

Croatia: Coping with Rapid Financial Deepening¹

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The Croatian banking sector underwent sweeping structural changes in the late 1990s and has remained relatively stable and profitable since then. Driven by brisk credit growth, financial deepening has continued rapidly in recent years, with the level of bank intermediation now being among the highest in Central, Eastern and Southeastern Europe. With regard to financial stability, relatively high credit and foreign exchange risks would appear to constitute the main challenges. However, the most recent slowdown in domestic credit growth and the sector's relatively high shock-absorbing capacities, as indicated by quite high profitability and capitalization levels and the strategically oriented presence of foreign banks, help mitigate risk concerns. Yet, the increasing debt burden of both households and corporates requires careful monitoring.

1 Introduction

The main aim of the study is to give a thorough overview of most recent financial sector developments in Croatia, notably with regard to banking sector stability, and to highlight possible macrofinancial challenges. The study also provides updated evidence and information on the financial sector in Croatia, following up on earlier OeNB studies on these issues (especially Reininger and Walko, 2005).

An introductory overview of macroeconomic conditions in section 2 puts financial developments in perspective and points out some factors of external vulnerability. Section 3 provides empirical insights into recent banking market developments – inter alia – by analyzing the structure, balance sheet structure and profitability of the banking market, followed by an examination of the underlying risk factors and the sector's shock-absorbing capacity. Section 4 focuses on nonbank financial intermediaries as well as on stock and bond markets. Section 5 concludes.

2 Macroeconomic Developments

In recent years the Croatian economy has maintained the strong momentum observed since the beginning of the new millennium, with the year 2007 even bringing a substantial boost to economic activity (see table 1). Domestic demand remained the main pillar of economic growth, with private consumption replacing investment as the key driver of growth against the background of brisk credit expansion, rising income growth and considerably improving labor market conditions. Similarly, public consumption accelerated markedly ahead of parliamentary elections in autumn 2007, thereby contributing to a less balanced composition of economic growth. The contribution of net exports to growth improved slightly in 2007, but remained modestly negative.

Despite booming domestic demand and its limited room for maneuver, Hrvatska narodna banka (HNB, Croatia's central bank) has been successful in maintaining low inflation in 2006 and the first three quarters of 2007. Consumer price inflation fell gradually from a temporary peak in 2005 to below 3% on aver-

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Table 1

GDP Growth and Growth Contributions

	2002	2003	2004	2005	2006	2007
Real GDP growth (annual change in %)	5.6	5.3	4.3	4.3	4.8	5.6
<i>Contribution to growth (percentage points)</i>						
Total consumption	5.8	3.1	2.9	2.3	2.5	4.4
of which: private consumption	4.6	2.8	2.9	2.1	2.1	3.7
public consumption	1.1	0.3	-0.1	0.2	0.4	0.7
Gross fixed capital formation	3.1	6.0	1.4	1.4	3.2	2.0
Inventories ¹	3.4	-1.9	0.1	0.6	0.2	0.0
Balance of goods and services	-6.7	-1.8	-0.1	0.1	-1.1	-0.8

Source: Crostat; OeNB calculations.

¹ Including statistical discrepancy.

Table 2

Nominal and Financial Indicators

	2002	2003	2004	2005	2006	2007
Inflation (CPI, annual average)	1.7	1.8	2.1	3.4	3.2	2.8
Money market overnight interest rate (annual average)	1.8	3.0	4.6	2.3	1.6	4.1
Real short-term interest rate (contemporaneous)	0.1	1.2	2.5	-1.1	-1.6	1.2
Domestic credit (annual change in %)	33.6	16.8	13.1	20.3	22.7	13.3
Exchange rate (euro, annual average)	7.4	7.6	7.5	7.4	7.3	7.3
Nominal effective exchange rate (2001 = 100) ^{1,2}	97.8	95.0	91.7	90.4	89.3	87.3
Real effective exchange rate (2001 = 100) ^{1,3,4}	98.2	95.7	92.6	90.6	88.9	86.5

Source: HNB.

¹ Period averages.² Decreasing index denotes nominal appreciation of the kuna.³ CPI-deflated.⁴ Decreasing index denotes real appreciation of the kuna.

age in 2007 (see table 2). However, given adverse global food and energy price developments, inflation accelerated in the final quarter of the year and reached a seven-year high of nearly 6% in year-on-year terms by end-2007. This, coupled with strong demand for liquidity in light of several public offerings of shares in major companies and bond issues, caused the falling trend of nominal interest rates to reverse as of early 2007 and real short-term interest rates to move into positive territory in 2007 (in annual average terms).³

Against the background of booming domestic demand and reaccelerating credit growth in 2005 and 2006 (in both the corporate and retail sectors) monetary policy remained challenging also in 2006 and 2007. Given the HNB's determination to curtail bank lending and to rein in banks' foreign borrowing in order to mitigate external imbalances (and also considering the limited maneuvering room for interest rate policy under the tightly managed float), the HNB continued to curb lending growth on several occasions in the last two years by introducing and fine-tuning new administrative measures (e.g. credit ceilings) and tightening

³ As of end-2007, the real interest rate was again mildly negative, as inflation increased faster than nominal interest rates.

Table 3

Fiscal Indicators

	2002	2003	2004	2005	2006	2007
General government balance (% of GDP) ¹	-4.1	-5.5	-4.3	-4.0	-2.5	-1.6
General government debt (% of GDP) ¹	40.1	41.0	43.2	43.7	40.8	37.7

Source: Eurostat.

¹ According to ESA 95 methodology.

reserve requirement regulations. As a consequence, domestic credit growth moderated in 2007 (see section 3.4.1 for a more detailed discussion).

On the back of buoyant GDP growth, Croatia's headline fiscal balances continued to improve in 2006 and 2007 (see table 3). Fiscal developments were, however, to a large extent underpinned by revenue overperformance, with the lion's share of extra revenues being spent in the areas of health care, education and agriculture. In this context, the HNB's limited room for maneuver and the country's high external imbalances would warrant a more prudent fiscal course. Public finances are still burdened with subsidies for various industries (e.g. shipping), high health and pension commitments (e.g. pensioner's debt)⁴ as well as other quasi-fiscal commitments, which are in many cases not included in the general budget and which amounted to more than 1% of GDP in 2006 and 2007, respectively. Thus, ensuring lasting fiscal consolidation through spending restraint remains an important challenge.

The acceleration of domestic demand as well as the sharp rise in oil and commodity prices triggered a further deterioration in Croatia's external position in 2006 and 2007 (see table 4). The current account deficit reached nearly 8% of GDP in 2006, and increased further to over 8.5% of GDP in 2007. However, thanks to sizeable capital increases in the banking sector and progress made in the privatization of state-owned enterprises (with strong foreign participation), gross FDI inflows accelerated substantially as well and provided full coverage of the current account gap both in 2006 and 2007. Croatia's gross external indebtedness increased further in recent years, although at a somewhat slower pace than at the beginning of the decade and against the background of a marked change in the country's external debt structure. On this note, the debt share of "other sectors" (primarily nonfinancial corporations) in total external debt rose markedly, while the banking sector's share decreased at about the same rate, given the HNB's determination to curb credit growth based on banks' foreign liabilities, which broadly indicates corporations' rising preference to borrow directly abroad rather than through domestic banks. The foreign exchange reserves of the HNB have continued to grow in euro terms on the back of capital inflows and central bank interventions and corresponded to an import cover of over five months as of end-2007.

