

An IRC Expert Group of the ESCB

Research Report

Financial stability challenges in EU candidate countries - Financial systems in the aftermath of the global crisis

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EUROPEAN CENTRAL BANK

EUROSYSTEM

OCCASIONAL PAPER SERIES

NO 115 / JULY 2010

EZB EKT EKP

**FINANCIAL STABILITY
CHALLENGES
IN EU CANDIDATE
COUNTRIES**

**FINANCIAL SYSTEMS
IN THE AFTERMATH
OF THE GLOBAL
CRISIS**

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CONTENTS

ABBREVIATION	4	4.4 Funding structures of banking systems	60
LIST OF AUTHORS	5	4.5 The role of parent banks in candidate countries	64
ABSTRACT	6	4.6 Trends in foreign exchange loans and deposits	68
SUMMARY	7	4.7 Measures taken to tackle the implications of the crisis	74
INTRODUCTION	9	5 CONCLUSIONS	80
1 CROATIA	10	REFERENCES	81
1.1 The macroeconomic environment	10	EUROPEAN CENTRAL BANK OCCASIONAL PAPER SERIES SINCE 2009	84
1.2 The financial system: structure and developments	13		
1.3 Risks and shock-absorbing capacities	19		
1.4 Concluding assessment and policy implications	25		
2 THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA	28		
2.1 The macroeconomic environment	28		
2.2 The financial system: structure and developments	29		
2.3 Risks and shock-absorbing capacities	33		
2.4 Concluding assessment and policy implications	38		
3 TURKEY	39		
3.1 The macroeconomic environment	39		
3.2 The financial system: structure and developments	40		
3.3 Risks and shock-absorbing capacities	43		
3.4 Concluding assessment and policy implications	49		
4 SPECIAL FEATURES	51		
4.1 Distribution of major banking stability indicators across individual banks in the candidate countries	51		
4.2 Results of macro stress tests in the candidate countries	53		
4.3 Credit quality in candidate countries	56		

ABBREVIATIONS

ATM	automated teller machine
BIS	Bank for International Settlements
BRSA	Banking Regulation and Supervision Agency (Turkey)
CBRT	Central Bank of the Republic of Turkey
CEBS	Committee of European Banking Supervisors
CNB	Croatian National Bank
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIB	European Investment Bank
ESCB	European System of Central Banks
FDI	foreign direct investment
FSB	Financial Stability Board
GDP	gross domestic product
HANFA	Croatian Financial Services Supervisory Agency
HBOR	Croatian Bank for Reconstruction and Development
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IRC	International Relations Committee
MFI	monetary financial institution
MoU	memorandum of understanding
NBRM	National Bank of the Republic of Macedonia
NPL	non-performing loan
SAA	Stabilisation and Association Agreement
SDIF	Savings Deposit Insurance Fund (Turkey)
SME	small and medium-sized enterprise
TOKİ	Housing Development Administration (Turkey)

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ABSTRACT

This paper reviews financial stability challenges in the EU candidate countries: Croatia, the former Yugoslav Republic of Macedonia and Turkey. It follows a macro-prudential approach, emphasising systemic risks and the stability of financial systems as a whole.

The paper recalls that the economies of all three countries experienced a recession in 2008-09 and shows how this slowed the rapid process of financial deepening that had been taking place since the beginning of the last decade. The deteriorating economic and financial conditions manifested themselves, first and foremost, through a marked deterioration in asset quality. These direct credit risks were compounded by the transformation of exchange and interest rate risks through a widespread use of foreign exchange-denominated or indexed loans and variable or adjustable interest rate loans. Moreover, funding and liquidity risks also materialised to some extent, although fully fledged bank runs were avoided, and none of the countries experienced a sharp reversal in external financing.

Overall, the deterioration in asset quality has so far been managed well by the banking systems of the candidate countries, facilitated by large capital buffers, pro-active macro-prudential policies pursued by the authorities both before and during the crisis and the relative stability of exchange rates. Looking ahead, although uncertainties remain high regarding credit quality, the shock-absorbing capacities of the banking systems are fairly robust, as also evidenced by their relative resilience so far. Nevertheless, as the economic recovery sets in, the central banks should return to and possibly reinforce the implementation of measures to avoid a pro-cyclical build-up of credit (asset) boom-bust cycles. Furthermore, given the relevance of foreign-owned banks in two of the three countries, a continued strengthening of home-host cooperation in the supervisory area will be crucial to avoid any kind of regulatory arbitrage, to enhance the efficiency of

macro-prudential measures and to provide authorities with comprehensive information for planning their actions.

