Financial Sector Development in Serbia: Closing Ranks with Peers[1]

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After a major structural reshuffling in the early 2000s, the Serbian banking sector embarked on a rapid catching-up process. Against the background of an emerging credit boom, financial deepening has advanced rapidly in recent years, largely making up for the late onset of banking reform. However, the pace of convergence to the intermediation levels of Serbia's Central, Eastern and Southeastern European peers as well as the high degree of euroization have also raised financial stability concerns, with credit and foreign exchange risks representing the main challenges. The sector's high capitalization, its increasing efficiency, the predominance of foreign banks and the central bank's efforts to rein in lending growth to more sustainable levels are important factors in alleviating financial stability concerns. Profitability is still comparatively low, but increasing.

1 Introduction

Serbian banks and financial markets have exhibited some of the most dynamic rates of expansion among transition economies in Central, Eastern and Southeastern Europe (CESEE) in recent years. While the speed of financial growth has given rise to concern, there can be no doubt that a sizeable slice of this growth is embodied by Serbia's structural catching-up efforts with its regional peers after the "lost decade" of the 1990s. This study aims to retrace and analyze the momentous development of Serbian financial markets, in particular the banking system, since 2002. In this sense, the study constitutes an update and an extension of an earlier article in this publication's predecessor, Focus on Transition (Barisitz, 2003).[3] In the realm of banking, the topics covered comprise the evolution of legal foundations, banking supervision, banks' asset, liability and earnings structure, bank restructuring, the role of foreign banks and FDI, credit growth, risks and reactions, and vulnerabilities. Nonbanking financial sector analysis will mainly focus on recent developments in the insurance sector, in financial leasing and in the pension fund sector, but will also include other financial market segments, such as stock and bond markets.

This study is organized along the following lines. Section 2 provides a brief overview of the development of the macrostructural background in the observation period (2002 to early 2008). Section 3 discusses reform measures targeting the legal framework. Section 4 focuses on overall banking development and reforms: The situation of the sector in 2002 is briefly outlined; this is followed by a survey of structural changes, notably the strong inflow of foreign capital. Section 5 analyzes the sector's asset and liability structure and its profitability. Section 6 is devoted to a synopsis of the sector's strengths and vulnerabilities: The recent Serbian banking and credit boom, its sources, and authorities' policy reactions are described and assessed, also in comparison with developments in neighboring peers. Moreover, the sector's economic strengths and vulnerabilities

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[3] *While the present update also extends the survey to Serbia's nonbanking financial sector, Montenegro is excluded after having become an independent state in June 2006; data on Kosovo are also excluded.*

are appraised by taking a look at the banking system's shock-absorbing capacities. Moving beyond the banking sector, section 7 provides a brief overview of recent payment system developments, while section 8 deals with nonbank financial institutions as well as with stock and bond markets. Finally, section 9 wraps up with a summarizing assessment and some conclusions.

2 Macroeconomic and Structural Background

A sound macroeconomic environment is generally seen as a prerequisite for the dynamic development of a banking system. In this respect, for many years the development of the Serbian banking sector reflected the uncertain and fragile macroeconomic environment.[4] More recently, however, driven by strong domestic demand (mainly private consumption), economic expansion has been robust, gathering momentum particularly as of 2004, when GDP growth (in real terms) spiked at 8.2%. In 2006, the economy grew by 5.6%, while in 2007 growth reached 7.1% (see table 1). Despite a difficult global environment, the Serbian economy has so far retained its strong momentum, with GDP growth having reached 7.3% year on year in the first half of 2008. This brisk growth, (first) successes of macrostabilization, and fiscal reforms have improved the country's budgetary performance, leading to growing budget surpluses in 2004 and 2005. However, some fiscal loosening has emerged more recently. This loosening, strong wage hikes in the public sector, and the gathering credit boom and consumer buying spree have been fueling demand and economic activity most recently. As a result, the current account deficit widened to 10% of GDP in 2006 and further to around 13% in 2007, which may point to a degree of overheating and which poses questions as to external sustainability over the medium to longer term.

In the years 2002 to 2006, the current account deficit was covered to a considerable degree by foreign direct investment (FDI) inflows (including a few major successful privatizations to foreigners in 2006). However, in 2007, FDI inflows decelerated sharply as the privatization process slowed down against the background of rising political uncertainties. In this respect, while privatization and restructuring have made overall progress since 2004, the public sector still accounted for 40% to 45% of GDP in 2007.[5] In early 2005, a new enterprise bankruptcy law entered into force, which enhanced the rights of creditors. However, implementation has encountered obstacles. For instance, collateral recovery is complex and time-consuming. State subsidies to often inefficient socially owned companies are still significant. With limited industrial competitiveness, corporate reforms remain a key challenge.

After the inflationary spike in 2005 (year-end retail price inflation: 17.7%), the central bank, Narodna banka Srbije (NBS), loosened its managed floating exchange rate regime (in place since early 2003 and geared to a gradual nominal depreciation of the dinar). In September 2006, the monetary authority adopted a new policy framework that focused on achieving price stability through numeric inflation objectives, which can be viewed as a kind of informal inflation targeting. A substantial nominal dinar appreciation over the second half of 2006 together

[4] *See Barisitz (2003, pp. 191–195).*

[5] *EBRD (2007).*

Table 1

Main Macroeconomic Indicators

	2002	2003	2004	2005	2006	2007	2008[4]
GDP growth (real, annual change, %)	4.2	2.8	8.2	6.0	5.6	7.1	7.3
Industrial production (real, annual change, %)	1.8	−3.0	7.1	0.8	4.7	3.7	4.1
Unemployment rate (%)[1]	13.3	14.6	18.5	20.8	20.9	18.1	13.3
Inflation (RPI, end of period, %)	14.8	7.8	13.7	17.7	6.6	10.1	12.1
Exchange rate (period average, RSD/EUR)	60.7	65.1	72.6	82.9	84.2	80.0	81.8
Exchange rate (period average, RSD/USD)	64.3	57.5	58.4	67.0	67.3	58.5	53.5
Policy rate (period average, %)[2]	12.8	10.4	14.9	15.6	18.0	10.3	13.8
Broad money (end of period, annual change, %)	62.9	12.6	17.0	31.4	45.2	39.9	26.9
Broad money (end of period, % of GDP)	10.9	10.7	10.2	11.0	13.7	16.3	18.8
Budget balance (consolidated general government, % of GDP)	−3.1	−1.1	0.9	1.9	1.7	0.5	−1.0
Public debt (% of GDP)	69.5	64.3	53.3	50.3	36.2	29.4	25.3
Current account balance (% of GDP)	−4.1	−7.5	−13.4	−8.4	−9.8	−12.9	−19.3
Net FDI inflows (% of GDP)	3.0	6.7	3.9	5.9	14.1	5.4	6.7
Gross external debt (end of period, % of GDP)	70.8	66.7	57.5	59.3	64.6	64.1	62.2
– Private debt (% of gross external debt)	21.6	23.1	31.3	41.0	56.9	65.5	67.6
– Short-term debt (% of gross external debt)	9.1	7.8	7.1	9.8	8.5	7.4	6.2
Foreign exchange reserves (end of period, % of GDP)[3]	14.4	17.4	17.3	22.4	39.2	34.7	30.4

Source: NBS, Statistical Office of the Republic of Serbia, Ministry of Finance of the Republic of Serbia.

[1] *According to labor force survey. 2008: First quarter.*
[2] *2002–2006: Weighted average interest rate on securities used by the NBS in open market operations. 2007: Two-week repo rate.*
[3] *Only foreign exchange reserves of the NBS.*
[4] *Data for the first half of 2008, thus figures expressed as a % of GDP are not directly comparable with full-year figures.*

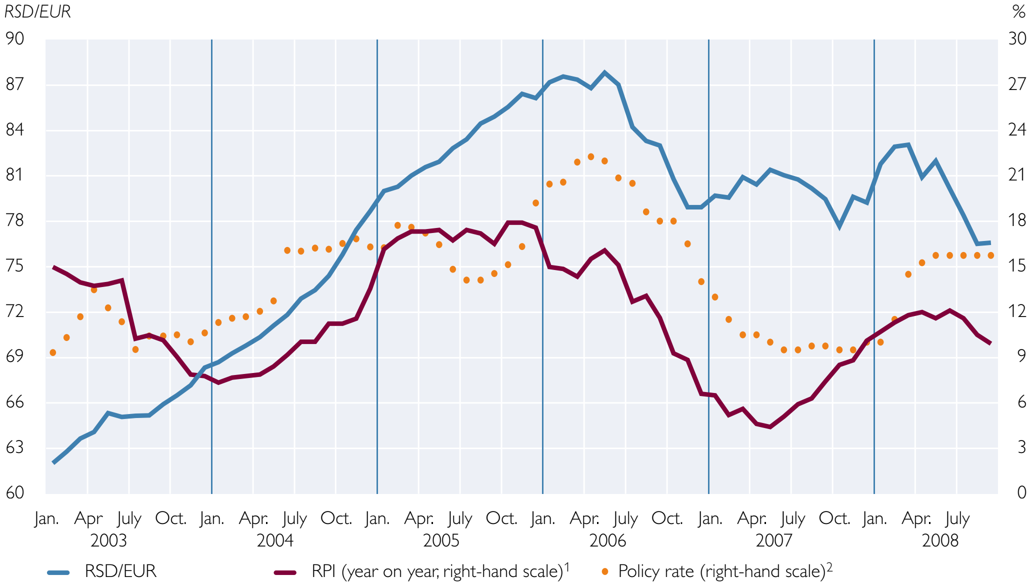
with considerably rising interest rate levels and the government's (temporary) freezing of controlled prices contributed to a decline of year-end inflation to 6.6% in 2006. Given sharply rising food prices (due to both adverse domestic weather conditions and global price movements), soaring energy prices and also demand-pull factors (strong domestic demand as a result of robust wage and credit growth), inflation was back in the double digits at the end of 2007 (see table 1). For similar reasons, inflationary pressures remained pronounced also in the first half of 2008, with retail price inflation reaching 12.1% in June. Strong foreign direct and portfolio investment inflows (including privatization proceeds) have allowed the central bank to steadily increase its foreign exchange reserves to a comfortable level of about one-third of GDP and have permitted the authorities to prepay some of their foreign debt. While short-term macroeconomic perspectives remain relatively favorable, latent political instability (though possibly contained since the formation of a new government in mid-2008), corruption[6] and problems in the functioning of the judicial system continue to weigh on the business climate. The World Bank's Doing Business 2008 report ranks Serbia 86th out of a total of 177 countries, behind Bulgaria (46), Romania (48), FYR Macedonia[7] (75) and Montenegro (81), but before Croatia (97), Bosnia and Herzegovina (105) and Albania (136).