⁴ This debt accumulated because, between 1993 and 1998, pensions were not indexed to rises in wage levels, but to price level changes. As a result, the real value of the pensions declined considerably. According to a 1998 Constitutional Court ruling, the state had to assume liability for these unpaid pensions (amounting to some 6% of GDP in 2006). Pensioners were given the option to receive 50% of the money in four instalments in 2006 and 2007 or the full amount over a longer period (2008 to 2013).

Table 4

External Position of the Economy

	2002	2003	2004	2005	2006	2007
Current account balance (% of GDP)	-8.6	-7.2	-5.1	-6.3	-7.9	-8.6
Gross FDI inflows (% of GDP)	4.7	6.7	3.3	4.7	8.0	9.7
External liabilities of the public sector (% of GDP) ¹	29.5	31.7	29.9	27.2	24.1	24.7
Gross external debt (total economy, % of GDP)	61.9	75.8	80.0	82.3	85.6	87.8
International reserves (no. of months of import)	4.9	5.2	4.8	5.1	5.3	5.2

Source: HNB.

¹ The public sector comprises the general government (including the Republic of Croatia, central government funds and local governments), the HNB, public enterprises and mixed-ownership companies.

Higher revenues from tourism, increased privatization-related capital inflows, capital increases in several foreign banks' subsidiaries, a number of domestic government bond issues and stepped-up foreign borrowing of corporations created substantial appreciation pressures on the Croatian kuna in the course of 2006 and 2007. However, in accordance with its exchange rate policy objectives, the HNB kept the exchange rate largely stable (in nominal terms) by means of foreign exchange market interventions, thereby also trying to prevent a deterioration of the country's external competitiveness.

3 The Croatian Banking Sector

3.1 Banking Sector Structure

Following major structural transformation at the end of the 1990s and the beginning of the new millennium, the Croatian banking sector has not seen further fundamental change in most recent years. Owing to slowing merger and acquisition activity, the number of banks has fallen only marginally in the last few years to 33 as of end-2007, a figure which seems still high in a regional context (see table 6).

The Croatian banking industry continues to be dominated by foreign ownership (see table 5). Although the number of majority foreign-owned banks increased from 14 to 16 in the last two years, their share in total assets has remained stable at around 90% of total banking sector assets. Foreign ownership is fairly concentrated, with investors from Austria, Italy and France taking the lead. In this context, especially the strong presence of Austrian banks is noticeable, with all major Austrian banking groups being present in Croatia. According to HNB data, Austrian groups (including Bank Austria, which is a member of the UniCredit Group) accounted for some 60% of Croatia's banking sector assets in 2007, corresponding to roughly two-thirds of total foreign involvement (in terms of total assets). Vice versa, the total assets of Austrian banks' subsidiaries in Croatia accounted for roughly 6% of Austrian banks' total foreign exposure and for some 13% of their total exposure in Central and Eastern Europe (CEE) in 2007; this means that Croatia is Austria's third-highest foreign-country exposure after the Czech Republic and Romania.

Despite the large number of banks, the banking sector is fairly concentrated. The four largest banks claimed a market share of some 64% of total assets as of year-end 2007. On this note, the large number of small banks (23 in total), all having a strong regional focus and a market share of less than 1% (8.1% in total),

Table 5

Ranking of Croatian Banks in Terms of Total Assets as at December 31, 2007¹

Bank name	Main shareholders ²	Total assets (EUR million)	Share in total assets (%)
1. Zagrebacka Banka d.d.	Bank Austria Creditanstalt AG (84.2%), Allianz SE (11.7%)	10,926.2	23.2
2. Privredna Banka Zagreb d.d.	Intesa Bci Holding International S.A. (76.6%), EBRD (20.9%)	8,362.8	17.8
3. Erste & Steiermärkische Bank d.d.	Erste Bank der Österreichischen Sparkassen AG (54.8%), Steiermärkische Bank und Sparkassen AG (41%)	5,532.6	11.8
4. Raiffeisenbank Austria d.d.	Raiffeisen International Bank-Holding AG (75%), Raiffeisenbank-Zagreb Beteiligungs GmbH (25%)	5,235.8	11.1
5. Hypo Alpe-Adria-Bank d.d.	Hypo Alpe-Adria-Bank International AG (100%)	3,602.5	7.7
6. Soci�t� G�n�rale-Splitska Banka d.d.	Soci�t� G�n�rale (99.8%)	3,523.0	7.5
7. Hrvatska Poštanska Banka d.d.	Croatian Privatisation Fund (37%), Hrvatska pošta (33.6%), Croatian Pension Insurance Administration (28%)	1,976.3	4.2
8. OTP Banka Hrvatska d.d.	OTP Bank RT (100%)	1,633.3	3.5
9. Slavonska Banka d.d.	Hypo Alpe-Adria-Bank International AG (99.9%)	1,439.3	3.1
10. Volksbank d.d.	VB International AG (99.2%)	994.4	2.1

Source: HNB.

¹ Preliminary unaudited data.

² As of June 2007.

may suggest potential for further market consolidation in the years ahead. This will most likely bring about higher concentration levels and possibly further foreign involvement.

Market penetration with banking services has increased considerably in recent years. The number of operating units rose from 1,037 in 2004 to 1,151 as of June 2007, while at the same time the number of automated teller machines (ATMs) grew by 1,155 to 2,766. Despite considerable network expansion there was only one operating unit for every 3,850 inhabitants, which is still more than twice the EU average of around 1,750. Network expansion went hand in hand with a considerable rise in bank staffing levels. As of June 2007 the banking sector comprised 20,172 employees, up by some 2,750 over 2004. Banking infrastructure signals a considerable geographical concentration of banking activities, with around 52% of all operating units and 57% of all ATMs registered in just four counties (out of a total of 20), i.e. Zagreb, Split-Dalmatia, Istria and Primorje-Gorski Kotar.⁵ This seems to indicate some susceptibility to regional shocks.

The banking sector's institutional framework seems to be well developed (see table 6). The EBRD's Banking Sector Reform Index (inter alia accounting for the quality of bank regulation and supervision, banking competition and the level of financial deepening) attests Croatia a good standing with a view to the state of banking reform – the country has even made more progress in this field than many other CESEE economies. Among the CESEE EU Member States, only Hungary, the Czech Republic, Estonia and Latvia had a similarly high ranking in 2007.

⁵ It should be noted, however, that the high degree of regional concentration might be explained to a large extent by the overall economic strength of these regions, with the four counties mentioned above accounting for over 60% of Croatia's GDP. An additional explanation might be the strong role of tourism in these counties.

Table 6

Structure of the Croatian Banking Sector

	2002	2003	2004	2005	2006	2007
EBRD Index of Banking Sector Reform	3.7	3.7	4.0	4.0	4.0	4.0
Number of banks (foreign owned)	46 (23)	41 (19)	37 (15)	34 (14)	33 (15)	33 (16)
Number of banks per 100,000 inhabitants	1.04	0.92	0.83	0.77	0.74	0.74
Asset share of private banks (%)	96.0	96.6	96.9	96.6	95.8	95.3
Asset share of foreign banks (%)	90.2	91.0	91.3	91.3	90.8	90.4
Market share of the four largest banks in total assets (%)	58.6	61.6	64.9	64.9	64.0	63.9
Herfindahl-Hirschmann index ¹	1,237	1,270	1,363	1,358	1,297	1,279

Source: HNB, EBRD; OeNB calculations.

¹ 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.

