded the risk weights to some of the exposures, primarily in connection with mortgages and currency unprotected debtors. This indicator, however, continues to be high – it is more than 8 p.p. above the regulatory minimum in Serbia, and as much as 12 p.p. above this minimum in most of the European countries.

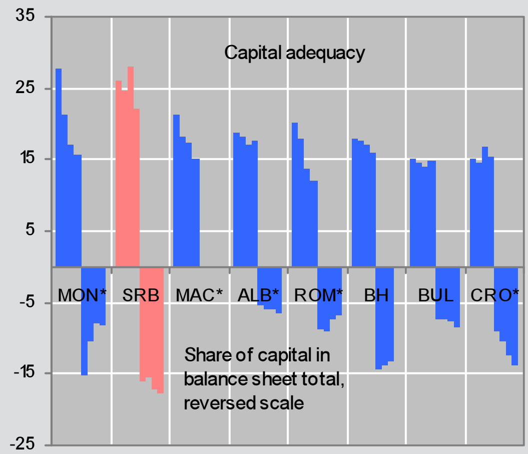
However, while the capital adequacy indicator at the level of sectors remained at a high level, it is indicative that its distribution within the sectors has changed (graph 7.17). Namely, the capital adequacy indicator was considerably reduced at some of the banks: thus at the end of 2008, the banks with the capital adequacy indicator above 20% managed half of the overall balance-sheet sum of the banking sector, while at the end of 2007 they managed as much as 80% of the overall assets. While capital adequacy is at a high level, the monitoring of this indicator and a proactive approach to the capital build-up of the banks will continue to be exceptionally significant in the forthcoming period. Because of this, stress tests according to the methodology supported by the IMF will

Chart 7.14 **Banking sector capital**
(in RSD billion, percent)



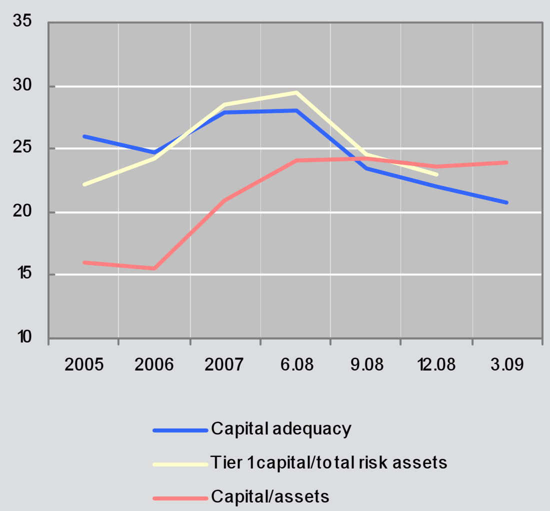
Source: National Bank of Serbia.

Chart 7.15 **Comparative overview of the capital adequacy ratio, 2005 - March 2008**
(in %)



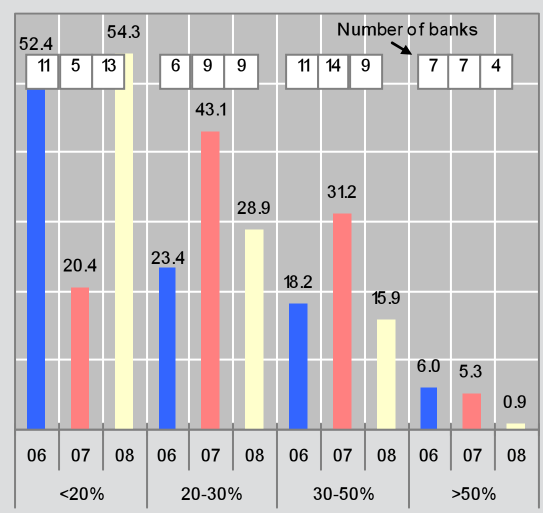
*Data as of September 30, 2008.
Source: International Monetary Fund.

Chart 7.16 **Capital adequacy ratios**
(in RSD billion, in %)



Source: National Bank of Serbia.

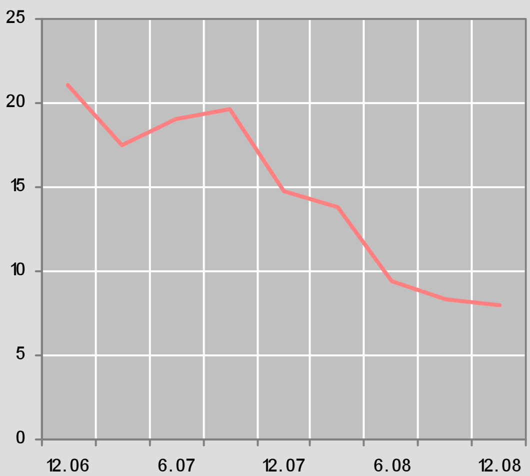
Chart 7.17 **Distribution of the capital adequacy ratio**
(in %, share of balance sheet total)



Source: National Bank of Serbia.