[6] *As measured by the governance indicators of the World Bank, Serbia's control of corruption in 2007 (governance score: –0.41) is slightly better than in the neighboring countries Bosnia and Herzegovina and Montenegro, and much better than in Albania, but weaker than in peers Croatia, Romania and Bulgaria. Looking at Transparency International's corruption perception index 2007, Serbia ranks 79th, on a par with Georgia, Saudi Arabia and Trinidad and Tobago.*

[7] *Former Yugoslav Republic of Macedonia.*

Chart 1

Monetary Developments in Serbia



Source: NBS, OeNB.

[1] *Retail price inflation.*
[2] *End of period.*

3 Evolution of the Legal Framework for Banking

The Bank Insolvency Law (2001) and the Law on Banks and Other Financial Organizations (mid-2002) as well as the Law on Payment Operations (late 2002), and their subsequent amendments, laid the foundation for market-oriented banking in Serbia.[8] However, the speed of economic change rendered adjustments necessary early on. At end-2002, minimum capital requirements for credit institutions were raised, which supported consolidation tendencies. The new accounting law enacted in early 2003 required all banks to adopt IAS (International Accounting Standards) as an accounting framework as from 2003. This has set off a gradual and not yet fully completed change from traditional formalistic and compliance-oriented bookkeeping and supervision behavior to substantive risk-based approaches.

To increase transparency and simplify lending, the Association of Serbian Banks established a Credit Bureau at the beginning of 2004, which collects data on credit outstanding and default information about bank clients, including households. In mid-2005, a new Law on Deposit Insurance providing for compulsory insurance of accounts of natural persons up to a limit of EUR 3,000 was passed.

While it is still evolving, transition toward risk-based practices has been supported by the enactment of a new Law on Banks, which entered into force in December 2005 (see box 1). This piece of legislation aligned key regulatory matters with Basel Core Principles for Effective Banking Supervision and EU directives: It prescribed improved systems for banks' risk monitoring and governance,

[8] *See Barisitz (2003, pp. 198–200).*

introduced consolidated supervision, tightened related party exposure limits as well as provisioning requirements, and strengthened banks' licensing procedures by applying fit and proper criteria to founders and acquirers of shares. While the legal framework was judged to meet international standards by mid-2006,[9] full enforcement of the new rules and elimination of regulatory forbearance remain challenges yet to be surmounted.

Box 1

Chronology of Major Banking Sector Developments and Reforms in Serbia

2001	*May*	*Narodna banka Jugoslavije (NBJ) carries out comprehensive assessment of sector, elaborates bank restructuring strategy (with IMF and World Bank assistance). Tightly managed float, reference currency: euro (since December 2000).*
	July	*Raiffeisenbank Jugoslavija set up.*
	October	*Enactment of the Law on Bank Rehabilitation, Bankruptcy and Liquidation and the Law on the Federal Agency for Deposit Insurance and Bank Rehabilitation.*
	December	*Closure of 19 small and undercapitalized credit institutions.*
2002	*January*	*Serbian authorities liquidate four large, distressed and deeply insolvent banks (Beobanka, Beogradska banka, Investbanka and Jugobanka), which comprised 57% of the sector's balance sheet total and 37% of the sector's work force.*
	April	*Foreign Exchange Law enacted*
	June	*NBJ establishes the Central Credit Registry for recording data on banking claims from large debtors.*
	July	*Amendments to Law on Banks and Other Financial Organizations strengthen NBJ's powers. The central bank is authorized to modify regulations and supervisory rules without parliamentary consent. At the same time, asset classification and provisioning rules are tightened. Minimum capital requirement for banks to be increased to EUR 10 million by end-2003.*
	August	*Serbia launches a EUR 4.2 billion issue of state obligations (savings bonds) in exchange for households' "frozen foreign exchange deposits." Serbian government acquires majority stakes in (i.e. partly nationalizes) 16 medium-sized banks (comprising over one-half of the sector's balance sheet total) by converting state claims (related to guarantees for banks' foreign exchange liabilities to Paris and London Clubs and related to frozen foreign exchange deposits) into shares (debt-equity swap) to facilitate privatization.*
2003	*January*	*Law on Payment Operations enacted. Bureaux for Clearing and Payment (Zavodi za obračun i plaćanja/ZOP) abolished and replaced by bank-based settlement. New accounting law passed, requiring all credit institutions to adopt IAS (International Accounting Standards)/IFRS (International Financial Reporting Standards) as permanent accounting framework.*
	February	*NBJ becomes NBS (Narodna banka Srbije).*
	March	*Eurobank EFG (Greece) acquires Postbanka, later renames it Eurobank EFG stedionica.*
	July	*New law on the National Bank of Serbia enacted.*
2004	*September*	*Credit Bureau established by Association of Serbian Banks, collecting data on indebtedness of prospective clients.*
2005	*February*	*New enterprise bankruptcy law enters into force. Creditor rights strengthened. Banca Intesa acquires Delta banka (for EUR 335 million), Alpha Bank (Greece) buys Jubanka.*
	April	*Minimum capital adequacy ratio raised from 8% to 10%.*
	July	*New law on deposit insurance enacted. Deposit Insurance Agency (Agencija za osiguranje depozita, AOD) provides compulsory insurance of deposits of natural persons, coverage up to EUR 3,000.*

[9] *See Hayward and Westphal (2006, p. 34).*

	September	*NBS acquires authority for regulating and supervising the leasing industry.*
	December	*A new Law on Banks is enacted. Key regulatory matters aligned with Basel Core Principles and EU directives, including the introduction of consolidated supervision, integrated risk management systems and tightening of related party exposure limits.*
2006	*January*	*Minimum capital adequacy ratio increased from 10% to 12%.*
	February	*Loosening of managed float.*
	March	*Recapitalization of Komercijalna banka (largest state-owned bank).*
	September	*Introduction of informal inflation targeting.*
	October	*New Law on Banks enters into force.*
	November	*Sale of Vojvodjanska banka to the National Bank of Greece (for EUR 360 million).*
2007		*Numerous regulatory and supervisory updates.*
2008	*July*	*New regulations in the area of supervision enter into force: They refer i.a. to bank solvency and liquidity and to the identification, measurement, management and monitoring of risks to which credit institutions are exposed, and represent an important step toward adjustment of Serbian rules to EU directives. Measures include the introduction of new capital requirements and a methodology for calculation of the capital adequacy ratio, and for the classification of balance sheet assets and off balance sheet items.*

Source: Authors' compilation.

The banking sector's institutional framework still offers room for further development. The EBRD's Banking Sector Reform Index (which measures the quality of bank regulation and supervision, banking competition and the level of financial deepening, etc.) attests Serbia a score of 2.7 (on a scale from 1 to 4+), a comparatively moderate standing (see table 2) on a par with that of all other countries in the Western Balkans but much lower than that of more advanced CESEE economies (e.g. Slovenia: 3.3, Poland: 3.7, Hungary: 4.0).

Table 2

Structure of the Banking Sector

	2002	2003	2004	2005	2006	2007	2008[5]
Number of banks (of which foreign-owned)[1]	50 (12)	47 (16)	43 (11)	40 (17)	37 (22)	35 (21)	34 (20)
Number of employees (in thousands)	18.9	22.3	23.5	25.7	28.1	30.2	31.3
Number of organizational units[2]	960	1.465	1.709	1.867	2.158	2.435	2.564
Market share of state-owned/socially owned banks[1] (% of total assets)	49.4	34.1	23.4	23.9	14.8	15,8	15,9
Market share of foreign-owned banks[1] (% of total assets)	27.0	38.4	37.7	66.0	78.7	75,5	75,0
Market share of the five largest banks (% of total assets)	46.6	46.2	46.9	50.3	47.2	44.6	46.2
Herfindahl-Hirschmann index[3]	n.a.	599	599	665	614	578	621
EBRD index of banking sector reform[4]	2.3	2.3	2.3	2.7	2.7	2.7	2.7

Source: NBS, EBRD, OeNB.

[1] *Majority ownership.*
[2] *Including business units, branches, branch offices, teller units and agencies.*
[3] *Sum of the squared asset shares of individual banks. The index ranges between 0 and 10,000. A figure below 1,000 suggests a nonconcentrated sector, whereas a figure above 1,800 indicates high concentration.*
[4] *The scores range from 1 (little progress beyond establishment of a two-tier system) to 4+ (standards and performance of advanced industrial economies).*
[5] *As of June 30, 2008.*

4 Structural Development of the Banking Sector: An Overview

Following the "lost decade" of the 1990s, the new Serbian authorities carried out incisive bank restructuring measures in 2001 and 2002, which stabilized the sector.[10] Once this had happened, foreign strategic investors did not wait for long to get involved and to tap the large banking potential in the last Southeastern European country whose sector was not yet dominated by FDI. Serbia then went through a radical transformation of ownership structures in but five years and in this sense "caught up" with its regional peers, who themselves had taken 10 to 15 years to arrive at a similar level.

Obviously persuaded by neighboring countries' experiences, the central bank and the government decided to give priority to the bank privatization method of direct sales to foreign strategic investors, even if realization did not turn out to be as swift as hoped for.[11] Growing competition and regulatory tightening (e.g. higher capital requirements) contributed to the steady decline of the total number of banks in Serbia from 50 at end-2002 to 35 at year-end 2007. At the same time, the number of foreign-owned banks rose from 12 to 21 (see table 2). The consolidation process is still under way, with the merger activity between foreign banks' subsidiaries currently being the main driving force behind consolidation. On this note, the number of banks continued to fall in the first half of 2008, in light of the merger of the Serbian units of EFG Eurobank. In May 2008, the NBS granted an operating license to Russia's Moscow Bank, which started operations in August 2008, bringing the number of operating banks to 35 again.