Key words: Europe, banking sector, vulnerability indicators, macro-prudential approach, emerging markets

JEL Classification: F32, F41, G21, G28

SUMMARY

This paper provides an assessment of financial stability issues in the EU candidate countries: Croatia, the former Yugoslav Republic of Macedonia and Turkey. It examines potential sources of vulnerability from a macroeconomic perspective as well as financial sector challenges, highlighting risks pertaining to each country individually or to the group as a whole.

Over the past two years, the largely bank-based financial systems of Croatia, the former Yugoslav Republic of Macedonia and Turkey have been operating in an increasingly challenging financial and economic environment. The candidate countries were barely affected by the initial global financial turmoil given their limited exposure to financial assets that turned “toxic”, but they were severely hit as the global crisis intensified through a combination of real, financial and confidence channels. The abrupt deterioration in the external environment, coupled with an unwinding of some domestic overheating pressures, tipped all three economies into recession in 2008-09. This crisis also slowed the rapid process of financial deepening that had been taking place since the beginning of the last decade – notwithstanding considerable differences in the level of economic development across the countries.

Turning to specific risks in the financial sector, the deteriorating economic and financial conditions manifested themselves, first and foremost, through a marked deterioration in asset quality. These direct credit risks were compounded by the transformation of exchange and interest rate risks through a widespread use of foreign exchange-denominated or indexed loans and variable or adjustable interest rate loans. In particular, while credit institutions have managed to limit currency mismatches, partly through the successful use of prudential policies, currency mismatches on the balance sheets of borrowers represent a risk from a systemic stability perspective. Nevertheless, the deterioration in asset quality has so far been managed well, facilitated by large capital

buffers, pro-active macro-prudential policies pursued by the authorities both before and after the crisis and the relative stability of exchange rates. Moreover, loan loss provisions are high, particularly in the former Yugoslav Republic of Macedonia and in Turkey. Looking ahead, further developments in asset quality will require close monitoring. Given that asset quality tends to lag behind the business cycle and that debt servicing problems may become aggravated as new loan portfolios start maturing, some further gradual deterioration in asset quality cannot be excluded (even though the trend in terms of non-performing loans in Turkey had started to revert back to moderate declines already towards the end of 2009).

A second main risk to financial stability relates to funding or liquidity risks. Domestic funding dominates the banking systems of candidate countries, the bulk of it stemming from deposits and capital.¹ This limits vulnerability to external liquidity shocks, even though the widespread deposit-based funding does leave banking systems exposed to the classical risks of deposit withdrawals. Such risks partially materialised in the last quarter of 2008, when deposits declined in Croatia and in the former Yugoslav Republic of Macedonia. Confidence-building measures by the national authorities, including an increase in deposit insurance limits in Croatia, and intensified communication by all central banks, helped to stem deposit withdrawals and avoid fully fledged bank runs, although deposit growth remains subdued in all three countries to date.

Despite the candidate countries’ heavy reliance on domestic funding, risks on the external side are also non-negligible as the external liabilities of the countries’ banking sectors range between 13% and 20% of total liabilities. These external funding risks only partially materialised during the crisis, as none of the countries experienced a sharp reversal in external financing. In Croatia

¹ Other sources of domestic funding, such as domestic debt securities, are negligible, reflecting the limited scope for institutional investors owing to a low level of development of corporate debt markets, as well as the absence of legal frameworks for the issuance of covered bonds.

and the former Yugoslav Republic of Macedonia, external funding is mainly channelled through foreign-owned banks – generally headquartered in the European Union – that hold over 90% of the total assets. The presence of EU banks was generally considered to be a stabilising factor for the banking systems of the western Balkan economies given that their lending is less constrained by local shocks, but the crisis highlighted the potential for bi-directional spillovers, namely when shocks originating in the home countries of parent banks might also adversely affect subsidiaries. However, the experience so far has confirmed the strategic and long-term interest of parent banks in the region.² In particular, the share of external liabilities in total liabilities increased steadily in Croatia and the former Yugoslav Republic of Macedonia during the crisis, suggesting that subsidiaries did not experience severe funding strains.