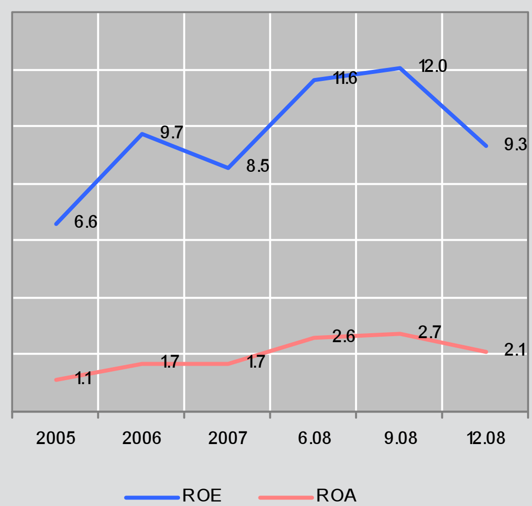
be conducted by the end of September and the banks have undertaken the obligation to participate within the scope of the negotiations that were part of the Vienna Initiative. The said stress test will show in a timely fashion if there is a need to build up the capital of some of the banks.

Chart 7.18 **FX risk indicator**
(in percent)



Source: National Bank of Serbia.

Chart 7.19 **RoA and RoE of the banking sector**
(in %)



Source: National Bank of Serbia.

4. Market Risk

Given the low exposure of banks in Serbia to the capital market, the exchange risk keeps being the basic element of the market risk. Through the end of 2008, the banking sector in Serbia kept a low exchange risk indicator[17] of 8%, which is significantly lower than 14.8% in 2007.

In the last several years the banks kept their total open foreign exchange position at a stable level thanks primarily to the operations with their parent institutions abroad. Namely, in addition to simple borrowing in foreign currency from their parent banks, in order to provide hedging for their balance-sheet currency position, the banks carried out FX swap transactions with their parent institutions – concurrent contracting of swap (current date, day of initiating transaction) purchase/sale of foreign currency for dinars and forward (future date, day of ending transaction) sale/purchase of that foreign currency for dinars at forward exchange rate, whereas the forward part of such transaction is an off-balance-sheet item. In this way, it was possible to keep the open foreign exchange position, as well as the FX risk indicator, at a low level.

Such forms of currency protection have become more difficult after the global reduction of liquidity, primarily because it has become much more difficult to get to long-term foreign currency assets abroad and then also because the swap markets have experienced reduced liquidity, as well as exposure limits. In the forthcoming period, an active role of parent institutions will have a great significance in this regard, strengthened by the agreements (Vienna Initiative) about the exposure towards Serbia, as well as an active role of the central bank through the newly-established FX swap trading instrument for transactions with commercial banks.

[17] Total risk foreign exchange position of the bank (sum of the long- and short-term open net FX positions by specific currencies and precious metals) in comparison to the capital of the bank.

5. Profitability

The banking sector in Serbia was profitable in 2008. Its nominal profit before taxation amounted to RSD 34.9 billion. 26 out of a total of 34 banks operated with profits.

The banking sector to a great extent owes its profitability during 2008 to the basic banking activities. Although the credit activity slowed down during this period, the margin scopes and gradual advancement of that deceleration enabled unhindered profitability from the credit and deposit operations. Total revenues from interests earned during 2008 – RSD 157.5 billion – are twice as large as the same revenues earned just two years earlier. On the other hand, the revenues from fees and commissions grew at a significantly slower pace and at the end of the year (RSD 38.9 billion) they were only RSD 4.5 billion higher in comparison with the previous year. If we look at this in aggregate terms, the revenues on the basis of interests and fees had a 18.4% share in the overall revenues.

The profitability was certainly also contributed to by the interests on repo operations. Significant reduction in the repo securities account in Q4 2008 had a negative impact on the profitability, since through this withdrawal, the banks redirected a part of the interest-bearing assets to the improvement of the foreign exchange liquidity. At the beginning of Q2 2009, the state of the central bank and the Republic of Serbia securities portfolio was somewhat restored, and therefore the banks will find a replacement in this type of investments for the part of the revenues that is endangered by the deceleration of the credit activity.