After the carve-out in 2001 to 2002 had triggered a sharp contraction of the total number of bank employees in Serbia, strong demand for banking services and the repositioning of banks in the fight for market share brought about a steady increase of banking employment, so that the precrisis level was surpassed already in 2006. Bank staff levels nearly doubled to 31,331 between 2002 and end-June 2008. Similarly, strong demand and increasing market penetration by banking services was also reflected by a rapidly expanding banking network. The number of organizational units (including business units, branches, branch offices, teller units and agencies) has risen considerably, widening from just 960 in 2002 to nearly 2,600 at end-June 2008.

At end-2002, majority state-owned and socially owned banks still dominated the sector, but foreign-owned credit institutions had within a year doubled their share in total assets to over one quarter. Given that the sector was very small at the time and that many domestic banks were still burdened by the legacies of the past, foreign-owned competitors swiftly gathered terrain, garnering the lion's share of rapidly growing new deposits. While initially hesitant in lending (because of the weak rule of law), foreign-owned banks subsequently became the key drivers of credit growth. As a result of a number of acquisitions and of organic growth, foreign ownership has come to dominate among the 15 largest Serbian banks (see table 2). In terms of banking sector capital, foreign banks accounted for a market share of some 70% at the end of June 2008, up from 19% in 2002, while, at the same time, their share in total banking sector assets rose from 27% in 2002 to

[10] *For a detailed discussion of these measures, see Barisitz (2003, pp. 198–201).*

[11] *See Gardó (2005, p. 57).*

75% in June 2008 (see table 2). Although this is lower than in many other CESEE countries (e.g. the Czech Republic: 98%, Bosnia and Herzegovina: 91%, Croatia: 90%, Romania: 88%), it is on a par with the respective share in Bulgaria (75%), and exceeds that in Slovenia (29%), Latvia (56%), Poland (67%) and Hungary (68%). EU banks overwhelmingly dominate among foreign-owned institutions, and thus prevail in the sector as a whole. Especially banks from Austria, Greece, Italy and France have taken the lead, but banks from Serbia's regional peers (e.g. Hungary, Slovenia) are present as well. According to NBS data, Austrian groups (including Bank Austria, which is a member of the UniCredit Group) accounted for roughly 40% of total foreign involvement (in terms of assets), or for about 30% of Serbia's total banking sector assets in 2007. Vice versa, according to BIS data on consolidated foreign claims of reporting banks (immediate borrower basis), the exposure of Austrian banks in Serbia accounted for a fairly low 1.8% of Austrian banks' total foreign exposure and for about 3.5% of their exposure in Central and Eastern Europe in 2007.

With foreign banks increasingly gaining ground, the asset share of state-owned credit institutions fell from about 50% in 2002 to 16% in the second quarter of 2008, and domestic private banks' share was squeezed to less than 10%. Nevertheless, given the still relatively large number (eight) of banks with more or less substantial state involvement, ongoing bank privatization and related merger and acquisition activities as well as increasing competitive pressures are expected to underpin further consolidation in the years ahead.

Table 3

Ranking of Serbian Banks in Terms of Total Assets on June 30, 2008

	Bank	Main shareholder	Total assets (EUR million)	Market share (%)
1	Banca Intesa a.d. Beograd	Intesa Holding International (93%), IFC (7%)	2,758.9	13.1
2	Raiffeisen banka a.d. Beograd	Raiffeisen International Beteiligungsholding (100%)	2,078.8	9.9
3	Komercijalna banka a.d. Beograd	Republic of Serbia (42.6%), EBRD (25%)	1,985.6	9.5
4	Hypo Alpe-Adria-Bank a.d. Beograd	Hypo Alpe-Adria-Bank International AG (99.9%)	1,576.2	7.5
5	Eurobank EFG Stedionica a.d. Beograd	EFG Eurobank Ergasias Athens (55.2%), EFG New Europe Holding (42.7%)	1,287.9	6.1
6	Agroindustrijska komercijalna banka AIK banka a.d. Niš	ATEBANK (20.3%), Irva Beograd (9.6%), IBT (5.9%)	1,067.4	5.1
7	Vojvođanska banka a.d. Novi Sad	National Bank of Greece (100%)	1,041.3	5.0
8	Unicredit Bank Srbija a.d. Beograd	Bank Austria AG (99.9%)	1,002.2	4.8
9	Société Générale banka Srbija a.d. Beograd	Société Générale S.A. (100%)	838.1	4.0
10	ProCredit Bank a.d. Beograd	ProCredit Holding (83.3%), Commerzbank (16.7%)	790.6	3.8
11	Alpha Bank Srbija a.d. Beograd	Alpha Bank A.E. Athens (100%)	739.2	3.5
12	Volksbank a.d. Beograd	Volksbank International AG (95.7%)	679.7	3.2
13	OTP banka Srbija a.d. Novi Sad	OTP Bank (90.4%)	573.1	2.7
14	Erste Bank a.d. Novi Sad	Erste Bank der Österreichischen Sparkassen AG (74%), Steiermärkische Sparkasse (26%)	551.1	2.6
15	Poljoprivredna banka Agrobanka a.d. Beograd	Republic of Serbia (20.1%), Hypo Kastodi (6.7%)	481.9	2.3

Source: Narodna banka Srbije, OeNB.

In June 2008, Italy's Banca Intesa was the largest Serbian credit institution, with a market share of 13.1%, followed by Austrian-owned Raiffeisen banka (9.9%) and the still partially state-owned Komercijalna banka (9.5%) (see table 3). The five largest banks together accounted for 46.2% of the Serbian balance sheet total in June 2008, reflecting a relatively low degree of concentration, which is also mirrored by a Herfindahl-Hirschman Index (HHI) of 621 (see table 2). The lending business is even less concentrated, with the top five banks commanding a market share of 44.7% (HHI: 599) at end-June 2008, while in terms of deposits the top five banks held a market share of 49.6% (HHI: 706).

5 Balance Sheet Structure and Profitability of the Banking Sector

Like other emerging European economies before, Serbia experienced a strong and very swift expansion of banking activity, once the regime change and the launch of restructuring had set the stage. The balance sheet total of the banking sector doubled in relative terms from 35% of GDP in 2002 to 70% at year-end 2007, which is still below the levels witnessed in more advanced transition countries like Hungary, Slovenia or Croatia. However, Serbia has caught up with or overtaken,

Table 4

Asset Structure of the Banking Sector

	2002	2003	2004	2005	2006	2007	2008[5]
	% of total assets						
Claims on NBS	17.5	16.4	16.2	22.5	36.8	33.9	31.3
Credit[1] to domestic nonbanks	51.3	53.3	58.0	58.3	48.1	49.8	54.0
of which: credit to general government	*3.6*	*3.1*	*3.7*	*2.8*	*1.8*	*0.9*	*0.9*
credit to households	*5.2*	*6.9*	*11.1*	*14.9*	*16.3*	*18.6*	*19.9*
credit to enterprises[2]	*42.5*	*43.3*	*43.1*	*40.6*	*29.9*	*30.3*	*33.3*
Foreign assets	15.0	13.2	10.6	7.3	4.4	6.6	4.5
Other assets[3]	16.2	17.1	15.3	11.9	10.8	9.7	10.1
Total assets	**100.0**	**100.0**	**100.1**	**100.0**	**100.1**	**100.0**	**99.9**
Memorandum items:							
Total assets (% of GDP)	*35.2*	*38.6*	*43.0*	*52.3*	*62.4*	*70.1*	*n.a.*
Credit to domestic nonbanks (% of GDP)	*18.1*	*20.6*	*24.9*	*30.5*	*30.0*	*34.9*	*n.a.*
Credit to domestic nonbanks (nominal, annual change, %)	*−32.0*	*30.7*	*47.9*	*49.5*	*15.0*	*36.4*	*31.5*
Credit to domestic nonbanks (real, annual change, %)	*−40.8*	*21.2*	*30.1*	*27.0*	*7.9*	*23.9*	*17.3*
Dinar claims on domestic nonbanks (% of total credit to domestic nonbanks)[4]	*57.3*	*61.5*	*68.4*	*75.6*	*86.0*	*91.3*	*92.2*
Foreign exchange claims on domestic nonbanks (% of total credit to domestic nonbanks)	*42.7*	*38.5*	*31.6*	*24.4*	*14.0*	*8.7*	*7.8*
Short-term claims of domestic nonbanks (% of total credit to domestic nonbanks)	*47.2*	*48.0*	*43.9*	*43.9*	*40.1*	*39.5*	*41.9*
Long-term claims of domestic nonbanks (% of total credit to domestic nonbanks)	*52.8*	*52.0*	*56.1*	*56.1*	*59.9*	*60.5*	*58.1*
Credit to households (% of total credit to households and enterprises)	*11.0*	*13.8*	*20.6*	*26.9*	*35.3*	*38.1*	*37.5*

Source: NBS, OeNB.

[1] *Including securities as well as claims on interest and fees.*
[2] *Including other financial organizations.*
[3] *Including fixed assets and other assets (presumably also interbank claims).*
[4] *Including foreign currency-indexed claims.*
[5] *June 30, 2008.*

at least on this measure, countries like Poland or Romania. Credit and balance sheet growth did not take off in Serbia until 2004, though.[12] Subdued overall economic growth in 2002 and 2003 may have combined with initial lending restraint. Furthermore, banks faced a situation in which risk assessment capacities had to be created almost from scratch, when the interbank market was underdeveloped and budget constraints in the real sector were still about to harden. This period of initial reticence took place later in Serbia than in most other countries of the region, and it was shorter.