Overall, banking systems in the three countries have weathered the strains in domestic and international funding sources well. Relatively high levels of capital contributed to this resilience. Liquidity risks were also contained through abundant liquidity provision by central banks, but a further deterioration in international liquidity conditions and possible further balance sheet restructuring in some western European parent banks could lead to a sudden deterioration in liquidity conditions for banking systems in candidate countries. Looking ahead, if the reduced availability or higher cost of external financing prevail and domestic savings remain subdued, increased competition for retail deposits may raise funding costs and erode net interest margins in the future, which could aggravate pressures caused by still fairly robust but recently deteriorating profitability.

Prior to the crisis, the central banks in the candidate countries used pro-active macro-prudential policies to stem systemic risks in the financial systems, particularly risks from high credit growth resulting from the economic convergence process and the concomitant

large capital inflows. Central banks in the candidate countries had limited possibilities to address these risks by means of traditional monetary policy instruments. Accordingly, the three countries resorted to several less conventional measures to stem credit growth and to influence the structure of loans towards those denominated in domestic currency. All in all, the various measures helped limit credit growth and avert a pro-cyclical emergence of banking crises in the candidate countries. At the same time, the measures to some extent displaced problems out of the banking system into other segments of the economy (e.g. increased external indebtedness as companies were induced to borrow directly from abroad). As the crisis unfolded, central banks were able to unwind some of their earlier measures, thereby contributing to an easing of liquidity constraints and avoiding significant spillovers from deteriorating economic conditions into the financial sector.

2 Candidate countries benefited not only directly from the presence of foreign banks, but also indirectly as a result of positive spillovers from parent bank commitments made to other countries in the region within the framework of the European Bank Coordination Initiative.

INTRODUCTION

This paper reviews financial stability challenges in Croatia, the former Yugoslav Republic of Macedonia and Turkey. All three countries enjoy EU candidate country status, albeit with varying degrees of progress towards EU membership. Croatia, an EU candidate country since June 2004, opened accession negotiations on 3 October 2005. These are now well-advanced. Accession by 2012 seems to be within reach but remains crucially dependent on further reforms to the judicial system and progress in the area of competition policy, particularly with regard to the privatisation of the country's loss-making shipyards. The former Yugoslav Republic of Macedonia became a candidate country in December 2005. In October 2009 the European Commission recommended starting accession negotiations with the country, but no start date has been set thus far. Turkey started EU accession negotiations on 3 October 2005, having been recognised as a candidate for EU membership since 1999. The European Commission started negotiations on the individual chapters of the *acquis communautaire* in June 2006, and one chapter was provisionally closed in the same month. In December 2006 the European Council, owing to the lack of progress in the extension of the customs union to the EU Member States, decided to suspend talks on eight out of the 35 chapters as well as against provisionally closing any other chapters for the time being.

This paper provides an update of ECB (2008) and complements this earlier paper with a clear macro-prudential focus, insofar as the emphasis is on the analysis of financial systems as a whole. It provides an overview of the structure of the financial systems in each of the countries and examines potential sources of vulnerability from a macroeconomic and financial system perspective, highlighting common and country-specific risks.³

Given the increasingly challenging financial and economic environment in which the banking systems of the candidate countries had to operate in 2008 and 2009, the rapid process of financial

deepening that had been taking place since the beginning of the last decade has slowed considerably in all countries. The paper starts by examining specific risks in the financial sector. In particular, the deteriorating economic and financial conditions manifested themselves first and foremost through a marked deterioration in asset quality. These direct credit risks were compounded by the transformation of exchange and interest rate risks through a widespread use of foreign exchange-denominated or indexed loans and variable or adjustable interest rate loans. A second main risk investigated relates to funding or liquidity risks. The paper looks into funding structures and the resulting vulnerabilities thereof. It also touches on the question of whether the presence of EU banks via their subsidiaries has proved to be beneficial in practice for the banking systems of the candidate countries. It tries to assess how the banking systems coped with these risks as well as the main vulnerabilities to be monitored in this regard in the future. In addition, the paper takes a look at macro-prudential policies used in the candidate countries to stem systemic risks in financial systems prior to the crisis, as well as policies and measures taken to alleviate the impact of the crisis.