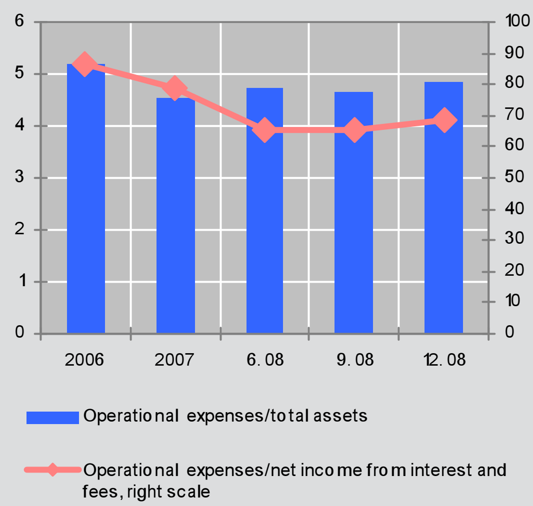
The effects of the depreciation have not had a negative effect on the financial result of the banking sector. Namely, although there was net expenditure in 2008 from currency differentials in the amount of RSD 53 billion, the effect of the change in the value of assets and liabilities was positive (RSD 70 billion), so that the overall effect of the domestic currency exchange rate volatility at the end of the year was positive – RSD 16.9 billion. The effects of the aggravation of the portfolio quality on the banks' profit and loss accounts were visible already in 2008, since the expenditures from indirect write-offs of placements and reservations went up compared to the year before (RSD 103.9 billion vs. RSD 61.1 billion). Although such effects could not endanger more considerably the overall financial result of the banking sector, it may be expected that the additional aggravation of the portfolio, along with a decelerated credit activity, will impact the profitability of the banks in Serbia more visibly in 2009.

Table 7.3
(in %)

	Gross income/total assets	Net interest income/total assets	Operational costs/total assets	Operational costs/interest and commissions net income	Financial result (in RSD billion)
Dec. 31 2005	33.63	4.47	5.55	80.95	7.3
Dec. 31 2006	39.46	4.13	5.20	86.30	16.5
Dec. 31 2007	42.31	3.97	4.54	78.09	23.5
Dec. 30 2008	55.03	5.23	4.75	65.23	21

Source: National Bank of Serbia.

Chart 7.20 **Operational expenses of the banking sector**
(in percent)



Source: National Bank of Serbia.

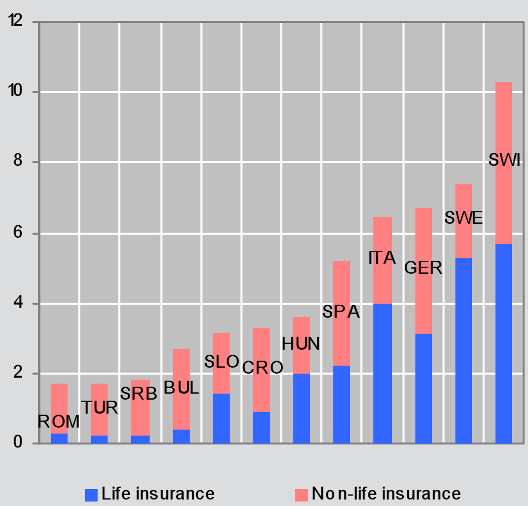
The ROE indicator at the end of 2008 amounted to 9.28%, which represents an improvement in comparison with the end of the previous year. In this regard, the position of Serbia has not changed more significantly compared to its immediate surroundings, where this indicator marked higher values. In addition to the differences between them and us that exist in the accounting, tax and prudential standards, the lower indicator in Serbia is predominantly the result of a stronger capital base of the sector, caused by prudential measures during the credit expansion phase. On the other hand, a high share of the capital in the overall balance-sheet sum contributes to a good ROA. This indicator also went up and was 2.1% at the end of 2008. Through a comparative analysis it may be concluded that the banks from Serbia have the highest efficiency rate in managing their assets.

The operational efficiency of the banking sector has been additionally improved, given the continued increase in the coverage of operational expenditures with operational revenues from interests and fees that actually started only at the end of the previous year. While there was an operational expenditures growth during 2008 (seen as a share in the overall balance-sheet sum), the stated indicator has been improved in comparison to the year 2007 (Table 7.3). The increased efficiency of the banking sector is apparent also from the indicators per employee, since the employees in 2008 “managed” higher amounts than at the end of 2007.