3.2 Asset and Liability Structure

Croatia has seen continuing financial deepening in recent years. Total banking sector assets reached 122% of GDP as of end-2007, which is among the highest in CESEE, but still well below the euro area average of some 300%.

Claims on nonbank residents represent the bulk of total banking sector assets (see table 7), with their share in total assets increasing to some 86% by 2007 thanks to the sustained strong momentum of the domestic credit market. At the same time, the need to finance domestic credit growth also caused banks' foreign assets to decrease to around 14% as a share of total assets in 2007. For similar reasons, banks' foreign liabilities kept growing strongly in absolute terms in recent years, while maintaining a fairly stable share of around 26% in total liabilities since 2003. Consequently, banks' net foreign asset (NFA) position turned strongly negative, reaching -12.2% of total assets as of end-2006. In 2007, however, banks' NFA position improved considerably, to -5.8% of total assets, following additional HNB measures to contain bank lending based on foreign borrowing and massive capital increases at foreign banks' subsidiaries (most likely enabling them to repay foreign liabilities), which led to a decrease of the share of foreign in total liabilities to below 20% as of end-2007.

Banks' claims on the private sector⁶ account for the lion's share of domestic claims (71.4%), with their share in total assets at 61.5% as of end-2007 being somewhat lower. In fact, despite the continuing tight monetary policy of the HNB, lending to the private sector accelerated considerably in 2005 and 2006, mainly on the back of a substantial revival in corporate lending and sustained strong growth of the retail segment. Placement growth was especially strong in the final quarter of 2006 given banks' intention to increase the calculation base ahead of the introduction of credit ceilings (the violation of which triggers the compulsory purchase of low-yielding HNB bills) as of the beginning of 2007. Partly as a result of the restrictive measures, lending to the private sector slowed considerably in the course of 2007. However, with banks' strategies still favoring the more profitable retail business (possibly also mirroring corporations' better access to foreign

⁶ The private sector comprises households and enterprises (including public sector enterprises).

Table 7

Asset Structure of the Croatian Banking Sector

	2002	2003	2004	2005	2006	2007
Commercial bank assets (% of GDP)	91.4	98.4	104.9	110.4	119.4	122.3
	% of total assets					
Total domestic claims	84.3	81.9	80.7	86.1	86.8	86.2
Claims on domestic MFIs	12.4	13.9	15.2	16.6	16.5	15.4
Claims on domestic nonbanks	71.9	67.9	65.5	69.5	70.2	70.8
of which:						
general government	14.1	11.8	10.1	12.0	10.0	9.2
domestic households and enterprises	57.8	56.1	55.3	57.5	60.3	61.5
domestic enterprises	31.8	27.9	26.4	26.7	28.3	28.0
domestic households	26.0	28.2	28.9	30.8	32.0	33.6
Foreign assets	15.7	18.1	19.3	13.9	13.2	13.8
Claims on domestic households (% of total claims on households and enterprises)	45.0	50.2	52.3	53.5	53.0	54.6
	%					
Loans-to-claims ratio for domestic nonbanks	81.8	85.6	87.1	87.3	90.3	90.4
of which:						
general government	29.1	37.6	39.9	42.8	48.9	46.3
domestic households and enterprises	94.7	95.7	95.7	96.6	97.1	97.0

Source: HNB; OeNB calculations.

financing), the slowdown in lending to corporations (which increasingly switched to direct external borrowing) was much more pronounced. Consequently, the share of household claims in total assets continued to increase also in 2007, as did their share in total private sector claims.⁷ A recent study shows that nonbank private sector credit levels in Croatia in 2006 were within an equilibrium range that underlying fundamentals would suggest. At the same time, credit levels have inched up in recent years relative to the estimated equilibrium ranges and by 2006 have moved above the midpoints of these ranges.⁸

Banks' claims on the general government are at relatively low levels, even though central and local governments have been borrowing more heavily domestically for the purpose of servicing maturing foreign debt by taking out loans or by issuing government bonds and T-bills issued by the finance ministry. On this note, as reflected by the fact that the loans-to-claims ratio has increased substantially since 2002, governments have come to increasingly rely on bank loans rather than securities issuance.

Concurrently, strict reserve requirements have kept banks' claims on domestic monetary financial institutions (MFIs; mostly deposits with the HNB and HNB bills) at relatively high levels since 2005, although falling somewhat in 2007, most likely as a result of moderating credit growth and banks' decreasing foreign liabilities.

Banks' liabilities are dominated by deposits of domestic nonbanks, mainly private sector deposits (see table 8). Robust economic growth, good corporate finances, improving labor market conditions, banks' efforts to mobilize domestic

⁷ For more details on household lending in Croatia see Kraft (2007).

⁸ See Backé, Égert and Walko (2007).

Table 8

Liability Structure of the Croatian Banking Sector

	2002	2003	2004	2005	2006	2007
	% of total liabilities					
Deposits of MFIs	0.1	0.6	0.4	2.3	2.6	3.7
Deposits of domestic nonbanks	68.7	63.7	60.4	59.2	59.0	61.3
of which:						
general government	5.1	4.0	4.2	4.5	4.4	5.0
households and enterprises	63.6	59.7	56.2	54.7	54.6	56.3
Money market fund shares	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	0.1	0.3	0.5	0.4	0.3	0.4
Capital and reserves	15.9	14.0	12.7	12.8	13.6	15.8
Foreign liabilities	21.1	25.6	27.1	26.3	25.4	19.4
Remaining liabilities	-6.0	-4.3	-1.1	-1.0	-0.9	-0.5
	memorandum items: %					
Domestic nonbanks' claim-to-deposit ratio	104.6	106.6	108.4	117.4	119.2	115.5
General government's claim-to-deposit ratio	273.8	293.5	242.6	266.4	227.2	185.2
Households' and enterprises' claim-to-deposit ratio	90.9	94.0	98.4	105.1	110.5	109.3

Source: HNB; OeNB calculations.

savings in order to substitute cheaper domestic sources of finance for relatively expensive and administratively penalized foreign funding, as well as the wealth effects of the 2006/2007 stock market boom have underpinned solid private sector deposit growth in recent years. Consequently, after several years of a falling trend, the share of domestic nonbank deposits in total liabilities increased markedly in 2007. By the same token, the share of capital and reserves grew vigorously to some 16% of total liabilities by year-end 2007 following large-scale capital increases in the banking sector in 2006 and 2007. At the same time, banks' increased capitalization, additional HNB action to safeguard banking sector stability and strong deposit growth led to a sharp drop of banks' foreign liabilities in 2007.

Household deposits accounted for 62.7% of total deposits (excluding deposits of nonresidents) as of end-2007, while the private sector (comprising households and nonfinancial corporations) made up around 90% of total deposits. The term structure of deposits reveals the predominance of time deposits, the share of which increased gradually from 65.2% of total deposits in 2003 to 69% by end-2007. This went fully to the detriment of savings deposits: Their share fell from 17.2% to 11.5% over the same period, while that of giro and current account deposits increased slightly to 19.5%. Foreign currency-denominated positions (mainly in euro) continue dominating the liability side of the banking sector,⁹ also owing to the fact that tourism revenues and workers' remittances are largely earned in foreign currency. Some 60% of time deposits¹⁰ are denominated directly in foreign currency. If foreign currency-indexed deposits are taken into account as well, the share of foreign currency deposits rises to 67%. Around 90% of residents' foreign

⁹ For more evidence on the role of foreign currencies in household savings in Croatia (and other CESEE countries) see Stix (2008) as well as Dvorsky, Scheiber and Stix (2008).