The paper has two main parts. The first focuses on developments in the three individual countries, where each country section discusses the macroeconomic environment, reviews structural developments in the financial system, assesses the risks and shock-absorbing capacity of the banking system and provides a concluding assessment. These country sections are complemented with special features that cover a number of overarching themes: (i) the distribution of major banking stability indicators across individual banks; (ii) the results of macro stress tests for the candidate countries; (iii) the quality of assets at the sectoral level at the turn of the credit cycle; (iv) the funding structures of banking systems; (v) the role of parent banks in the candidate countries; (vi) the trends in terms of foreign exchange-denominated loans and deposits; and (vii) measures taken to tackle the crisis.

3 The cut-off date for this paper is mid-May 2010.

I CROATIA

I.1 THE MACROECONOMIC ENVIRONMENT

After the boom years between 2002 and 2007, which were characterised by buoyant growth in domestic demand, the Croatian economy saw a gradual slowdown in economic growth during 2008 on the back of the unfolding global financial turmoil. The downward trend reached its peak in the first half of 2009, when the spillovers from the global crisis fully hit the Croatian economy and led to the deepest recession since early transition. The severe economic downturn also entailed notable changes in the growth pattern: while domestic demand plummeted as a result of waning consumer confidence, tightening credit conditions, fiscal adjustments and deteriorating labour market conditions, the contribution of net exports to GDP growth became markedly positive, despite the collapse in world trade, with imports contracting even more strongly than exports.

Against this backdrop, Croatia's external imbalances narrowed considerably in 2009, with the current account deficit falling to 5.3% of GDP, down from 9.3% in 2008 (the highest level since the mid-1990s). Nevertheless, financing needs were high, especially in the first quarter of 2009, when the limited access to foreign funds, portfolio investment outflows

and more moderate foreign direct investment (FDI) inflows translated into declining foreign exchange reserves. However, given the gradually softening global liquidity conditions, financing pressures started to ease from the second quarter of 2009. As a result of falling GDP and continued (though more moderate) increases in debt financing, Croatia's gross foreign debt increased further and stood at 98.2% of GDP at the end of 2009 (see Table 1). The increase reflected a revival of foreign borrowing by the corporate sector in the latter part of the year (which had largely come to a halt at the turn of 2008-09) and two government bond issues on international financial markets in 2009. At the same time, reserve accumulation resumed and by the end of 2009 foreign exchange reserves had returned to the levels recorded before the collapse of Lehman Brothers at around €10 billion (or some 22% of GDP).

The conduct of monetary policy remained challenging in 2008 and 2009. In the first half of 2008 the Croatian National Bank's (CNB) focus was on containing inflationary pressures related to adverse global food and energy price developments (which drove average inflation to a near 15-year high in 2008), as well as on reining in credit growth driven by banks' foreign liabilities. However, the CNB's priorities quickly changed to safeguarding exchange rate and financial stability when the global financial market turmoil gained

Table 1 Croatia: Main macroeconomic indicators

	Description	2003	2004	2005	2006	2007	2008	2009	2010 ¹⁾	2011 ¹⁾
Real GDP growth	Percentage period average	5.0	4.2	4.2	4.7	5.5	2.4	-5.8	-0.5	2.0
Inflation	Percentage, period average, harmonised definition	2.4	2.1	3.0	3.3	2.7	5.8	2.2	1.5	3.0
Repo rate	Percentage, end of period	...	...	3.5	3.5	4.1	6.0	...	...	...
Money market overnight rate	Percentage, period average	3.1	5.0	3.0	2.4	5.0	5.9	7.2	...	...
Nominal effective exchange rate	Index (2001 = 100), period average	102.8	105.0	106.2	107.4	108.1	110.3	108.5	...	...
Current account balance	Percentage of GDP	-6.4	-4.5	-5.6	-7.0	-7.6	-9.3	-5.3	-5.5	-5.9
FDI	Percentage of GDP	5.6	1.8	3.5	6.5	8.0	6.8	2.1	3.8	4.1
Gross external debt	Percentage of GDP	66.3	70.0	72.1	74.9	76.9	85.1	98.2	...	...
General government balance	Percentage of GDP	-5.1	-3.8	-3.2	-2.2	-1.7	-1.4	-3.5	-3.0	-3.2
General government gross debt ²⁾	Percentage of GDP	35.8	37.8	38.3	35.7	33.1	29.1	33.5	35.9	37.3
Central government balance	Percentage of GDP	-4.0	-3.2	-2.8	-1.9	-1.3	-1.0	-2.3	-3.0	-3.2
Unemployment rate	Percentage, period average	14.2	13.7	12.7	11.2	9.6	8.4	9.1	11.5	11.0

Sources: Eurostat (AMECO), Haver Analytics, IMF, national sources and ECB calculations.