VIII. Non-Banking Financial Institutions

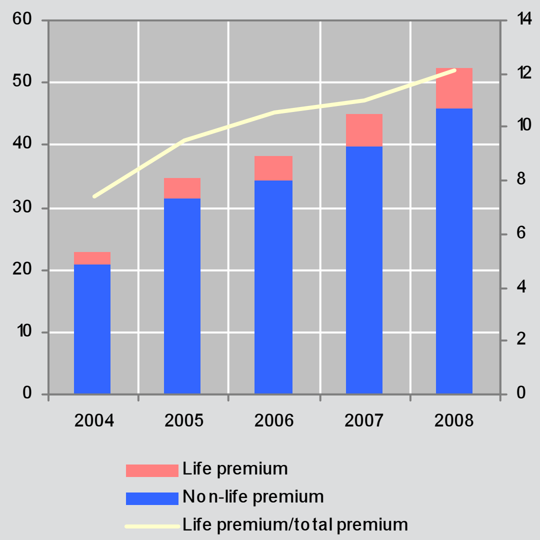
In the exceptionally bank-oriented financial system of Serbia, non-banking financial institutions supervised by the National Bank of Serbia manage around 10% of the overall financial assets. The insurance, financial leasing and voluntary pension funds sectors continued to mark growth in 2008, but it has been slowed down owing to the negative consequences of the financial and economic crisis. Despite the low relative share in the financial system, as well as the low degree of links with the banks, the risks in some of these sectors may reflect on the overall stability of the financial system, primarily through a negative impact on the confidence in financial institutions.

Chart 8.1 **Insurance business in selected countries**
(in %, total premium/GDP)



Source: National Bank of Serbia.

Chart 8.2 **Total insurance premium**
(in %)



Source: National Bank of Serbia.

1. Insurance Sector

Although the insurance sector has not been hit more significantly by the effects of the global financial crisis, the 2008 results bear witness to the deceleration of its development.

The insurance market had a significant growth in the last five years, both in terms of life and non-life insurances. Despite that, this development has not increased more significantly the relative significance of the sector in the overall financial system, primarily due to the present bank-oriented mentality of that system, but also because of numerous other factors – macroeconomic, regulatory, infrastructural and other ones. The total premium has a

Table 8.1. **Insurance sector's operations indicators**

	2004	2005	2006	2007	2008
Total premium, in billion dinars	22.6	34.7	38.3	44.8	52.2
Life insurance premium, in billion dinars	1.7	3.3	4.0	4.9	6.3
share in the total premium, in %	7.4	9.5	10.6	11.0	12.2
Non-life insurance premium, in billion dinars	20.9	31.4	34.3	39.8	45.8
Premium per capita, in euros	38.0	55.0	65.0	77.0	80.0
Life insurance premium per capita, in euros	3.0	5.0	7.0	8.0	10.0
Premium share in the GDP, in %	1.6	2.1	1.9	1.9	1.9
Total assets, in billion dinars	30.8	46.4	56.0	70.6	84.8
Capital, in billion dinars	15.6	18.6	20.7	24.7	25.3
Technical reserves, in billion dinars	11.5	22.9	28.9	39.5	51.5
Number of insurance companies	40	19	17	20	24
Number of employees	5,407	7,283	7,876	9,697	11,713

Source: National Bank of Serbia.

1.9% share in the GDP and that percentage has not changed in comparison with the year 2007. Also, the share of the premium in the overall assets of the financial system has still not exceeded 5%. The comparison with the other countries of the European continent still point at a large potential for the development of the insurance market. The first available quarterly data from 2009 support this claim, since there has been a capital reduction trend and the deceleration of the premium growth.

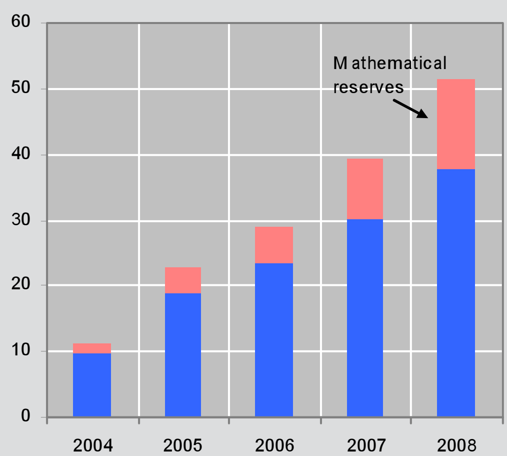
It is precisely the insufficient development of the insurance sector, as well as the still low degree of connections between this activity and the banking sector, that have reduced the exposure of insurance companies in Serbia to the negative effects of the financial crisis. Nonetheless, owing to the negative macroeconomic outlooks it is realistic to expect here as well several negative consequences. The deceleration of the economic growth, negative trends in the earnings and employment, as well as the deceleration of the credit activity and the activity of leasing companies will certainly have an impact on the assets of the insurance companies, as well as on the contracting of insurance, and will increase the problems in the collection of premiums.