¹⁰ No currency breakdown is available for total deposits. Time deposits account for some 70% of total deposits.

currency deposits were denominated in euro as of end-2007. Despite recent years' strong deposit growth, claim-to-deposit ratios in excess of 100% still imply the continuing need for refinancing from abroad (or from other types of domestically issued/incurred liabilities, such as issued securities, capital increases etc.).

The most recent IMF balance sheet analysis for Croatia¹¹ reveals no major balance sheet imbalances for the financial sector. However, banks' sizeable net foreign liabilities toward nonresidents and the credit risk associated with the domestic private nonfinancial sector are identified as potential factors of vulnerability.

3.3 Banking Sector Profitability

Against the background of growing operational efficiency, the banking sector maintained relatively high levels of profitability in recent years (see table 9). In fact, return on average assets (ROAA) at around 1.3% has remained at high levels for several years now. After having peaked in 2004, return on average equity (ROAE), however, declined gradually to 11.1% by year-end 2007 mainly on the back of voluminous capital increases of foreign bank subsidiaries. Following a pickup in interest rates in recent years, net interest income as a share of total operating income increased to slightly over 70% by 2006, but decreased at the same time relative to average assets due to faster asset growth. In 2007, however, the share of net interest income in total income fell considerably against the background of declining interest rate spreads¹² (a result of a favorable inflationary environment, increasing operational efficiency and keener competition¹³), a falling claim-to-deposit ratio that was partly ascribable to new HNB measures to rein in credit growth and the related change in banks' strategies to aim for other sources of income. Despite rapid network expansion and increasing bank headcounts, the share of general operating expenses (including depreciation) in total income was

Table 9

Profitability of the Croatian Banking Sector

	2002	2003	2004	2005	2006	2007
Total operating income	100.0	100.0	100.0	100.0	100.0	100.0
of which: net interest income (% of total income)	70.8	74.3	69.2	70.1	70.5	67.4
net noninterest income (% of total income)	29.2	25.7	30.8	29.9	29.5	32.6
General administrative expenses (% of total income)	59.3	56.7	54.3	54.4	54.9	52.1
Loan loss provision expenses (% of total income)	6.6	7.7	6.6	5.3	6.2	7.4
Income tax (% of total income)	6.3	5.9	6.4	7.8	7.7	8.0
After-tax profit/loss (% of total income)	27.8	29.4	32.6	32.5	31.1	32.5
Net interest income (% of average assets)	3.3	3.4	3.0	2.9	2.7	2.6
Net noninterest income (% of average assets)	1.3	1.2	1.3	1.2	1.1	1.3
Interest rate spread (total loans - total deposits)	7.7	8.0	7.6	7.0	6.5	6.0
Return on average assets (%) ¹	1.3	1.3	1.4	1.3	1.2	1.3
Return on average equity (%) ¹	13.7	14.5	16.1	15.1	12.4	11.1

Source: HNB; OeNB calculations.

¹ After tax.

¹¹ See Hilaire and Ilyina (2007).

¹² Average interest rate on loans minus average interest rate on deposits.

¹³ For a detailed analysis of the competitiveness of the Croatian banking system see Kraft (2006).

fairly stable at some 55% in the period from 2004 to 2006, with improvements in cost efficiency starting to yield first results in 2007 and the cost-income ratio falling to 52.1% in 2007. Provisioning requirements (mainly collectively assessed impairment provisions) have increased gradually since 2005, boosted by strong placement growth.

3.4 Risks and Shock-Absorbing Capacities

3.4.1 Credit Risk

Credit risk continues to be the main risk to financial stability in Croatia. Given a booming economy and despite HNB action to put a brake on bank lending (see table 10), growth of credit to the private sector accelerated again considerably in 2005 and 2006. As the rapid credit expansion continued to be largely funded by external borrowing (mainly from parent banks), in the course of 2006 the HNB further tightened the marginal reserve requirement and introduced a special reserve requirement of 55%, thereby extending reserve requirements also on debt securities issued by banks. As of the beginning of 2007, the HNB additionally tightened monetary policy by introducing credit ceilings (12% p.a.) and thus penalizing excessive bank lending by obliging banks to purchase low-yielding HNB bills on lending in excess of the credit limits. Specifically, banks must purchase the equivalent of 50% of loans exceeding the credit ceiling (75% as of January 2008). However, given signs of ongoing circumvention by banks (e.g. activities shifted to their nonbank financial subsidiaries), a fine-tuning of the measures became necessary later on in 2007. First, as of June 2007, the calculation base for purchasing compulsory HNB bills was divided into two separate parts, i.e. household and corporate placements on the one hand, as well as off balance sheet items on the other hand. In July 2007, the HNB subsequently reduced banks' maximum allowable placement growth (i.e. without triggering the compulsory purchase of HNB bills) to a monthly rate of 0.5% for the second half of the year. Finally, as of October 2007, the calculation base for the subscription of compulsory HNB bills was broadened to include lending by legal persons controlled by Croatian banks. All measures combined finally led to a deceleration of domestic credit growth to the private sector in the course of 2007. This was driven mainly by a marked slowdown in domestic corporate lending, as banks started to redirect their corporate clients to borrow directly from their parent banks abroad, enabling them to continue to focus on the more profitable retail sector.

Banks' exposure to the household sector has increased rapidly in recent years, as has the credit risk associated with the retail segment. In fact, household debt levels grew considerably not only as a share of GDP, but also relative to gross disposable income (see table 11). The estimated overall household debt-to-GDP ratio climbed to over 42% as of June 2007 (most recent figure available). Although this is still well below euro area levels (e.g. Germany 67%), it is much higher than in many other countries in the region (e.g. Poland 21%, Hungary 29%). Household debt levels even surpassed the level of annual gross disposable income by June 2007, which is indeed high in CEE comparison (e.g. Czech Republic 41%). Implicit interest payments relative to gross disposable income increased to over 7% by end-June 2007, driven by both strong volume growth and rising interest rates. Household debt is predominantly made up of bank loans, with mortgage lending registering the highest growth rates. Given a strong demand for property and ris-