Claims on domestic nonbanks amounted to about 35% of GDP at year-end 2007, a doubling compared to 2002, and at the same time represented the largest fraction of total banking sector assets (see table 4). The strong relative contraction of claims on nonbanks in terms of total assets in 2006 can be attributed to the concomitant sharp increase in claims on the NBS (still representing about one-third of total assets in 2007) against the background of monetary tightening in 2005 and 2006 (see box 2). Moreover, this development can also be seen as a result of banks' attempt to redirect their corporate customers to parent banks abroad, most likely in order to circumvent the NBS's monetary, but also prudential and administrative regulations (see box 3), and also to be able to continue lending to the more profitable retail segment. Consequently, the share of claims on households in total assets nearly quadrupled over the years 2002 to 2007 (and increased further to around 20% in June 2008), while that of claims on enterprises fell from over 40% in the years 2002 to 2005 to about 30% in 2006 and 2007 (only to rise again to one-third of total assets in the first half of 2008). Against the background of more or less pronounced budget surpluses in 2004 to 2007, banks' claims on the general government decreased considerably from 3.7% of total assets in 2004 to 0.9% in 2007 and remained at the same level also in the first half of 2008. In light of rapid credit expansion and more profitable domestic investment opportunities (e.g. NBS bills), banks' foreign assets declined sharply from 2002, falling from 15% to 6.6% in 2007 and further to 4.5% in June 2008.

Credit institutions' liabilities are dominated by deposits of domestic nonbanks, mainly private sector deposits (see table 5). In fact, robust economic growth, improving corporate finances, labor market conditions ameliorating at long last (especially in 2007) coupled with strong wage growth and tax cuts have all contributed to solid private sector deposit growth of an average 45% in nominal terms (30% in real terms) in the period 2005 to 2007. Thus, after hovering around 45% for years, the share of domestic nonbank deposits in total liabilities increased to about 50% in 2007, prevailing at similar levels also in the first half of 2008. By the same token, the share of capital and reserves grew vigorously from 2004 to about 21% of total liabilities at end-2007 following substantial capital increases in the banking sector in 2006 and 2007 mainly against the background of prudential regulations enforced by the NBS (e.g. credit ceilings on household lending), and increased further to 23.5% of total liabilities in June 2008. At the same time, after having increased considerably for years against the background of robust credit growth, banks' foreign liabilities saw a sharp drop in 2007 on the back of banks' increased capitalization (most likely enabling them to repay foreign

[12] *See M2 Presswire (2007).*

liabilities), additional NBS action to safeguard banking sector stability (see box 3) and strong deposit growth. This also led to a pronounced improvement of banks' net foreign asset (NFA) position from –19.8% of total assets in 2006 to –11.2% in 2007. This development continued also in the first half of 2008, when banks' NFA position improved to –9.7% of total assets.

Box 2

Overview of Selected Monetary Policy Measures of the NBS since 2002

Monetary Policy Instrument	Date	Measure
Policy rate	2002	Weighted average interest rate on securities used in open market operations by the NBS set at 12.8%.
	2003	Weighted average interest rate on securities used in open market operations by the NBS set at 10.4%.
	2004	Weighted average interest rate on securities used in open market operations by the NBS set at 14.9%.
	2005	Weighted average interest rate on securities used in open market operations by the NBS set at 12.8%.
	2006	Weighted average interest rate on securities used in open market operations by the NBS set at 18%.
	September 1, 2006	Introduction of the two-week repo rate as policy rate, set at 18%.
	November 3, 2006	Policy rate cut by 50 basis points to 17.5%.
	November 15, 2006	Policy rate cut by 100 basis points to 16.5%.
	December 8, 2006	Policy rate cut by 100 basis points to 15.5%.
	December 27, 2006	Policy rate cut by 150 basis points to 14.0%.
	January 31, 2007	Policy rate cut by 100 basis points to 13.0%.
	March 2, 2007	Policy rate cut by 150 basis points to 11.5%.
	March 30, 2007	Policy rate cut by 100 basis points to 10.5%.
	May 4, 2007	Policy rate cut by 50 basis points to 10.0%.
	June 1, 2007	Policy rate cut by 50 basis points to 9.5%.
	August 28, 2007	Policy rate hike by 25 basis points to 9.75%.
	October 29, 2007	Policy rate cut by 25 basis points to 9.5%.
	December 27, 2007	Policy rate hike by 50 basis points to 10%.
	February 6, 2008	Policy rate hike by 75 basis points to 10.75%.
	February 28, 2008	Policy rate hike by 75 basis points to 11.5%.
	March 13, 2008	Policy rate hike by 300 basis points to 14.5%.
	April 24, 2008	Policy rate hike by 75 basis points to 15.25%.
	May 29, 2008	Policy rate hike by 50 basis points to 15.75%.
Reserve requirements	February 19, 2002	Halving of the commercial bank reserve requirement for local currency deposits to 11.8% and imposition of a new reserve requirement at the same level for foreign currency deposits.
	March 26, 2002	Increase of the minimum reserve requirement from 11.8% to 20%.
	March 10, 2003	Increase of the minimum reserve requirement from 20% to 23%.
	April 10, 2003	Reduction of the minimum reserve requirement from 23% to 22%.
	May 10, 2003	Reduction of the minimum reserve requirement from 22% to 20%.
	July 11, 2003	Reduction of the mandatory reserve requirement from 20% to 18%.
	August 10, 2004	Increase of the unified reserve requirement ratio by 3 percentage points from 18% to 21%.
	January 10, 2005	Extension of the minimum reserve requirement base by including commercial bank's foreign borrowings stock with a maturity of up to 4 years, and in the case of new foreign borrowings, regardless of maturity.
	April 10, 2005	Broadening of the foreign exchange reserve requirement base by including liabilities to subordinated and related banks.
	June 10, 2005	1 percentage point reduction in the dinar reserve requirement rate to 20%. At the same time, 5 percentage point increase in the foreign currency reserve requirement rate from 21% to 26%.
	August 10, 2005	Increase of the foreign exchange reserve requirement of banks by 3 percentage points to 29%.
	September 10, 2005	Extension of the minimum reserve requirement base by including commercial banks' foreign borrowings stock with a maturity of over 4 years extended before December 31, 2004.
	Oktober 10, 2005	Dinar and foreign exchange base narrowed by long-term housing loans insured with the National Housing Loans Insurance Corporation; foreign exchange base extended by inclusion of foreign liabilities arinsing from bank ooperations performed in the name and for the account of third parties.
	November 10, 2005	Increase of the foreign exchange reserve requirement rate from 29% to 35%. At the same time, reduction of the dinar reserve requirement rate from 20% to 18%.
	November 22, 2005	Application of the 35% minimum foreign exchange reserve requirement rate also to dinar deposits with foreign exchange indexation.
	December 10, 2005	Increase of the foreign exchange reserve requirement from 35% to a 38% unified rate (regardless of maturity, including dinar deposits with foreign exchange indexation) and launch of a 10% reserve requirement for leasing companies.

April 10, 2006	*Increase of the foreign exchange reserve requirement rate to 40% from 38% (including dinar deposits with foreign exchange indexation); extension of the foreign exchange base by the amount of subordinated foreign currency liablities. Increase of the 38% ratio to 100% for deposits of leasing companies with banks.*
May 10, 2006	*Increase of the reserve requirement to 60% from 40% on banks' external short-term borrowing and deposits from abroad with maturity up to 2 years.*
June 10, 2006	*Increase of the reserve requirement to 60% from 18% on nonresident dinar deposits and short-term borrowing with a maturity of up to 2 years, and for liabilities with a maturity of over 2 years from 18% to 40%.*
November 10, 2006	*Downward revision of reserve requirement ratio on the dinar base by 3 percentage points, i.e. from 18% to 15%.*
January 10, 2007	*As of December 26, 2006, the NBS adopted a new Decision on Required Reserves of Banks with the NBS. The reserve requirement ratio on dinar deposits was set at 10%, on household foreign liabilities at 40%, on external borrowing (irrespective of maturity) at 45%, on leasing companies' foreign currency assets at 100% and on foreign exchange subordinated obligations at 20%. The 60% reserve requirement ratio on short-term external borrowing has been cancelled. The calculation of foreign currency required reserves is effected in euro (by exception also in U.S. dollars).*
November 10, 2007	*Minimum reserve ratio on dinar deposits with a maturity of over one month cut from 10% to 5%. At the same time, the foreign currency base excludes the household term savings deposited from October 31 through November 7, 2007 for the duration of their term.*
May 15, 2008	*10% of the required reserves calculated in euro has to be allocated in dinar.*

Source: NBS, authors' compilation.

Table 5

Liability Structure of the Banking Sector

	2002	2003	2004	2005	2006	2007	2008[5]
	% of total liabilities						
Liabilities to NBS	1.5	0.9	0.3	0.1	0.0	0.1	0.0
Deposits of domestic nonbanks	46.8	46.5	45.0	44.5	44.9	49.8	49.7
of which: deposits of general government	*7.2*	*3.8*	*2.3*	*2.2*	*2.4*	*1.9*	*2.3*
deposits of households	*17.8*	*19.8*	*21.3*	*23.8*	*23.5*	*25.8*	*27.0*
deposits of enterprises[1]	*21.8*	*22.8*	*21.4*	*18.5*	*19.0*	*22.2*	*20.4*
Foreign liabilities	4.8	5.2	13.5	20.9	24.2	17.9	14.2
Other liabilities[2]	25.8	25.3	23.4	19.2	12.5	11.4	12.6
Capital and reserves	21.2	22.2	17.8	15.3	18.4	20.8	23.5
Total liabilities	**100.1**	**100.1**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Memorandum items:							
Total deposits (% of GDP)	*16.5*	*17.9*	*19.3*	*23.3*	*28.0*	*35.0*	*n.a.*
Deposit growth (nominal, annual change, %)	*60.6*	*25.1*	*31.8*	*46.9*	*40.6*	*46.3*	*37.5*
Deposit growth (real, annual change, %)[3]	*39.9*	*16.0*	*15.9*	*24.8*	*31.9*	*32.9*	*22.7*
Dinar deposits (% of total deposits)[4]	*46.2*	*40.7*	*35.2*	*33.3*	*37.2*	*38.2*	*33.7*
Foreign currency deposits (% of total deposits)	*53.8*	*59.3*	*64.8*	*66.7*	*62.8*	*61.8*	*66.3*
Short-term deposits (% of total deposits)	*98.6*	*97.4*	*94.6*	*92.0*	*90.8*	*92.4*	*92.1*
Long-term deposits (% of total deposits)	*1.4*	*2.6*	*5.4*	*8.0*	*9.2*	*7.6*	*7.9*
Domestic nonbanks' claim-to-deposit ratio	*109.8*	*114.7*	*128.8*	*131.1*	*107.2*	*99.9*	*108.7*
General government's claim-to-deposit ratio	*50.7*	*80.9*	*159.3*	*129.2*	*77.9*	*49.2*	*39.8*
Households' and enterprises' claim-to-deposit ratio	*120.5*	*117.7*	*127.1*	*131.2*	*108.8*	*101.9*	*112.0*

Source: NBS, OeNB.