Still, 2008 was yet another year of the growth of the basic indicators of the insurance sector business operations. Specifically, the overall premium of RSD 52.2 billion is 16.5% higher than at the end of 2007, which is, given the rise in the retail prices – a real growth. A particularly good indicator is further continuation of the life insurance growth, whose premium growth of 28.5% additionally increased its share in the overall premium of the insurance sector (12.2%). Like in the previous years, in the group of non-life insurances a visible annual growth of the premium is marked by the voluntary health insurance (22.9%), where there is a growth of the share from 3.9% in 2007 to 4.1% in 2008. Taking into account, on the one hand, the incoming trend of this type of insurance during the previous period and, on the other, the regulating of that field by enacting new regulations at the end of 2008 (according to which, insurance companies are obliged to align their operations in 2009), it is realistic to expect appearance of new voluntary health insurance packages.

The insurance sector assets structure did not change in 2008, with a continued dominance of short-term financial placements.

During 2008, there were no major changes in the structure of this sector's assets compared to the previous year. The

Chart 8.3 **Technical reserves**
(in RSD billion)



Source: National Bank of Serbia.

Table 8.2 **Composition of insurance assets**
(in %)

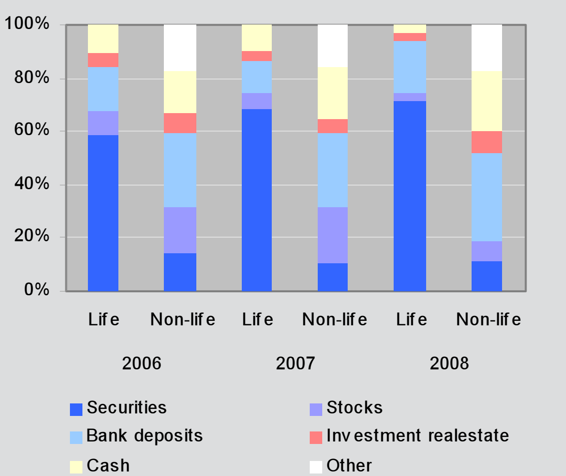
	2006	2007	2008
Short-term financial investment	26.4	28.2	27.2
Cash and cash equivalents	9.6	11.1	11.9
Other	5.9	6.0	8.2
Real estate, equipment and investment real estate	21.6	18.4	22.5
Long-term financial investment	21.9	23.4	18.2
Claims	14.6	13.0	12.0

Source: National Bank of Serbia.

biggest share in the assets during the last two years was taken by short-term financial placements and as of 31st December, 2008, this was 27.2%, with a 15.9% growth in comparison to the previous year, as opposed to 2004 and 2005 when it was property, plant and equipment that had the biggest share.

The year 2008 witness the continued trend of increasing the share of appropriating assets to technical reserves that started in 2005 when the share of these reserves was 49.3%, with 40.1% share that was taken by capital and reserves. While capital marked a somewhat slower growth (from RSD 24.7 billion in 2007 to RSD 25.3 billion in 2008), during the observed period, technical reserves marked a 30.3% growth, from RSD 39.5 billion

Graph 8.4 **Coverage of technical reserves**
(in %)



Source: National Bank of Serbia.

to RSD 51.5 billion, with the biggest growth in the structure of these reserves on the side of mathematical reserve with the 49.5% growth rate. However, in order to ensure protection of the interests of insurants and third parties that suffered damage, that is, in order to pay indemnities in a timely manner – it is not enough only to set up an adequate level of technical reserves, but also to invest them in a manner that ensures settling of undertaken liabilities in their entirety and within the set deadline, both in the present and in the future periods. In order to be able to respond to its commitments, the company is under obligation to invest the assets depending on the type of insurance it operates with, taking into account the maturity of liabilities, profitability and dispersion of investments.

At the insurance companies that deal predominantly with non-life insurance operations, there is a noticeable somewhat weaker coverage of technical reserves in 2008 compared to 2007. Specifically, the coverage with prescribed forms of assets amounted to 90.41% in 2008, while in 2007 it was 96.45%, which is interpreted in the light of stock exchange indices trends at the end of 2007 and during 2008. The indicator that takes diversification of placements in different forms into consideration was 90.35% in 2008 and 91.99% in 2007. At the insurance companies that deal predominantly with life insurance operations, the coverage of technical reserves with prescribed forms of assets, as well as this coverage realized while taking care of the diversification of placements, were also met in 2008 in the same amount – 100.30%. If we look at the total figures in Serbia, for all the companies that operate in the insurance sphere, non-life technical reserves in 2008 were mostly covered by bank deposits – 30%, cash – 20%, claims for premiums not due – 12%, government securities – 10% and shares traded at the market – 7%. In the structure of the life insurance technical reserves coverage, the most prominent is investment in government securities (71%) and then bank deposits (19%). Taking into account the influence of the current crisis on the stock exchange, as well as its possible influence on the value of the insurance companies' investments, the National Bank of Serbia enacted the *Decision on Temporary Measures for Securing Financial Stability in the Republic of Serbia*, by which the limits of investing the insurance companies' technical reserves in bank deposits were increased – from 30% to 35% for life insurance, and from 35% to 40% for non-life insurance, and changed the requirements which need to be met by the stock in which assets are invested.