Table 10

Overview of Selected HNB Measures to Rein in Lending Growth

Monetary Policy Instrument		Date	Measure
Interest rates		April 2000	Discount rate cut by 200 basis points (bp) to 5.9%.
		October 2002	Discount rate cut by 140 bp to 4.5%.
		January 2008	Discount rate increased by 450 bp to 9.0%
Reserve requirements	General reserve requirement	December 2000	Foreign currency reserve requirement lowered from 55% to 23.5%, i.e. the prevailing ratio for the kuna reserve requirement.
		July 2001	Reserve requirement reduced to 22%; uniform calculation base introduced for kuna and foreign currency reserve requirements.
		September 2001	10% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		October 2001	20% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		November 2001	Reserve requirement reduced to 19%. Of the accrued foreign currency reserve requirement, 25% have to be allocated in kuna.
		August 2003	35% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		November 2003	40% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		December 2003	60% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		October 2004	Reserve requirement reduced to 18%.
		January 2006	Reserve requirement reduced to 17%.
	Marginal reserve requirement (MRR)	August 2004	MRR introduced at 24% on borrowing beyond the base of June 2004.
		February 2005	MRR increased to 30%.
		May 2005	MRR increased to 40%.
		January 2006	MRR increased to 55%. Alternatively, a rate of 40% applies to increases in foreign debt over initial debt balance in June 2004, and a rate of 15% of increases after November 2005. Minimum reserve base broadened to include bank guarantees for corporate external borrowing and bank borrowing from domestic leasing companies. Off balance sheet items carry a rate of 55% (reference period November 2005).
	July 2006	Scope of marginal reserve requirement extended to include increases in funds received from nonresidents and legal persons in a special relationship with a bank which are used to finance domestic legal and natural persons in the form of syndicated loans, or domestic banks' placements to domestic legal and natural persons in the name and for the account of the mandator (mandated operations).	
Special reserve requirement	March 2006	Special reserve requirement (55%) introduced on banks' liabilities arising from issued securities (calculation period January 2006). Minimum reserve base is calculated separately for securities issued in kuna and securities issued in foreign currency.	
Administrative measures		January 2003	Banks whose loan growth was above 16% (or 4% in a given quarter) in 2003 relative to loans outstanding on December 31, 2002, are required to buy low-yield HNB bills equivalent to 200% of excess growth. Not extended beyond 2003.
		December 2006	To restrict the annual growth of bank placements in 2007 to 12%, the HNB introduces the mandatory purchase of HNB bills (decision issued toward the end of 2006).
		February 2007	Decision on the compulsory purchase of HNB bills amended to make it to easier for banks to distribute the permissible rate throughout the financial year: Banks may define, in their business and credit policy, for which part of the year the permissible 12% growth rate of placements shall apply.
		June 2007	Calculation base for the compulsory purchase of HNB bills divided into two separate parts, i.e. household and corporate placements as well as off balance sheet items; the annual 12% growth ceiling is retained for both components.
		July 2007	Banks' permissible placement growth is reduced to a monthly ratio of 0.5% for the second half of the year (reference period end-June 2006).
		October 2007	Calculation base for the compulsory purchase of HNB bills broadened to include loans granted by legal persons, controlled by a bank or an owner of a qualifying holding (who is a financial institution) (reference period September 30, 2007).
		January 2008	While the annual 12% credit growth ceiling is retained, the rate for compulsory purchases of HNB bills is increased from 50% to 75% of loans granted in excess of the credit ceiling. At the same time, the remuneration rate is decreased from 0.75% pa. to 0.25% pa.

Source: HNB, IMF and OeNB compilation.

Overview of Selected HNB Measures to Rein in Lending Growth

Monetary Policy Instrument	Date	Measure
Loan loss classification/provisioning/risk weights	January 2004	Loan classification and provisioning requirements tightened; the new categories applicable from 2004 are recoverable (A), partly recoverable (B1, B2, B3) and irrecoverable (C), replacing the following framework: fully recoverable placements (A, B), partly recoverable placements (C, D), irrecoverable placements (E).
	December 2005	Capital adequacy risk weights increased by 25 basis points on foreign currency or foreign currency-indexed loans to unhedged borrowers in the nongovernment sector.
	June 2006	Specific reserve rates tightened (amendments to the Decision on the classification of placements and contingent liabilities of banks)
	January 2008	Introduction of higher capital requirements on banks whose growth rate of placements exceeds the maximum permissible growth rate of placements and introduction of increased risk weights (100%) to placements with a currency clause extended to clients with no own foreign currency income.
Liquidity ratios	February 2003	Minimum ratio of foreign currency liquid assets to foreign currency liabilities of 35%.
	February 2005	Liquid asset ratio cut to 32%.
	March 2006	From March 1 to October 31, 2006, banks are required to include under liquid assets their participation in a EUR 400 million loan to the government.
	October 2006	32% of foreign exchange liabilities must be covered by short-term foreign exchange assets with a maturity of less than 3 months. Forex liabilities expanded in order to include liabilities in kuna with a currency clause.
	March 2008	From March 10 to May 31, 2008, banks are required to include under foreign currency claims their shares in the short-term foreign currency loan granted in March 2008 to Croatia's Ministry of Finance, totaling EUR 200 million.

Source: HNB, IMF and author's compilation.

ing real estate prices¹⁴ since 2003 (mainly in Zagreb and the coastal areas) loans for housing purposes have grown much faster than other types of household loans (see table 12), with their share in total household loans increasing from 28% in 2002 to over 40% as of end-2007.

Robust growth in corporate indebtedness in recent years has contributed to increased credit risks also in the corporate sector. Indeed, as a result of buoyant investment activity in a favorable economic environment, the corporate sector's domestic debt growth (mainly bank loans) has accelerated significantly in recent years. Consequently, total corporate sector domestic debt reached over 62% of GDP in June 2007, and interest payable has climbed to 3.4% of GDP since 2004.

The Croatian banking sector continued to be highly exposed to foreign currency-related (indirect) credit risk, which can be associated with both potential exchange rate fluctuations and foreign interest rate risk borne by clients. This has to be seen as a consequence of the large portion of banking activity being conducted in foreign currency (mainly euro), even though a great deal of loans is actually not denominated in euro, but granted in kuna and indexed to the euro. Even though the share of foreign currency loans in total loans (including loans with a foreign currency clause) fell substantially in 2006 and 2007 (see table 12), it still amounted to 61% as of end-2007 (2005: 77.4%). This development can be attributed to stricter capital adequacy and liquidity requirements imposed by the HNB in 2006, which introduced higher risk weights on foreign currency and foreign currency-indexed claims on unhedged borrowers and broadened the base for cal-

¹⁴ For a more detailed analysis of the determinants of house price dynamics in Croatia and in CEE, see HNB Bulletin 135, p. 18–19, and Égert and Mihaljek (2007).

Table 11

Selected Macprudential Indicators – Domestic Debt

	2002	2003	2004	2005	2006	2007 ¹
Households						
% of GDP	24.8	28.9	31.8	35.6	40.3	42.2
% of gross disposable income	49.3	63.5	68.5	81.7	96.2	103.5
Annual rate of change	42.5	27.9	19.2	20.2	22.6	22.4
Implicit interest payments (% of gross disposable income)	4.5	5.7	5.9	6.5	7.0	7.4
Nonfinancial enterprises						
% of GDP	45.2	45.4	47.2	51.4	58.7	62.2
% of corporate bank deposits	308.5	290.7	302.4	347.6	340.5	366.9
Annual rate of change	15.2	10.0	12.6	17.2	23.5	24.5
Implicit interest payments (% of GDP)	3.2	3.0	2.8	2.9	3.1	3.4
Total nonfinancial private sector						
% of GDP	70.0	74.4	79.1	87.0	98.9	104.4
Annual rate of change	23.6	16.4	15.2	18.4	23.2	23.6
General government						
% of GDP	42.1	43.3	45.9	46.9	44.0	43.2
Annual rate of change	8.5	12.6	15.0	9.9	1.5	3.5
Interest paid (% of GDP)	2.0	2.0	2.0	2.2	2.2	2.0
Total nonfinancial sector						
% of GDP	112.0	117.6	125.0	133.9	142.9	147.6
Annual rate of change	17.4	15.0	15.1	15.3	15.6	17.0

Source: HNB.

¹ June 2007.

culating the prescribed 32% foreign currency liquidity ratio¹⁵ (by including kuna liabilities with a currency clause). Over 85% of total foreign currency loans are indexed to foreign currencies, in the case of households even 99%. Given the above, domestic borrowers carry the lion's share of the currency risk,¹⁶ even though this risk is to some extent alleviated by the fact that also banks' liabilities are largely denominated in foreign currencies (mainly euro), as workers' remittances and tourism revenues (both denominated largely in euro) are a major source of private sector deposits (at least at the aggregate level). Foreign currency lending is predominantly carried out in euro. Domestic sectors' borrowing in currencies other than euro is, however, increasing strongly, with the Swiss franc having rapidly gained in importance in recent years due to lower interest rates. On this note, the share of Swiss franc-denominated or -indexed loans in total foreign currency loans more than doubled from 12% in 2005 to some 27% by year-end 2007. The higher volatility of the kuna against the Swiss franc (as compared to the euro) further increases borrowers' exposure to currency risk.