1) Forecasts.

2) Excluding public guarantees and HBOR debt.

considerably in depth and intensity following the demise of Lehman Brothers, and inflationary pressures subsided in tandem with the deepening economic downturn and sharp corrections in global commodity prices.

In fact, given falling investor and depositor confidence in particular (resulting in heavy stock market losses, increasing risk premia and temporary deposit withdrawals) and, to a lesser extent, increased demand for foreign exchange by the government and corporations (to repay foreign liabilities), the kuna came under downward pressure in the last quarter of 2008 and the first quarter of 2009.⁴ During this turbulent period, the CNB allowed a moderate depreciation of the kuna. However, in order to prevent a more marked weakening, it not only changed reserve requirement allocation rules, but also undertook outright market interventions in favour of the currency.⁵ Furthermore, to boost banking sector (foreign currency) liquidity the CNB also reduced mandatory reserve requirements, eased foreign currency liquidity regulations and raised banks' maximum permitted open foreign exchange positions (see Table 2). With a view to moderating interest rate fluctuations in interbank markets and stabilising liquidity supply, at the end of 2008 the CNB started to hold its regular repo auctions at a fixed interest rate of 6% and kept doing so until mid-October 2009. Driven by improving global investor sentiment, increased foreign currency inflows following Eurobond issues by the public sector and seasonal factors (tourism), the kuna began to strengthen again from the second quarter of 2009 onwards. In the final quarter of 2009, the CNB even intervened in foreign exchange markets to prevent a more marked appreciation of the kuna. With a view to supporting economic recovery (and in the absence of inflationary pressures), the CNB reduced mandatory reserve requirements further from 14% to 13% in early 2010.

Headline fiscal balances continued to improve overall in 2008, but public finances increasingly came under pressure towards the end of 2008 as economic activity slowed. In order to cope with

the spillovers from the global crisis, in early 2009 the government adopted a set of ten anti-recession measures⁶ and, in order to maintain public confidence in banks, also quadrupled the level of guaranteed bank deposits (of natural persons) to HRK 400,000 (approximately €55,000).⁷ The severity of the economic downturn and the related revenue shortfalls also induced a series of budget revisions in 2009, including expenditure cuts and revenue-boosting measures, such as the introduction of a temporary "crisis tax" and an increase in the main VAT rate. Given the severity of the economic downturn the general government budget deficit still climbed to 3.5% of GDP in 2009 instead of the originally targeted 0.9% of GDP. Nevertheless, cyclically adjusted primary budget figures from Croatia's 2009 Pre-accession Economic Programme suggest a fairly neutral fiscal stance in 2009. To finance the budget deficit and refinance maturing public debt, the government took out a €1 billion loan from domestic banks in early 2009 and tapped international financial markets with two Eurobond issues in May and November 2009, worth €750 million and USD 1.5 billion (€1 billion) respectively. Consequently, public debt levels picked up substantially in 2009, but still remained relatively low at around 35% of GDP. During 2008 and 2009 all major rating agencies revised downward their sovereign rating outlook for Croatia, but confirmed the country's long-term foreign currency ratings at pre-crisis levels.⁸

4 For an empirical analysis of the determinants of downward exchange pressures, see Box 2 in issue 4 of CNB (2009b).

5 The first intervention in favour of the kuna took place on 27 October 2008 (worth €270.6 million), followed by two other interventions on 23 January 2009 (€328.3 million) and 18 February 2009 (€184.7 million).

6 The measures include, inter alia, the revision of the state budget, the financial strengthening of the Croatian Bank for Reconstruction and Development (HBOR) and support for the tourism and real estate sectors.