The solvency of the insurance sector was not jeopardized during 2008.

As of the last day of 2008, the solvency margin amounted to RSD 12.2 billion, while the guarantee reserve was RSD 21 billion, with the margin growth that depends on me movement of the premium and the inflow of the capital of new insurance companies was much more evident. At the level of all the companies in Serbia that predominantly operate with non-life insurances, the ratio between the guarantee reserve and the solvency margin is 171.4%, and in the case of those that predominantly operate with life insurances, it is 157.9%.

The ability of an insurance company to absorb the risk of inadequate price level of the premiums, unforeseeable damages and inadequate transfer of risk to co-insurance and reinsurance (insurance risk) is measured, among other ways, by the ratio between the self-insured retention premium and the overall capital. Despite the fact that, as the consequence of the more rapid growth of the premium than the growth of the capital, the share of the self-insured retention premium in the overall capital in 2008 (at the level of all the companies in Serbia that predominantly deal with non-life insurances) was 212.51% (in 2007 it was 179%) – the guarantee reserve was significantly above the solvency margin, which means that the solvency was not threatened. The ratio between the overall capital and the technical reserves of the insurance companies that predominantly deal with non-life insurance operations, albeit mildly reduced from 33.4% in 2007 to 29.6% in 2008, continued to be stable. The above-mentioned reduction was influenced by the growth of the life-insurances' technical reserves (that went up by 39%) which is caused by the growth in the volume of contracted life insurances during the past period. The value of the stated amount in 2008 shows that there is a "reserve" of around 30% in case of inadequately measured underwritings of these companies.

2. Financial Leasing Sector

The abolishment of the mandatory reserve that leasing companies must appropriate on the grounds of foreign borrowing will contribute to the liquidity in the financial leasing sector, which will have an impact on the deceleration of the rental companies' activities.

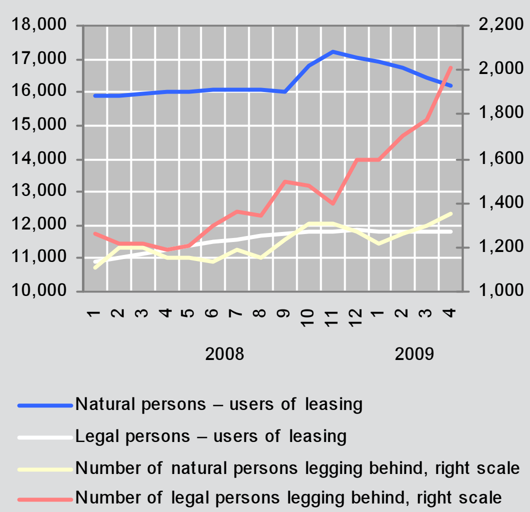
Leasing companies in Serbia depend very much on foreign borrowing. The liabilities in respect of foreign loans make up for almost 87% of the total liabilities of the banks, while the domestic loans as a source are – negligible. Given that the foreign creditors of the leasing companies are the founders or legal entities that operate within the same banking group, the global liquidity crisis will certainly leave a trace on the volume of operations in this sector. For the stated reason, the National Bank of Serbia has, within the scope of its measures aimed at increasing the liquidity, abolished the mandatory reserve that the leasing companies must appropriate in respect of the foreign borrowing, which will to some extent alleviate the continuation of obtaining assets. One of the effects of this measure is a deceleration of the operations of rental companies, that is, the companies for "operational leasing," that were founded in the previous period in order to avoid appropriations on the basis of mandatory reserve, which means that leasing operations (at least when it comes to natural persons as users) are returning to the flows supervised by the central bank.

Table 8.3 **Financial leasing companies' operations indicators**
(in %)

Return on average assets (ROA)	1.8	0.4
Return on average equity (ROE)	30.6	7.9
Net interest margin	4.3	3.1
Average passive interest rate	10.0	9.6
Expenditure coverage from interests	5.2	5.5
Operational expenditure against average placements	139.0	109.0
Оперативни расходи према просечним пласманима	3.4	3.3
Total liabilities against the capital	1,514.0	1,869.0
Long-term liabilities against the capital	1,451.0	1,793.0

Source: National Bank of Serbia.

Graph 8.5 **Number of financial leasing users**



Source: Association of Serbian Banks.