[1] *Including deposits of other financial organizations.*
[2] *Including frozen foreign currency savings deposits, restricted deposits, provisioning for loan losses and other liabilities (presumably also interbank liabilities).*
[3] *RPI deflated.*
[4] *Including foreign currency-indexed deposits.*
[5] *June 30, 2008.*

Signaling strength and confidence in the sector, particularly in the expanding presence of foreign-owned banks, deposits surpassed loans (in absolute terms) by year-end 2007 after having grown more dynamically than the latter for years. Thus, total deposits relative to GDP have more than doubled since 2002, reaching

35% at end-2007 (see table 5). Increased depositor confidence is also underscored by the decreasing share of short-term deposits in total deposits, even though short-term arrangements still dominate with a share of over 90%. In this respect, rising confidence is, however, also reflected by the fact that the share of sight deposits steadily declined in favor of term and savings deposits. As of 2006, the latter have outweighed the former. Confidence aspects notwithstanding, foreign exchange deposits have remained predominant, given lingering memories of hyperinflation, negative real interest rates on dinar deposits and the still great importance of workers' remittances (mostly denominated in euro) as a source of deposits.[13] During Serbia's period of managed floating until early 2006, when the dinar nominally depreciated, the share of foreign exchange deposits in total deposits gradually rose to about 67%. The discontinuation of dinar depreciation under the new informal inflation targeting regime in 2006 and 2007 led to a slight erosion of this share to below 62%, with exchange rate valuation effects seemingly being negligible in having caused this decline. However, against the background of re-emerging political uncertainties, the share of foreign currency deposits increased to over 66% of total deposits during the first half of 2008.

Box 3

Overview of Selected Prudential and Administrative Measures of the NBS since 2004

Administrative/prudential measures	*June 10, 2004*	*Introduction of a compulsory downpayment of minimum 20% of the loan amount and a limit on monthly repayment installments amounting to a maximum of 30% of net household income.*
	September 30, 2006	*Limiting the volume of lending to households to 200% of the share capital of commercials banks as of September 30, 2006. Changed a few weeks later to "200% of the share capital of commercial banks at the end of each month."*
	August 27, 2007	*Repayment period for general purpose cash credits to households limited to two years.*
	December 31, 2007	*Limit on gross lending to households lowered from 200% to 150% (including mortgage loans).*
	April 14, 2008	*Mandatory 20% cash deposit for household loans canceled for loans in dinar and with no foreign currency clause, mandatory 20% deposit on foreign currency loans – included indexed foreign currency loans – raised to 30%, no changes for mortgage loans and credit card use.*
	June 30, 2008	*Household dinar loans with no foreign currency clause intended for investment in agricultural production and dinar loans with no foreign currency clause approved to entrepreneurs for investment in the production of goods or services within their line of business are excluded from gross household lending.*
Loan classification/ provisioning/capital adequacy	*November 10, 2004*	*Banks are obliged to classify all claims arising from loans extended to a natural person in category E, subject to 100% provisioning, in cases where the total monthly installment exceeds 30% of the borrower's monthly income, and the downpayment placed by the borrower is less than 20% of the new loan.*
	June 10, 2005	*In cases where the documentation submitted by a natural person applying for a loan does not include a Credit Bureau report on the natural person's liabilities, claims under such loan are classified in category E subject to 100% provisioning.*
	July 1, 2006	*Amendment of the above decision. In addition to obligations in respect of existing loans, monthly repayment obligations will also include obligations under revolving credit cards, activated warranties on loans and obligations arising from financial lease contracts.*
	October 1, 2006	*A new, more stringent Decision on the Classification of Bank Balance Sheet Assets and Off-Balance Sheet Items enters into force. 1% to 2% for category A, 5% to 15% for B, 20% to 35% for C, 40% to 75% for D and 100% for E.*

[13] *See Petrovic (2007, p. 29).*

	October 1, 2006	*When calculating risk-weighted assets, banks are obliged to apply a new 125% weight to claims in foreign currency or claims in dinar with foreign exchange indexation clause or other form of indexation clause amounting to no less than RSD 10 million that have not been protected by the borrower against changes in the exchange rate of the dinar vis-à-vis other currencies or against change in any other form of indexation.*
	July 1, 2008	*Amendments to regulations on risk weights applied in calculating risk-weighted assets and off balance sheet items. Abolishment of the RSD 10 million limit with regard to 125% weight and inclusion of all receivables; 50% risk weight for receivables in dinar and mortgage; 75% for receivables in foreign exchange and mortgage and unhedged borrowing; 125% for receivables in foreign exchange and unhedged borrowing. Moreover, provisioning requirements related to off balance sheet items were brought more in line with international accounting standards, while other regulations aim for standardizing risk and liquidity risk management practices across banks.*
Liquidity ratios	*June 1, 2004*	*Minimum foreign currency liquidity against foreign currency savings reduced from 50% to 47%.*
	August 10, 2005	*Minimum foreign currency liquidity against foreign currency savings reduced from 47% to 45%.*
	September 10, 2005	*Minimum foreign currency liquidity against foreign currency savings reduced from 45% to 43%.*
	October 10, 2005	*Minimum foreign currency liquidity against foreign currency savings reduced from 43% to 42%.*
	November 10, 2005	*Minimum foreign currency liquidity against foreign currency savings reduced from 42% to 41%.*
Open foreign exchange positions	*July 1, 2008*	*Lowering of the limit on the open foreign exchange position from 30% to 20%.*

Source: NBS, authors' compilation.

The initially poor condition of the banking system and the subsequent restructuring process entailed huge losses in the sector during the early 2000s.[14] However, buoyed by the cleanup of banks' balance sheets, rationalization of operational costs promoted by foreign ownership, the deposit and credit boom and a diversification of bank activities, the sector shook off its losses, became profitable in 2005, and increased profits in 2006 (see table 6). Whereas private banks had already achieved the breakeven point in 2002, state-owned banks only reached it in 2005. Return on average assets at around 1.7% remained fairly high for two years in a row. After having peaked at 9.7% in 2006, the (pretax) return on average equity declined to 8.6% at year-end 2007, mainly on the back of large capital increases of foreign bank subsidiaries. Despite these positive developments, Serbian credit institutions' profitability is still among the lowest in CESEE: As of 2007, the return on average equity (already after tax) amounted to 22% in Poland, 25% in the Czech Republic, 18% in Hungary and 24% in Bulgaria.

Net noninterest income represents close to 60% of banks' total income, which is high but decreasing against the background of the credit boom of recent years and the related increase in interest-bearing assets in banks' portfolios. Thus, less surprisingly, the share of net interest income in total income increased from 24% in 2004 to over 40% at end-2007, even though in recent years the claims-to-deposits ratio has fallen strongly in the wake of NBS measures to curb lending growth and even though interest rate spreads have declined considerably as a result

[14] *See Barisitz (2003, p. 205).*

Table 6

Profitability of the Banking Sector

	2002	2003	2004	2005	2006	2007	2008[1]
Net interest income (% of total income)	66.5	38.0	23.7	28.3	32.7	40.7	41.6
Net noninterest income (% of total income)	33.5	62.0	76.3	71.7	67.3	59.3	58.4
Operating expenses (% of total income)	75.4	57.5	53.3	38.5	43.5	46.7	37.9
Loan loss provision expenses (% of total income)	22.9	49.7	55.7	60.0	42.0	39.3	41.6
Pretax profit/loss (% of total income)	–129.6	–2.2	–5.0	5.9	11.2	15.1	19.8
Net interest income (% of average assets)	4.6	5.4	5.4	5.4	5.0	4.6	5.5
Net noninterest income (% of average assets)	2.3	8.9	17.5	13.6	10.2	6.8	7.7
Deposit rate (weighted average, %)	2.6	2.7	3.6	3.7	5.1	4.1	6.1
Lending rate (weighted average, %)	19.2	14.8	14.6	14.4	15.9	11.1	16.9
Interest rate spread (lending to deposit rate)	16.6	12.1	11.0	10.7	10.8	7.0	10.8
Return on average assets (ROAA, pretax, %)	–9.0	–0.3	–1.1	1.1	1.7	1.7	2.6
Return on average equity (ROAE, pretax, %)	–49.9	–1.4	–5.4	6.5	9.7	8.6	11.5

Source: NBS, OeNB.
[1] *June 30, 2008.*

of a more favorable inflationary environment (until 2007), greater operational efficiency and more robust competition. After having declined for several years, the cost-to-income ratio has picked up significantly since 2005, mainly due to banks' rapid network expansion and to considerably increasing bank headcounts. In the first half of 2008, the claims-to-deposit ratio and the interest rate spread have, however, trended upward again, thereby contributing to a further rise of the share of net interest income in total income.