¹⁵ According to the HNB Decision on Minimum Required Amount of Foreign Currency Claims (Official Gazette 104/2006 and 71/2007), banks shall maintain a minimum of 32% of their foreign currency liabilities in foreign currency claims.

¹⁶ Therefore, it is of utmost importance to raise borrowers' awareness of a residual exchange rate risk, as within the tightly managed float they might tend to underestimate the risks associated with borrowing in the anchor currency.

Table 12

Selected Banking Sector Stability Indicators

	2002	2003	2004	2005	2006	2007
Credit risk						
Credit growth (annual change in %)	33.6	16.8	13.1	20.3	22.7	13.3
Growth of credit to the private sector (annual change in %)	31.6	15.9	13.6	18.5	23.7	14.5
Real growth of credit to the private sector (annual change in %)	29.1	14.0	10.6	14.4	20.3	10.2
Credit growth to households (annual change in %)	43.0	27.7	18.7	20.3	21.8	18.0
Mortgage credit (housing loans) growth (annual change in %)	30.8	36.7	26.6	28.8	33.9	22.5
Nonperforming placements (% of total placements)	5.9	5.1	4.6	4.0	3.2	3.1
Share of foreign currency credit in total credit	79.8	74.2	75.7	77.4	70.9	61.0
Share of foreign currency deposits in total deposits ¹	88.4	87.5	87.3	86.4	76.3	66.8
Market risk						
<i>Foreign exchange risk</i>						
Open FX position (% of total balance sheet assets) ²	1.2	1.3	1.1	0.7	0.5	0.7
<i>Stock market risk</i>						
Ratio of shares and participations to total assets (equity holdings)	1.8	1.4	0.9	0.8	0.7	0.7
Liquidity risk						
Ratio of liquid assets ³ to total assets	29.4	32.8	31.2	28.0	27.5	27.6
Ratio of total loans to total deposits	74.2	76.7	80.7	88.5	92.5	92.8
Ratio of liquid assets ³ to short-term liabilities	97.1	117.2	120.4	103.1	102.6	107.6
Shock-absorbing factors						
Impairment provisions ⁴ (% of nonperforming placements)	85.1	79.4	80.2	81.5	81.8	80.5
Capital adequacy ratio	17.2	16.2	15.3	14.7	14.0	15.4
Memorandum item						
Number of banks (foreign owned)	46 (23)	41 (19)	37 (15)	34 (14)	33 (15)	33 (16)
Asset share of foreign-owned banks (%)	90.2	91.0	91.3	91.3	90.8	90.4

Source: HNB; OeNB calculations.

¹ Time deposits.

² June 2007.

³ Liquid assets = cash in vaults + deposits with the HNB + deposits with other banks + treasury bills.

⁴ Including collectively assessed impairment provisions.

Loan quality (measured by the nonperforming loan ratio) continued to improve. In fact, the share of nonperforming placements¹⁷ in total placements declined further in recent years (although primarily due to strong placement growth), reaching 3.2% as of end-2006. Slower credit growth, however, seems to have slowed the recent strong downward trend, with the nonperforming placement ratio falling only marginally to 3.1% by year-end 2007. With a view to better managing credit risk, a Central Credit Register (HROK) was established in Croatia in 2005. HROK was founded by 20 Croatian banks under the auspices of the Croatian Bank Association, became fully operational in May 2007 (when banks started to use reports issued by HROK) and covers around 90% of the total retail

¹⁷ According to the HNB Decision on the Classification of Placements and Contingent Liabilities of Banks, placements encompass all financial instruments which give rise to a bank's exposure to credit risk, i.e. loans, financial instruments held to maturity and debt instruments classified into the available-for-sale portfolio.

market in Croatia. It collects, processes and exchanges information on the credit record of potential borrowers.

3.4.2 Market and Liquidity Risks

Banks' interest rate risk seems to be moderate. With a view to banks' assets, the interest rate risk of banks is limited, as most loan contracts (including fixed interest rate loans) carry a restrictive clause, allowing interest rates to be customized. At the same time, on the liability side, the lion's share of bank deposits is short term. In this context, some 62% of time deposits (accounting for approximately 70% of total deposits) have a maturity of less than one year, allowing for some flexibility in times of high interest rate volatility. Consequently, most of the interest rate risk has been shifted to bank clients, and will thus rather materialize through the credit risk channel in the event of adverse developments.

Given the low and declining fraction of shares and participations in total assets, the Croatian banking sectors' exposure to stock market risk is negligible. The recent falling trend has, however, come to an end in 2007, with the ratio of equity holdings to total assets prevailing at 0.7%, most likely given banks' keen interest in the initial public offering of major Croatian corporations in 2007.

Direct foreign exchange risk of banks appears to be manageable. According to HNB regulations, banks' open foreign currency positions may not exceed 20% of their regulatory capital. The ratio of long foreign exchange position to regulatory capital stood at 6.7% in June 2007 (2006: 5.2%), while the short position was at 2.8% (2006: 1.8%). These figures are an indication for a relatively low direct foreign exchange risk, with the higher long position implying that banks are more exposed to foreign exchange risks resulting from a kuna appreciation. Moreover, as mentioned above, according to the rules in place, banks' liquid foreign currency claims must correspond to at least 32% of their short-term foreign currency liabilities.

Overall, banks' exposure to market risks seems to be subdued, but by shifting foreign exchange and interest rate risks to clients, banks have broadly transformed market risk into credit risk.

Liquidity risks have increased somewhat in recent years, as is mirrored by slightly worsening liquidity indicators (see table 12). Over the past few years, the ratio of liquid assets to total assets declined gradually to 27.6% by end-2007, while the loan-to-deposit ratio rose to over 90%. Nevertheless, liquidity levels can still be considered high, inter alia given the large amounts of free reserves held with the HNB (denominated mainly in foreign currency). However, the concentration of liquid assets on a few asset classes (e.g. treasury bills) seems to indicate some risk in case of liquidity shocks. At the same time, given the high share of liabilities toward nonresidents, risks associated with international financing have been growing in recent years. Despite the fact that parent banks appear to be the main external financing source for foreign bank subsidiaries in Croatia¹⁸ and that the year 2007 seems to have heralded a declining trend in foreign liabilities, the still high share of foreign liabilities requires cautious monitoring.

¹⁸ It should be noted, however, that liquidity problems of parent banks in times of financial market turbulence could negatively impact the refinancing channels of foreign bank subsidiaries, thereby increasing external refinancing risks.

3.4.3 Shock-Absorbing Factors

Banking sector profitability is relatively high, as evidenced by a fairly stable return on average assets of some 1.3% in recent years. This should provide banks with a comfortable buffer to weather unexpected regional or sectoral shocks. Moreover, although return on average equity has declined in recent years, this can be mainly attributed to the strengthening of banks' capital base, which should likewise underpin the shock resistance of the Croatian banking market.