Despite the said negative trend that started in the last quarter of 2008, the financial leasing companies marked a growth in that year. Specifically, the overall placements on the basis of financial leasing amounted to RSD 95 billion (26.3% growth). Such growth of placements contributed to a situation in which the assets of the financial leasing sector grew faster in the last year than the assets of the banking sector. As a consequence of such growth, the financial leasing sector increased its share in the overall financial system to 6.2%.

The most significant growth of the sector-held share in the overall placements on the basis of leasing during the year was marked by transportation, warehousing and communications – as opposed to the end of 2007 when the most prominent was the trade sector.

For the structure of placements according to the subject of leasing, it is characteristic that there is further increase in the share of the financing of freight vehicles, minibuses and buses/coaches. The financing of passenger vehicles was, after a large one-year drop in 2007 (10 p.p.), additionally reduced by the end of 2008 by two percentage points and is now 23%.

According to the data of the Association of Serbian Banks, the number of users who leg behind with the payments over 90 days has also gone up Since October (graph 8.5). The generally reduced capacity for servicing liabilities has caused that this trend is more evident in the case of natural persons where the number of such users has gone up rather abruptly since the beginning of the spilling over of the crisis on Serbia.

3. Voluntary Pension Funds

Two and a half years after the beginning of the operations of voluntary pensions funds in Serbia, their development is slowed down, mostly due to the shallowness of the domestic capital market, but also because of the unfavourable global financial climate; nevertheless, voluntary pension funds managed to increase their net assets in 2008, as well as the number of members, which bears witness to a large potential of this form of long-term savings.

Voluntary pension funds in Serbia – ten of them – and nine companies that manage them, operated in 2008 under strong negative impact both from the changes in the surrounding region and from local events.

These funds have been operating at our market for a little less than two years, which is a relatively short period of time given the character of their operations. There is large space for the development of this sector, since the net assets of the funds in the gross domestic product are less than 1%, which is significantly lower than the European average (15%) or the average of the surrounding countries (5%), as well as that only 7.4% of employees has a concluded contract on the membership in some of the existing funds.

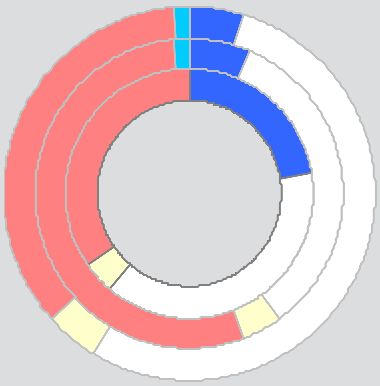
The overall number of users of the services of voluntary pension funds[18] at the end of 2009 was 155,954. At the same time, the number of users who have accounts in several funds has been relatively reduced and is 24,641, that is, 15.8% of the total number. With the new payments of contributions, as well as the increase in the value of investment units of all funds in Q4, the average amount of assets per user has also been increased and thus at the end of 2008 it was RSD 29,755, or RSD 34,593 excluding the users who have never paid the contribution.

During 2008, the overall assets of the funds marked a 52% growth and at the end of the year they amounted to around RSD 4.6 billion. With the increase in the net assets, the problem of undeveloped domestic financial market and limited possibilities for investments has become more and more evident. In the course of the year, a part of the assets of one fund was invested in property with the expected intensification of the investments in treasury bills of the Republic of Serbia. So far, the possibility of investing assets abroad has not been utilized and therefore this type of investments may be expected in the future. Until now, the structure of assets has changed only because of the changes in the financial market. The most important change consisted of the decrease in the stock share in favour of the increase in the transaction accounts, while the bonds of the so-called old hard currency savings also became more significant in the last quarter. At the end of 2008, around RSD 1.7 billion is in foreign currency (so far only in euros), which is 36% of the assets, with close to RSD 3 billion in domestic currency, that is 64% of the assets.

The changes in the structure of assets have also caused the changes in the exposure of parts of the funds' assets to individual types of market risk. Specifically, at the end of

[18] User means an individual, with unique personal ID number or passport number (for foreign persons), who may have one or more individual accounts in the same fund or different funds.

Chart 8.6 **Composition of net VPF assets***
(in %)



* End-2007 - the innner circle End 2008 - the middle circle, March 2009 - the outer circle.
Source: National Bank of Serbia.

than at the end of 2007. The reason for this growth is the increase of the assets in the dinar accounts.

An exceptionally low turnover at the capital market during 2008 contributed to a situation in which the share of the voluntary pension funds in the stock exchange turnover was 2.19% at the end of that year, that is, by over 1 p.p. higher in comparison with the previous year. As opposed to the larger part of the year, when the funds carried out a significantly higher part of the securities trading at the Belgrade Stock Exchange, in the last quarter the ratio between the trading at the stock exchange and out of it was rather even: close to 49% of the overall turnover consists of the over-the-counter trading. During that quarter, the funds were again on the side of the demand and the ratio between the purchase and sale of securities is 2.57.