6 Synopsis of the Banking Sector's Strengths and Vulnerabilities

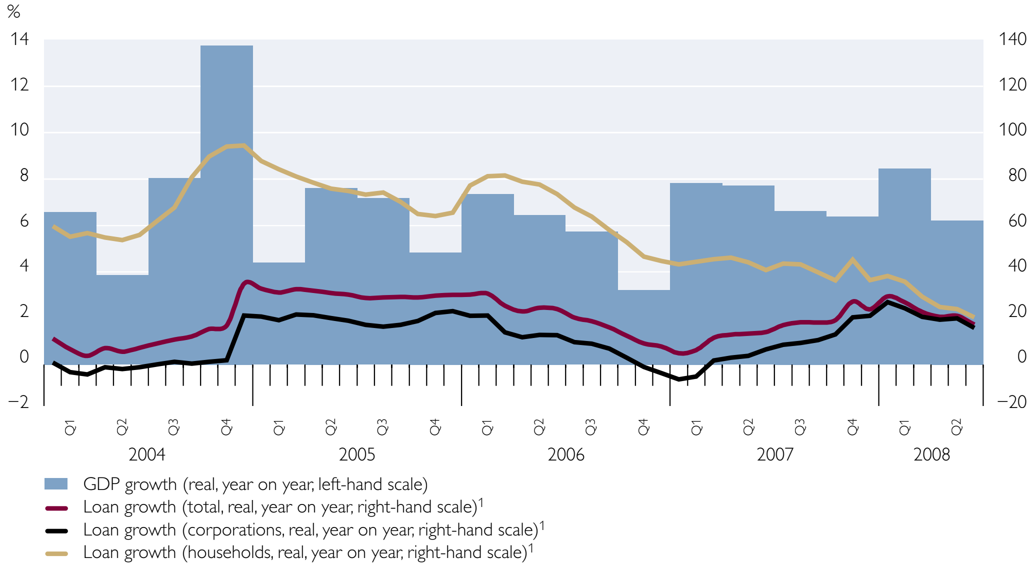
6.1 Credit Risk

Fast credit expansion in recent years was driven by high (catching-up) demand, the low base, the lack of alternatives given underdeveloped capital markets, and by foreign banks' quest to gain market shares in the context of substantial interest rate margins. GDP growth and credit expansion were positively correlated in recent years (see chart 1). Despite various lending restrictions implemented by the NBS (see boxes 2 and 3), lending to households expanded at an impressive 70% on average per annum from 2002, although starting from a very modest point of departure. Its share in total domestic credit grew from 10% in 2002 to 37% in 2007 and remained at similarly high levels also in the first half of 2008. A small, but particularly dynamic element within retail credit is mortgage lending, which grew tenfold from 2004 to attain 12% of total lending and about 30% of total loans to households (see table 7) at end-2007. This strong momentum of mortgage lending, which continued also in the first half of 2008, is not only attributable to high demand for housing, but also to the fact that mortgage loans (which are insured by the National Mortgage Insurance Company) are exempt from mandatory reserve requirements.[15] Mortgage loans are predominantly indexed to foreign currencies, i.e. mainly to the euro and the Swiss franc, with the share of the latter in total housing loans having risen to 40% at end-2007.

[15] *IMF (2008, p. 23).*

Chart 2

GDP and Credit Growth, 2004–2008



Source: NBS, OeNB calculations.

1 RPI deflated.

In order to avoid currency mismatches and possibly also to take advantage of higher margins, Serbian banks have been inclined to undertake, if not promote, foreign currency-denominated lending. However, given that the Foreign Exchange Act of 2002 designates the dinar as the sole currency for domestic transactions, banks have often resorted to foreign exchange indexing of dinar loans (mostly to the euro, to a lesser but rising degree to the Swiss franc).[16] During the period of dinar depreciation up to 2005, the development of the share of foreign exchange-denominated and -indexed loans was similar to that of the deposit structure, with the share increasing to almost 90% of total loans. This was followed by a decline to 76% in June 2007.

While foreign exchange-denominated and -indexed lending helps to eliminate currency mismatches for banks, the foreign exchange risk involved is borne by borrowers, many of whom may be unhedged (although one should not overlook the traditional flows of foreign currency remittances as well as the possibly considerable but difficult to quantify amounts of mattress money with parts of the population). Unhedged borrowers imply indirect exchange rate risk and therefore credit risk for banks. The evolution of the exchange rate regime in 2003 had already put unhedged borrowers under pressure. According to the most recent IMF (2008) sensitivity analysis (accounting only for the banking sector's exposure to households), a depreciation of the dinar by 25% would result in a drop of the capital-to-asset ratio of the banking sector from 19% to 14.5%, but capital adequacy would not fall below the regulatory minimum of 12%. NBS stress tests come to a similar conclusion.[17] At any rate, Serbia's share of foreign exchange-

[16] *This resembles the Croatian practice (see Gardó 2005, p. 60).*

[17] *For more details, see NBS Financial Stability Report 2007.*

denominated and -indexed loans in total loans is among the highest in transition countries.[18]

Many loans – particularly retail loans – are also subject to variable interest rates, set with reference to a benchmark interest rate (mostly EURIBOR or LIBOR), implying also a foreign interest rate risk. Consequently, the transfer of foreign exchange as well as interest rate risk to clients (often households) tends to push up banks' credit risks.

Despite the credit boom, the share of bad assets (receivables classified by the NBS in categories C, D and E) in total assets under classification[19] at over 30% was fairly high (see table 7), although the substantial spike in 2006 (to 33%) can be partly explained by the introduction of tighter loan loss classification rules and stepped-up enforcement of prudential provisions.[20] But even if adjusted for methodological changes, asset quality has trended to worsen most recently. In this respect, a regular survey of the nine largest banks (mostly foreign-owned) conducted by the NBS arrives at a similar result, according to which the share of nonperforming loans in loans to enterprises grew from 5.6% in 2006 to 5.9% in 2007, while at the same time the ratio of nonperforming household loans climbed from 1.8% to 2.1%.

Given that Serbia's economy still displays a variety of structural weaknesses, the economic risks triggered by the acceleration of credit growth in 2004 (notwithstanding the initially modest credit volume) were sufficient to raise serious concerns on the part of the authorities. Apart from financial risks (growing indirect foreign exchange exposure of banks), macroeconomic risks (particularly with respect to high inflation and current account-to-GDP ratios, see also section 2) persuaded the NBS to introduce credit containment measures. Some measures were launched in mid-2004, various others followed, and the policy has continued to date (see box 3).

The measures seem to have gone in two basic directions: reining in or provisioning for foreign exchange-denominated or -indexed lending, and containing or limiting retail lending. Most frequently, reserve requirements have been raised or strengthened. General prudential tightening has taken place (with respect to risk management systems, classification rules, capital adequacy calculation – also particularly focusing on unhedged borrowers). Most recently, the central bank has repeatedly resorted to administrative interventions (e.g. introducing "rule 200%" in October 2006 and "rule 150%" in December 2007; see also box 3) to curtail retail lending. Credit institutions and borrowers have often reacted by trying to circumvent these measures, e.g. by borrowing abroad (from headquarters of foreign-owned banks or foreign-owned nonbank corporations) or by resorting to leasing transactions.[21] The NBS responded by strengthening and extending

[18] *The same also goes for Serbian households' euro cash holdings as well as euro savings deposits, as documented in the OeNB Euro Survey 2007 and analyzed in Dvorsky, Scheiber and Stix (2008, p. 52–54).*

[19] *Total assets under classification comprise both on and off balance sheet items, but exclude some specific balance sheet items (e.g. vault cash, securities refinanceable with the NBS, fixed assets, own shares). For further details, see NBS Decision on the Classification of Bank Balance Sheet Assets and Off-Balance Sheet Items as published in the RS Official Gazette Nos.129/2007 and 63/2008.*

[20] *Hayward and Westphal (2006, p. 26).*

[21] *These activities are referred to in greater detail immediately below.*

its measures, e.g. by restricting external borrowing by banks and acquiring jurisdiction and supervisory control over activities of leasing companies (see box 1).

The NBS's credit containment policies (notably the strong increase in foreign exchange-denominated required reserves in 2005 and 2006) have proved to be modestly successful in slowing down loan growth. Moreover, the NBS does not appear to have succeeded in reining in external borrowing, as witnessed by the still substantial share of foreign liabilities in total liabilities, even if this share declined in 2007.

Lending to the private sector has also partly migrated abroad: According to balance of payments statistics, the direct foreign debt (comprising inter alia bank loans, intercompany loans, trade credits) of "other sectors" (i.e. households and nonbank corporations) rose from 10% of GDP in 2002 to almost 26% of GDP in 2007. These funds have mostly gone to enterprises. In this way, a portion of the high-quality portfolio from balance sheets of Serbian banks may have been transferred abroad. According to the IMF (2008), not only the maturity structure of the corporate sector's outstanding foreign debt has deteriorated in recent years (shift toward short- and medium-term loans), inducing higher rollover risks, but also the corporate sector's exposure to foreign exchange risks has increased (especially when taking into account the country's small and volatile export base). Therefore, the effectiveness of the containment measures has turned out to be quite limited, which is in line with the mixed results delivered by similar policies in other countries of the region.

Against the background of relatively strong deposit growth, with deposits in absolute terms even surpassing the level of loans, one might ask why additional external sources were deemed necessary to finance the credit boom. One of the reasons was certainly the above-mentioned strong adjustment of the foreign exchange component of the NBS's mandatory reserves (see box 2), which withdrew a considerable amount of liquidity from potential lending activities. But the sharply increasing volume of repo transactions with the NBS might also be an indication of banks' potential engagement in carry trades (be it on their own account or on the account of foreign investors). Furthermore, by taking up loans abroad, banks have managed to compensate for the inadequate maturity structure in the sources of their funds. In 2006, total credits exceeded time deposits by 60%; therefore, long-term borrowing abroad alleviated maturity mismatches. However, banks' foreign borrowing has reinforced indirect foreign exchange risk (credit risk) with mostly unhedged debtors.

In a nutshell, the rapid expansion of loans requires careful monitoring. Operational risks have increased for banks, given the need to swiftly adopt new products, to substantially improve staff training, and to carry out logistical adjustment quickly. Moreover, risk assessments of individual loan applications may suffer due to the sheer speed of loan growth.[22] Bad credits have been swelling, although part of the expansion may reflect better bookkeeping practices. The increase pertains particularly to household credits, though the overall level of retail lending is still

[22] *See Narodna banka Srbije (2007, p. 20) and Schaechter (2004, p. 21).*

modest. The ongoing intense struggle for market shares, buoyed by FDI inflows into the sector, has raised concern over a possible further deterioration of asset quality and profitability, especially in the event of an economic downturn.[23] Surging mortgage lending might feed into asset price inflation (or even a bubble). The high degree of currency substitution in the banking market points to rather substantial foreign exchange rate and foreign interest rate risks. An adverse shock (e.g. sudden depreciation, sharp foreign interest rate hike) might create financial problems for some borrowers, thereby increasing credit risk, and might bring about a rapid slowdown of credit growth, possibly even triggering a credit crunch.[24] Yet safeguards have been erected against a number of these contingencies through prudential measures. Finally, the recent credit boom also contributed to growing macroeconomic imbalances. Given slow industrial restructuring and possible overheating tendencies, inflationary pressures have increased. Swift loan growth is also contributing to the swelling of the current account deficit.[25]

6.2 Market and Liquidity Risks

The interest rate risk of banks appears to be manageable, as most loans (to both households and corporates) carry variable interest rates.[26] At the same time, on the liability side, the bulk of bank deposits, i.e. about 90%, are short term, allowing for some degree of flexibility in times of high interest rate volatility. Thus, most of the interest rate risk has been outsourced to bank clients, and will most likely resurface through the credit risk channel in the event of adverse developments.