Croatia's banking sector is well capitalized according to standard capital ratios. Notwithstanding substantial capital increases, the capital adequacy ratio has fallen considerably since 2001 on tighter capital adequacy regulations, reaching 14% of risk-weighted assets by end-2006 (see table 12), which is, however, still well above the 10% required by Croatian law. Following large-scale capital increases, the capital adequacy ratio increased again to 15.4% in 2007. Thus, as banks' capital ratios are far in excess of regulatory requirements, the banking sector has a substantial buffer in the event of shocks. However, according to the latest IMF sensitivity analysis,¹⁹ adverse economic developments (mirrored by slowing real GDP growth and a pickup in the unemployment rate) could have a large and negative impact on the capitalization of Croatian banks (via the need for higher loan loss reserves).

Finally, also widespread foreign ownership bolsters banking system stability. On this note, foreign bank presence in Croatia not only increases banks' operational efficiency by means of transfer of capital, know-how and modern technologies, but also mitigates the likelihood of distress and sudden stop given foreign banks' strategic, long-term objectives in Croatia. Indeed, given high reputational risks (i.e. the potential negative impact that a deteriorating image might have on the respective banking group as a whole), foreign bank subsidiaries in Croatia may be able to rely on their parent banks' backing in the event of unexpected shocks.²⁰

4 Financial Markets and Nonbank Financial Institutions

Despite relatively high financial intermediation levels in CEE comparison, Croatia's financial markets are still having substantial potential for further development, considering the EU as a convergence benchmark in the longer run. This would seem to imply dynamic financial market developments also in the years ahead. Croatia's financial system is dominated by banks, which still represent the main channel for financial intermediation. In recent years, however, nonbank financial intermediation – albeit still small in size – has expanded rapidly (even though starting from a very low base), thereby increasingly gaining in relative importance. This development is not only underpinned by growing macroeconomic stability, rising income levels of the population and improving corporate finances, but also by increasing interest of foreign investors in the wake of Croatia's EU integration process.²¹

¹⁹ See Mitra (2007).

²⁰ However, it should be noted that it was actually in Croatia that a foreign bank followed a hands-off approach with regard to its troubled subsidiary in 2002.

²¹ On February 21, 2003, Croatia applied officially for EU membership. Accession negotiations have started formally on October 4, 2005. By the end of April 2008, 18 negotiation chapters were opened out of a total of 35, with 2 chapters being already provisionally closed.

Table 13

Financial Sector Structure

Share in total financial sector assets	2002	2003	2004	2005	2006	2007 ¹
Banks (gross assets, consolidated)	85.8	83.4	81.5	78.8	76.3	73.5
Open-end investment funds (net assets)	1.3	1.3	1.6	2.7	4.1	6.2
Close-end investment funds (net assets)	0.6	0.4	0.4	1.1	1.4	1.7
Insurance companies	5.7	5.4	5.2	5.1	5.0	5.1
Housing savings banks (gross assets, consolidated)	1.1	1.5	1.8	1.8	1.6	1.4
Compulsory pension funds (net assets)	1.1	2.0	2.9	3.6	4.1	4.3
Voluntary pension funds (net assets)	0.0	0.0	0.0	0.1	0.1	0.1
Savings and loan cooperatives	0.6	0.6	0.5	0.5	0.5	0.5
Leasing companies	3.8	5.4	6.0	6.3	6.9	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: HNB, HANFA, Ministry of Finance.

¹ June 2007.

4.1 Nonbank Financial Institutions

Croatia's nonbank financial sector exhibited a rapid development in recent years. Consequently, as of June 2007, the nonbank financial sector already accounted for around 26.5% of total financial sector assets, corresponding to roughly 40% of GDP. This considerable increase in the market share of nonbank financial institutions at the expense of banks is particularly remarkable in light of the likewise brisk expansion of the banking sector. Nonetheless, some nonbank financial intermediaries, mainly leasing companies, may have benefited to a tangible extent from the HNB's restrictive approach to monetary policy in recent years. In light of last years' stock market boom, open-end investment funds recorded, however, the most dynamic development among all nonbank financial institutions: Their market share in total financial sector assets has roughly quadrupled since 2004. Similarly, favorable stock market developments coupled with the easing of investment restrictions allowed compulsory pension funds' assets to grow buoyantly as well. Insurance companies' assets also increased significantly, albeit at a somewhat slower pace, with growth rates in the life segment, however, outperforming the nonlife segment.

The risks associated with the nonbank financial sector seem limited at present and are thus unlikely to undermine financial system stability in Croatia, given the still relatively small size of the sector and its proper regulation by the Croatian Financial Services Supervisory Agency HANFA. Nevertheless, the sector's strong momentum, its strong dependency on stock market developments (implying risks in case of an adverse shock) and the signs of regulatory arbitrage on the part of banks warrant a cautious policy stance and an intensive cooperation between the HNB, which is in charge of supervising the banking sector, and HANFA, which supervises nonbank financial intermediaries.

4.2 Bond Market Developments

Croatia's domestic bond market showed a dynamic development in recent years, with the total market capitalization of bonds listed on the Zagreb Stock Exchange tripling in absolute terms in the period from 2004 to 2006 (see chart 1) and reaching around 16% of GDP in relative terms by end-2006, which is, however, still low compared with other CESEE countries. This relatively strong momen-

Chart 1

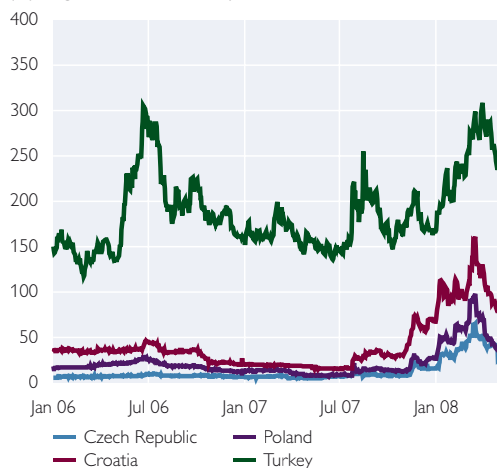
Bond Market Developments

Source: Zagreb Stock Exchange.

Chart 2

Credit Default Swap Developments

(5-year government bonds, EUR)



Source: Datastream.

first half of 2007 and were even much lower than those of many of Croatia's CEE peers. Yet as a result of global financial market turbulences, the second half of 2007 saw some widening of long-term government bond yield spreads vis-à-vis the euro area, similarly to developments in other countries in the region. Likewise, risk insurance premia increased markedly in the second half of 2007 and up to March 2008 before starting to reside again, as is mirrored by credit default swap developments (see chart 2). Croatia's ongoing EU integration process and the prospect of upcoming rating upgrades on the back of improving fundamentals are, however, expected to bring about lower spreads and risk premia in the future.

4.3 Stock Market Developments

In 2006 and 2007, Croatia's stock market was among the best performers worldwide. The CROBEX stock index grew by over 60% per annum in the last two years, by far outperforming the MSCI global emerging market index (see chart 3).

tum cannot be explained only by the government's objective to focus on domestic borrowing in order to reduce the country's foreign indebtedness, and stepped-up capital market activity of municipalities in need of financing for infrastructure projects, but also by the increasing interest of large corporations to obtain financing via the capital market in light of the HNB's regulatory requirements. Nevertheless, the share of corporate bonds in total bond market capitalization is still fairly low (around 15%). In 2007 the domestic bond market developed more moderately, though, with one reason being the favorable development of the country's budgetary situation and the government's lower financing needs as well as banks' limited interest in bond issues (subject to special reserve requirement) and corporate bond underwritings (also subject to credit ceilings). Nevertheless, the EU integration process, the sustained interest of foreign investors and the increasing role of institutional investors (e.g. mutual and pension funds) are expected to underpin the growth potential of the domestic bond market into the future, at least on the demand side.