With the exception of the recovery in Q2, most of the voluntary pension funds experienced a drop in value during 2008. It was particularly evident in Q3 because the negative trends at the world financial markets also spilled over to the Belgrade Stock Exchange. The index of the most liquid stock (Belex 15) lost around 44% of its value in Q3, while the dinar strengthened by around 3% during the same period. FONDEX, the average weighted value of the investment units of all funds lost around 10% of its value in 2008.

The value of the investment units of all of the voluntary pension funds experienced a growth in the last quarter, after the first nine months of 2008, which also continued in 2009. This trend in respect of the investment units' value is a consequence of the reduction of the stock share

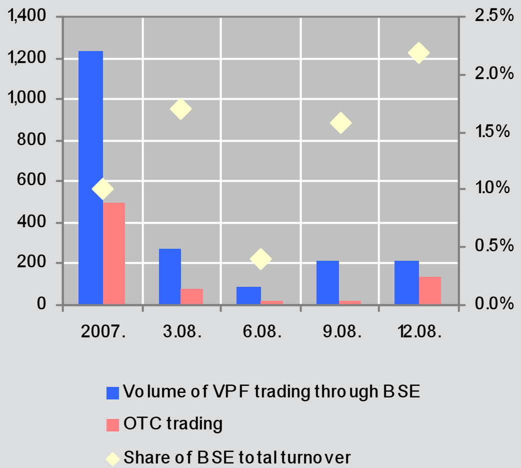
Table 8.4 **Exposure of the funds' assets to the market risk**

	Securities price change risk	Property price change risk	Currency risk	Interest risk	Dec. 2007	`March 2008	`June 2008	Sept. 2008	Dec. 2008
Shares	+	-	-	-	22.4%	19.5%	17.3%	11.3%	6.3%
Old hard currency savings bonds	-	-	+	+	37.8%	39.9%	29.9%	29.1%	33.7%
Government bills	-	-	-	-	0.8%	0.7%	0.0%	0.1%	0.0%
Property	-	+	+	-	0.0%	0.0%	1.8%	1.7%	1.7%
Unfixed assets and term deposits on dinar account	-	-	-	+	37.8%	39.6%	44.7%	54.0%	57.4%
Unfixed assets on foreign currency account	-	-	+	+	1.0%	0.2%	6.2%	3.7%	0.9%

Source: National Bank of Serbia.

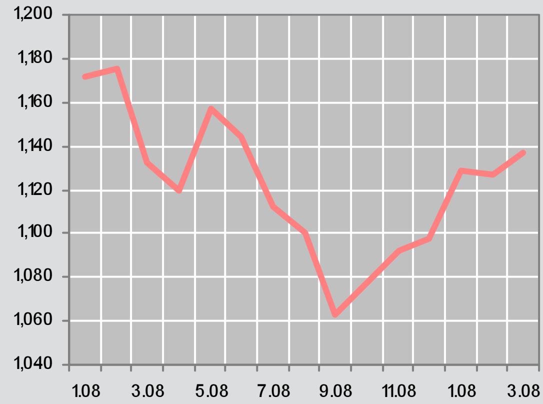
2008, as a consequence of significantly lower investments in shares, the exposure of the funds' assets to the risk of the securities price change was reduced. The exposure to the property price change risk is low, because of the small share of property in the overall assets of the funds. Around 36% of the funds' assets are exposed to the currency risk, which is somewhat less in comparison to the year before. The biggest part of the assets that is directly influences by the changes in the exchange rate comprises the bonds of the so-called old hard currency savings. Around 92% of the assets are exposed to the interest rate change risk, which is by around 20% more

Chart 8.7 **VPF share of Belegrade Stock Exchange trading**
(in RSD million, %)



Source: National Bank of Serbia.

Chart 8.8 **FONDEX**
(in RSD)



Source: National Bank of Serbia.

in the portfolios of the funds and the increase of the bonds share. Although unfavourable stock price trends at the stock exchange had a negative impact on the value of the investment unit, given that the companies have reduced the stock share in the assets of the funds – the said changes could not influence the decrease of its value to the same degree. In this sense, it may be expected that the recent moderate recovery of the stock trading at the Belgrade Stock Exchange will partially increase the stock share in the assets of the funds. On the other hand, taking into account its currency structure, the weakening of the domestic currency reflected positively on that part of the assets. Consequently, during that period FONDEX marked a rise in its value (graph 8.8).

List of tables and graphs

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