Direct foreign exchange risks so far seem to be limited. At year-end 2007, the banking sector's total open foreign exchange position amounted to 14.8% of the sector's regulatory capital, which was on average well below the regulatory requirement of a maximum of 30% at that time and corresponded to around 2.5% of total assets. Around three-quarters of the total open foreign exchange position can be allotted to long positions, so that the ratio of the long foreign exchange position to regulatory capital stood at 11.2%, while the short position was at 3.6%. In this respect, the higher long position implies that banks are more exposed to foreign exchange risks related to an appreciation of the dinar. During the first half of 2008, the sector's total open foreign exchange position fell substantially to 9.4% of the sector's regulatory capital, on the back of both lower foreign exchange risk exposure and a strong increase in regulatory capital. Starting in July 2008, the NBS tightened the respective regulations by lowering the limits on open foreign exchange positions from 30% to 20% of banks' regulatory capital.

[23] *IMF (2007, p. 7).*

[24] *IMF (2006) stress tests indicated that credit risk was the most significant risk for the system. Subsequent IMF (2008) stress tests show that assuming a liability euroization of 80%, a nominal depreciation of 10% would result in an increase of corporate sector's liabilities by about 8% and trigger a fall in equity by 4%.*

[25] *According to Goswami (2008, p. 23), the importance of credit expansion in explaining the rising current account deficit in Serbia is statistically significant.*

[26] *IMF (2008).*

In light of the very low and gradually decreasing share of banks' equity holdings (enterprise shares) in total assets, the banking sectors' exposure to stock market risk is negligible. By the way, holdings in a single nonbank undertaking are limited by law to 25% of a bank's regulatory capital, and to 60% for the sum of all holdings in nonbank undertakings.

Liquidity risks have decreased considerably in recent years, with the ratio of liquid assets to total assets picking up markedly from 16.8% in 2004 to about 40% in 2006 and 2007. This can be mainly attributed to a substantial increase of securities refinanceable with the NBS (claims against repo transactions) in banks' portfolios, most likely also driven by carry trades, after the NBS in September 2005 began to auction repo sales of NBS bills for sterilization purposes. The liquidity ratio has remained constantly over 2 since 2002, which is well above the prescribed regulatory level (see table 7), but the ratio of short-term claims to short-term deposits declined sharply from 62.6% in 2005 to 42.7% in 2007. Nonetheless, in light of the still high share of liabilities to nonresidents, risks associated with international financing have been growing in the context of global financial market turbulence since summer 2007. Even though parent banks constitute the main external financing source for foreign bank subsidiaries in Serbia, the still high share of foreign liabilities in total liabilities requires cautious monitoring.

6.3 Shock-Absorbing Factors

There are at least three factors which underpin the shock-absorbing capacities of the banking sector with respect to credit risk: First, bank profitability, although still among the lowest in the CESEE region, has improved considerably since 2002 and continued to do so also in the first half of 2008, when return on average assets reached 2.6% and return on average equity increased to 11.5%, equipping banks with a comfortable cushion to endure unexpected regional or sectoral shocks. In this respect, even if a deterioration of the business climate (with less demand for banking services) materialized, the still high interest rate margins and further restructuring and privatization of the banking sector could keep profitability at high levels in the years ahead. Second, standard capital ratios reveal a well capitalized banking sector. Capital remains more than sufficient to cover potential losses, at least as far as depicted in the books. Although capital adequacy weakened in the years 2003 to 2006, at 25% in 2006 it was still at a comfortable level (see table 7), far above the regulatory minimum of 12%. The year 2007 again saw an increase of the capital adequacy ratio by about 3 percentage points to 27.9% (marking the highest level in CESEE), mainly on the back of tighter regulatory requirements (e.g. quantitative restrictions on household lending), and even increased further to 28.1% at end-June 2008. Finally, prevalent foreign ownership underscores banking system stability by increasing banks' operational efficiency via capital, know-how and technology transfer and by alleviating sudden stop risks given foreign banks' long-term strategic interest in the Serbian market.

Table 7

Indicators of Banking Sector Stability

	2002	2003	2004	2005	2006	2007	2008[7]
Credit risk							
Credit growth (annual change, %)	–32.0	30.7	47.9	49.5	15.0	36.4	31.5
Private sector credit[1] (annual change, %)	–34.6	32.5	46.9	52.0	16.2	39.2	32.1
Household credit (annual change, %)	28.0	67.0	119.9	98.7	52.8	50.0	35.7
Mortgage loans (annual change, %)	n.a.	n.a.	n.a.	139.7	103.2	88.9	80.4
Mortgage loans (% of household loans)	n.a.	n.a.	15.1	18.7	24.2	29.6	33.7
Receivables classified in categories C, D and E (% of total classified assets)	24.3	22.5	23.3	23.2	33.0	30.4	33.5
FX-denominated and FX-indexed credit (% of total credit)[2]	49.7	63.3	69.9	88.1	83.5	75.8	n.a.
Market risk							
– Foreign exchange risk							
Open foreign exchange position (% of total assets[3])	n.a.	n.a.	3.0	2.5	3.3	2.5	1.8
Open foreign exchange position (% of regulatory capital)	23.8	14.4	16.9	15.8	21.1	14.8	9.4
– Stock market risk							
Equity holdings (% of total assets)[4]	0.8	0.9	0.7	0.4	0.3	0.2	0.2
Liquidity risk							
Liquidity ratio[5]	2.92	2.45	2.19	2.06	2.41	2.06	n.a.
Liquid assets[6] (% of total assets[3])	26.4	19.5	16.8	28.8	41.4	38.1	35.7
Shock absorbing capacities							
Loan loss provisions (% of nonperforming assets)	65.0	62.8	67.7	56.3	38.5	28.8	24.5
Capital adequacy ratio	30.6	31.3	27.9	26.0	24.7	27.9	28.1
Market share of foreign-owned banks (% of total assets)	27.0	38.4	37.7	66.0	78.7	75.5	75.0

Source: NBS, OeNB.

[1] *The private sector comprises households and enterprises (including public sector enterprises and other financial organizations).*
[2] *Data series according to IMF calculations. Data for 2007: June 2007.*
[3] *Total assets according to banking supervision data.*
[4] *Only long-term enterprise shares.*
[5] *According to the NBS decision on Liquidity Risk Management, the bank liquidity ratio is the ratio of the sum of first- and second-degree liquid receivables of the bank and the sum of liabilities payable on demand with no agreed maturity and liabilities falling due within a month from the date of the liquidity ratio calculation. Banks are required to maintain the level of liquidity so that their liquidity ratio equals at least 1.0 if calculated as the average liquidity ratio for all business days in a month; not less than 0.9 for more than three days in a row and at least 0.8 if calculated for one business day only.*
[6] *Including cash and cash equivalents as well as deposits with the NBS and securities refinanciable with the NBS.*
[7] *June 30, 2008.*

7 Payment System Developments

According to the Law on Payment Operations, the NBS is responsible for the efficient and sound functioning of the payment system. The law authorizes the NBS inter alia to carry out interbank clearing and settlement system operations, to develop the national payment system and to conduct payment systems oversight. The payment system operates on the real-time gross settlement principle, which is mainly used for large-value interbank payment transactions. The clearing system of the NBS is used for the clearing of small-value payments.[27] Serbia's EU membership perspective has raised the need for bringing in line the domestic payment system with EU standards. To this end, the NBS aims for approximating payment system regulations to the acquis communautaire and fostering cooperation with central banks in the region and with international institutions.

Strong demand for banking services and rapid network expansion went hand in hand with a formidable development of the Serbian payment card system. The number of both ATMs and POS terminals has increased thirtyfold since 2002,

[27] *For more details, see BIS (2007, p. 3).*

Table 8

Payment System Developments

	2002	2003	2004	2005	2006	2007	2008[2]
Number of ATMs	65	204	450	837	1,348	2,074	2,334
Number of POS terminals	1,709	6,779	16,266	31,816	48,194	55,340	57,246
Number of debit cards (in thousands)[1]	195.7	632.2	2,129.7	3,476.6	4,382.8	4,686.4	4,621.2
Number of credit cards (in thousands)	4.2	10.9	28.2	382.2	857.6	1,039.0	1,060.3
Memorandum items:							
No. of ATMs (per million inhabitants)	*8.7*	*27.3*	*60.3*	*112.5*	*181.9*	*281.6*	*316.9*
No. of debit cards per inhabitant	*0.03*	*0.08*	*0.29*	*0.47*	*0.59*	*0.64*	*0.63*
No. of credit cards per inhabitant	*0.00*	*0.00*	*0.00*	*0.05*	*0.12*	*0.14*	*0.14*

Source: NBS, OeNB.

[1] *Including business cards.*
[2] *June 30, 2008.*

climbing to over 2,300 and 57,000, respectively, in June 2008. Similarly, against the background of the recent boom in retail banking, the number of debit and credit cards grew strongly from a mere 200,000 in 2002 to about 5.7 million in June 2008. Notwithstanding these impressive developments, relative figures still indicate substantial catching-up potential. The number of ATMs per one million inhabitants was at about 320 in June 2008. The comparable figures for Germany, France and Switzerland are about 700, while they stand at more than 1,000 for the United States and Japan. The same holds true for the number of cards per inhabitant, which at 0.64 and 0.14 for debit and credit cards, respectively, was still fairly low in Serbia in an international comparison. The respective figures for advanced economies within the EU were at about 1 to 1.5 and 0.5, respectively.