The long-term government bond yield spreads versus the euro area were largely stable throughout 2006 and the

Chart 3

Stock Market Developments

(June 30, 2005 = 100, in EUR terms)



Source: Zagreb Stock Exchange, Datastream.

This development can be attributed largely to a favorable macroeconomic environment, progress made in structural reforms (privatization), increased foreign (equity) capital inflows encouraged by the country's ongoing EU integration process and improvements in the regulatory framework and institutional streamlining (including the merger of the Zagreb Stock Exchange and Varaždin Stock Exchange in early 2007). Price developments, numerous large-scale IPOs and the one-off effect of the merger of the two stock exchanges combined resulted in a stock market capitalization of some 125% of GDP by end-2007, which is one of the

highest ratios in CESEE and, incidentally, roughly on a par with Croatia's bank intermediation levels.

Despite the rapid increase in market capitalization, the stock market is still characterized by relatively low trading volumes and liquidity levels. Although regular equity turnover has grown briskly in recent years, reaching around 8% of GDP by end-2007, it is still much lower than in some other CESEE EU Member States (e.g. Hungary 34%, Poland 41%) or candidate and potential candidate countries. On this note, the increasing role of alternative ways of financing (e.g. bank finance, public offering of corporate bonds, FDI inflows and direct external financing by corporates) seem to constrain the attractiveness of the capital market.

Table 14

Stock Market Indicators¹

	2001	2002	2003	2004	2005	2006	2007
CROBEX stock market index	1,035	1,173	1,185	1,566	1,998	3,210	5,239
Number of listed shares	66	73	175	183	194	202	383
Market capitalization (EUR million) ²	3,503	3,805	4,856	8,048	10,945	22,014	48,086
Market capitalization (% of GDP) ²	15.6	15.6	18.7	28.7	34.9	64.5	129.3
Regular turnover (EUR million) ²	130	158	198	350	639	1,428	3,006
Regular turnover (% of GDP) ²	0.6	0.6	0.8	1.2	2.0	4.2	8.1

Source: Zagreb Stock Exchange (ZSE)

¹ 2001–2006 ZSE only. Following a merger, 2007 figures include Varaždin Stock Exchange.² Equities.**5 Conclusions**

Croatia's financial sector has continued to develop dynamically in recent years. The financial system is still dominated by the banking sector, although its relative importance has declined somewhat recently. This can be mainly attributed to the strong momentum of the nonbank financial sector, which in turn was largely driven by buoyant asset (mainly stock) prices.

Croatia's banking sector has continued to converge toward more advanced systems and can now be considered rather well-developed compared with other CESEE countries from both the financial and institutional perspective. The strong presence of foreign banks has contributed to increasing operational efficiency. Despite the relatively large number of banks, the banking sector is characterized by high concentration levels. Considering the large number of small banks, further market consolidation seems inevitable and will add to market concentration and presumably also to even higher foreign presence. Sustained keen competition among banks should, however, prevent the abuse of dominant market positions.

Risk exposure has increased further as a result of sustained rapid credit expansion in recent years. Strong credit growth coupled with a shift of market risk to bank clients calls first and foremost for a careful monitoring of credit risk. Despite the restrictive measures undertaken by the HNB, especially the growth of credit to the household sector has remained high, leading to rapidly increasing debt and debt service levels. At the same time, the still high degree of currency substitution in the financial sector highlights substantial (indirect) foreign currency-related risks. It is, however, important to underscore the Croatian banking system's relatively high shock absorbing capacity. On this note, the banking sector is characterized by high capitalization ratios, high profitability, increasing cost efficiency and improving loan portfolio quality (as measured by the nonperforming placement ratio).

Rapid credit expansion has contributed to macroeconomic imbalances, in particular with regard to Croatia's current account and external debt position. Thus, the main challenge for the HNB now is to allow for a further development of the banking sector while, at the same time, safeguarding macroeconomic and financial stability. Thus, it is crucial to keep Croatia's external debt position in check, so as to contain the country's vulnerability to changes in investor sentiment. Against this background, the HNB has continued to take restrictive administrative and prudential measures to curtail credit growth based on banks' foreign borrowing. However, looking forward, it remains to be seen how viable this strategy will be over the medium and longer term, given Croatia's advancing preparations for EU membership.²² Moreover, since the HNB's maneuvering room in a quasi-fixed exchange rate regime is limited, fiscal policy needs to play a more decisive role in macroeconomic stabilization.

²² According to Croatia's Stabilization and Association Agreement (SAA) with the EU, from the fourth year after the entry into force of the SAA (February 1, 2005) Croatia has to ensure free movement of capital relating to portfolio investment and financial loans and credits with maturity shorter than one year.

References

- Backé, P., B. Égert and Z. Walko. 2007.** Credit Growth in Central and Eastern Europe Revisited. In: Focus on European Economic Integration 2/2007. OeNB. 69–77.
- Barisitz, S. 2000.** The Development of the Croatian Banking Sector Since Independence. In: Focus on Transition 2/2000. OeNB. 96–122.
- Dvorsky, S., T. Scheiber and H. Stix. 2008.** Euroization in Central, Eastern and South-eastern Europe – First Results from the New OeNB Euro Survey. In: Focus on European Economic Integration 1/2008. OeNB.
- EBRD. 2006.** Transition Report 2006. London.
- EBRD. 2007a.** Transition Report Update 2007. London.
- EBRD. 2007b.** Transition Report 2007. London.
- Égert, B. and D. Mihaljek. 2007.** Determinants of House Price Dynamics in Central and Eastern Europe. In: Focus on European Economic Integration 1/2007. OeNB. 52–76.
- ECB. 2006.** Macroeconomic and financial stability challenges for acceding and candidate countries. ECB Occasional Paper Series 48. Frankfurt. July. 37–48.
- European Commission. 2008.** Candidate and Pre-Accession Countries' Economies Quarterly. Brussels. April.
- European Commission. 2008.** European Economy 1/2008. Economic Forecast – Spring 2008. Brussels.
- Hilaire, A. and A. Ilyina. 2007.** External Debt and Balance Sheet Vulnerabilities in Croatia. In: IMF Country Report 07/82. February. 55–79.
- HNB. 2007a.** Bank Bulletins. Zagreb.
- HNB. 2007b.** Macroprudential Analysis. Zagreb.
- HNB. 2007c.** Annual Reports. Zagreb.
- IMF. 2007a.** Republic of Croatia – 2006 Article IV Consultation – Staff Report. Country Report 07/81. February. Washington.
- IMF. 2007b.** Republic of Croatia – Selected Issues. Country Report 07/82. February. Washington.
- Kraft, E. 2006.** How Competitive Is Croatia's Banking System? Hrvatska narodna banka. Working Paper 14. Zagreb. March.
- Kraft, E. 2007.** The Boom in Household Lending in Transition Countries: A Croatian Case Study and a Cross-Country Analysis of Determinants. In: Comparative Economic Studies 49(3). September. 345–366.
- Mitra, S. 2007.** Bank Stability and Credit Risk in Croatian Banks. IMF Country Report 07/82. February. 80–102.
- Reininger, T. and Z. Walko. 2005.** The Croatian Banking System. In: Financial Stability Report 9. OeNB. 110–126.
- Stix, H. 2008.** Euroization: What Factors Drive its Persistence? Household Data Evidence for Croatia, Slovenia and Slovakia. OeNB Working Paper 140. March.