8 Nonbank Financial Institutions

8.1 Nonbank Financial Intermediaries

The Serbian financial sector is dominated by banks, which – accounting for about 90% of total financial sector assets – still represent the most important financial intermediation channel in the country. Although starting from a very low base, in recent years nonbank financial intermediation experienced fast growth, expanding at least in tandem with the banking sector. These developments are underpinned on the demand side by the rising income levels of the population and by improving corporate finances as a result of the strong momentum of the economy and ongoing corporate restructuring as well as privatization, and on the supply side by the increasing interest of foreign investors in the Serbian financial market driven by higher profit margins and the country's EU membership perspective, and by the NBS's restrictive approach to monetary and regulatory policy in recent years.

Within Serbia's nonbank financial sectors, financial leasing claims the largest share. This is not only reflected by the constantly increasing number of leasing companies and considerably rising staff levels, but also by the strong increase of leasing assets relative to GDP (see table 9). The insurance sector underwent large-scale restructuring in 2004 and 2005 after the NBS had assumed responsibility for regulating and supervising insurance companies in August 2004. Regulations were tightened and about 15 insurance companies were shut down.

Table 9

Financial Sector[1] Structure

	2004	2005	2006	2007
	% of total financial sector assets			
Banking sector	90.4	88.8	90.5	90.4
Insurance sector	5.5	5.3	4.3	4.1
Financial leasing sector	4.1	5.9	5.2	5.5
Voluntary pension funds (VPF)	0.0	0.0	0.02	0.17
Total	**100.0**	**100.0**	**100.0**	**100.2**
Memorandum items:				
Number of insurance companies	*40*	*19*	*17*	*20*
Number of employees in the insurance sector	*5,926*	*7,283*	*7,876*	*9,697*
Insurance premiums (% of GDP)	*1.6*	*2.0*	*1.9*	*1.9*
Life insurance premiums (% of total insurance premium)	*7.5*	*9.5*	*10.6*	*11.0*
Number of leasing companies	*12*	*14*	*15*	*17*
Number of employees in financial leasing	*132*	*329*	*388*	*478*
Total financial leasing assets (% of GDP)	*1.6*	*3.0*	*3.3*	*4.0*
VPF management companies	*0*	*0*	*1*	*7*
Number of employees in VPF management companies	*0*	*0*	*73*	*196*
EBRD index of reform of nonbank financial institutions	*2.0*	*2.0*	*2.0*	*2.0*

Source: NBS, OeNB.

[1] Including only financial sector segments under the supervision of the NBS.

Following this major reshuffle, the insurance sector grew at a somewhat slower pace than other financial market segments and has constantly lost market share to banks and leasing companies since 2004. The written premiums have hovered around 2% of GDP (EU-27: 9%) for several years now, with growth rates in the life segment by far outperforming the nonlife segment, however. The Law on Voluntary Pension Funds and Pension Schemes entered into force only in April 2006, thereby laying the legal foundations for the incorporation of voluntary pension fund management companies in Serbia. The number of management companies has increased rapidly since then, but not surprisingly, voluntary pension funds are still in their infancy with a market share of 0.2% in total financial sector assets.

8.2 Stock and Bond Market Developments

In line with other financial market segments, as mirrored by the Belex-15 index,[28] the Serbian stock market developed buoyantly in recent years, growing by an average 50% per annum in 2006 and 2007. Developments were, however, accompanied by high volatility, given mounting political uncertainties related to early elections in May 2008 and Kosovo's declaration of independence, as well as increasingly differentiated risk assessment of international investors toward emerging markets in the context of the recent global financial market turmoil. Thus, in the first half of 2008, the Belex-15 index lost about 25% of its value, falling below 1,800 points.

The number of listed companies in the unregulated market has quadrupled since 2004 after a regulation required companies with more than 100 shareholders to list on the stock exchange by March 2007. In 2007, the Belgrade Stock

[28] The Belex-15 is the leading index of the Belgrade stock exchange.

Exchange (BSE) also introduced a regulated prime market with an A and B listing and stricter listing requirements, but up to now only three companies qualified for the A segment, while no applications have been submitted for entering the B segment. Total equity market capitalization has increased sevenfold in absolute terms since 2004 (due to both price and quantity effects), reaching EUR 16.3 billion – about 55% of GDP – at end-year 2007.

Despite this strong market capitalization growth, the stock market still exhibits relatively low trading volumes and liquidity levels. This is true even more for the bonds listed on the Serbian stock exchange (bonds of the Republic of Serbia), with total bond turnover reaching slightly over EUR 200 million – merely 0.7% of GDP – at year-end 2007. On this note, the abundant availability of alternative financing sources (e.g. bank finance, direct external financing by corporates, FDI) might to some extent have restrained the attractiveness of the capital market so far, but a stabilization of the political environment, progress made in EU approximation and planned initial public offerings (e.g. Telekom Srbija, Komercijalna banka),[29] however, promise a dynamic development in the years ahead.

Table 10

Stock and Bond Market Indicators

	2002	2003	2004	2005	2006	2007
BELEX-15 stock market index[1]	n.a.	n.a.	n.a.	1,060	1,675	2,318
Number of listed shares	n.a.	n.a.	431	900	1,204	1,710
Market capitalization (EUR million)[2]	n.a.	n.a.	2,410	4,550	8,340	16,313
Market capitalization (% of GDP)[2]	n.a.	n.a.	12.2	21.6	34.4	54.5
Total equity turnover (EUR million)	114	446	323	338	1,105	1,873
Total equity turnover (% of GDP)	0.7	2.5	1.6	1.6	4.6	6.3
Total bond turnover (EUR million)[3]	362.0	484.9	161.7	87.0	168.2	210.0
Total bond turnover (% of GDP)[3]	2.2	2.7	0.8	0.4	0.7	0.7

Source: Belgrade Stock Exchange, Federation of Euro-Asian Stock Exchanges, OeNB.

[1] *Launched in October 2005.*

[2] *Equities.*

[3] *2002 to 2004 including corporate bonds and bonds of the Republic of Serbia (RS). 2005 to 2007 only bonds of the RS.*

9 Assessment and Conclusions

In recent years, Serbia's banking system has successfully continued along the catching-up trajectory it had embarked upon immediately after regime change in the early 2000s. Serbian banks have been closing ranks with those of other transition countries in terms of the depth of intermediation, soundness of services and ownership of capital (see table 11). The restoration of public confidence in the sector is exemplified by the high level and dynamic expansion of deposits (whose absolute amount and growth rate exceed those of credits). The quality of the NBS's banking regulation and supervision has greatly improved in recent years, and has enhanced the health of the sector. This is exemplified by rigorous risk classification rules, tightened provisioning obligations (for – albeit relatively high – nonperforming loans), robust reserve and capital requirements, all of which address risks and bolster Serbian credit institutions' financial soundness.[30]

[29] *Privatization of Komercijalna banka is earmarked for 2009. See Petrovic (2006, p. 28–29).*

[30] *See IMF (2007).*

Table 11

Banking Indicators in CESEE (2007)

	CZ	HU	PO	SK	SI	BU	RO	AL	BA	HR	MK	ME	**RS**
Total assets (% of GDP)	104.3	112.3	72.6	94.4	129.7	108.1	64.3	74.2	93.2	122.3	74.6	117.1	**70.1**
Total loans (% of GDP)	47.0	61.0	40.6	42.8	79.6	65.9	37.5	56.0	57.1	80.2	40.2	88.4	**34.9**
Total deposits (% of GDP)	64.3	46.6	43.0	55.6	56.5	65.1	33.7	62.0	57.9	84.7	45.4	82.3	**35.0**
Market share of foreign-owned banks (% of total assets)[1]	97.6	68.0	67.0	96.0	28.8	75.0	87.8	94.2	91.0	90.4	85.9	75.3	**75.5**
Market share of the five largest banks (% of total assets)	65.7	54.1	46.6	68.2	59.7	56.7	56.3	74.1	56.7	71.5	74.4	83.6	**44.6**
Herfindahl-Hirschmann Index[2]	1,114	839	640	1,082	1,299	833	1,040	1,600	926	1,279	1,625	1,918	**578**
EBRD Index of banking sector reform	4.0	4.0	3.7	3.7	3.3	3.7	3.3	2.7	2.7	4.0	2.7	2.7	**2.7**
Return on assets (after tax, %)[3]	1.3	1.5	1.7	1.1	1.4	2.4	1.0	1.6	0.9	1.3	1.8	0.7	**1.7**
Return on equity (after tax, %)[3]	24.5	17.5	22.1	16.6	16.3	23.8	9.4	20.7	8.9	11.1	15.2	6.2	**8.6**
Capital adequacy ratio (%)	11.5	11.6	12.4	12.4	11.2	13.8	13.8	17.1	16.4	15.4	17.0	17.1	**27.9**

Source: national central banks, authors' calculations.

[1] Montenegro: % of total capital.
[2] Bosnia and Herzegovina: 2006.
[3] Slovenia and Serbia: pretax.

Notwithstanding these generally positive trends, the banking sector's risk exposure has increased against the background of the credit boom of recent years. Rapid credit expansion, the rising debt levels of households and nonbank corporations, the passing on of market risks to bank customers and the high level of nonperforming loans warrant careful monitoring of banks' credit risk. Notwithstanding the NBS's restrictive measures, especially the retail segment continued to grow briskly in recent years, while in the case of corporations, some cross-border migration of intermediation has taken place (entailing additional foreign exchange risks and possibly also adverse selection problems). The credit boom has also contributed to high and widening macroeconomic imbalances (especially current account and inflationary pressures) and to rapidly growing foreign indebtedness of the private sector, making Serbia one of the rather vulnerable CESEE economies. Moreover, the still high degree of currency substitution in the banking sector (even in a regional comparison) highlights considerable foreign exchange risks, mainly with respect to unhedged borrowers. Strong credit growth may also have contributed to heightened operational risks of banks as far as risk management capacities are concerned, while – in light of the recent global financial market turmoil – the high net external liability position of banks may represent a source of risk associated with international financing. Furthermore, achievements so far in terms of financial sector development and stability may come under pressure if price stability is not restored sufficiently quickly. Overall, it is also important to stress the system's fairly high shock-absorbing capacities, however. The banking sector appears to be adequately capitalized, with increasing profitability levels, and widespread foreign ownership is bolstering the sector's shock resistance.

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