7 Starting from 1 January 2010 the deposits of legal persons are also guaranteed up to HRK 400,000 (approximately €55,000).

8 Standard & Poor's and Fitch revised Croatia's rating outlook down from stable to negative in October 2008 and May 2009, respectively, while Moody's reduced its outlook from positive to stable in November 2008. All rating agencies have, however, maintained their sovereign ratings for Croatia at investment grade levels of BBB, BBB- and Baa3 respectively.

Table 2 CNB measures in the context of the global financial crisis (2008-10)¹⁾

Monetary policy instrument		Date	Measure
Interest rates		January 2008	Increasing the discount rate by 450 bp to 9.0%.
		December 2008	As of December 2008 the CNB started to hold regular repo auctions at a fixed 6% interest rate.
Reserve requirements	General reserve requirement	October 2008	Starting from the reserve requirement calculation date of 9 October 2008, banks' vault cash will no longer be included in the liquid kuna claims that may be used to maintain the kuna component of the reserve requirement. With this move the CNB withdrew some €365 millions from the market.
		November 2008	The CNB reduced the banks' reserve requirement rate from 17% to 14% to provide additional liquidity to the banking system totalling HRK 8.4 billions (5.9 billions in kuna and 2.5 billions in foreign exchange). The decision was applicable as of the reserve requirement calculation period starting on 10 December 2008.
		January 2009	To maintain exchange rate stability, i.e. to ease depreciation pressures on the kuna against the euro, the CNB increased the foreign exchange component of the reserve requirement to be allocated in kuna from 50% to 75%. The decision was applicable as of the reserve requirement period starting on 14 January 2009.
		February 2010	Reduction of the reserve requirement from 14% to 13% with the aim of speeding up economic recovery. This move released HRK 2.9 billions of additional liquidity (2.4 billions in kuna and 0.5 billions in foreign exchange).
	Marginal reserve requirement	October 2008	The CNB suspended the 55% marginal reserve requirement on all commercial bank borrowing from abroad as of 10 October 2008. Removal of the MRR was designed to release HRK 3.2 billions in liquidity.
Special reserve requirement	February 2009	Abolishment of the 55% special reserve requirement on banks' liabilities arising from issued securities, releasing additional liquidity of approximately HRK 10 millions.	
Administrative measures		January 2008	While retaining the annual 12% credit growth ceiling, the rate of purchase of compulsory CNB bills was increased from 50% to 75% of the loans granted in excess of the credit ceiling. At the same time, the remuneration rate was lowered from 0.75% p.a. to 0.25% p.a.
		November 2009	Removal of the obligation on banks to subscribe CNB bills at 0.25% interest rate where credit growth exceeded 12% annually, thereby releasing liquidity of around HRK 137 millions.
Loan classification and provisioning and capital requirements		January 2008	Introduction of higher capital requirements on banks whose growth rate for placements exceeded the maximum permissible growth rate for placements and the introduction of increased risk weights (100%) to placements with a currency clause extended to clients with no own foreign currency income.
		March 2008	A 100% risk weight (instead of 75%) has to be applied on foreign currency loans and loans with a currency clause fully and completely secured by mortgages on residential property occupied or let by the borrower now or in the future (with an unhedged currency position). At the same time, a 150% risk weight (instead of 125%) was applied to foreign currency claims and claims with a currency clause not covered by bank deposits or adequate pledged property (referring to clients with an unhedged currency position).
Bank liquidity		March 2008	In the period from 10 March 2008 to 31 May 2008, the banks included in their foreign currency claims the amount they contributed to the short-term foreign currency loan granted in March 2008 to the Ministry of Finance of the Republic of Croatia, totalling €200 millions.
		May 2008	Cut in the ratio of banks' liquid foreign currency claims to foreign currency liabilities from 32% to 28.5%.
		February 2009	On 4 February 2009 the CNB cut the ratio of banks' liquid foreign currency claims to foreign currency liabilities from 28.5% to 25% to boost liquidity and make it easier for the state to borrow at home. This freed up around €840 millions.
		February 2009	On 18 February 2009 the CNB released €1.25 billions to banks by cutting the ratio of banks' liquid foreign currency claims to foreign currency liabilities from 25% to 20%.

Table 2 CNB measures in the context of the global financial crisis (2008-10)¹⁾ (cont'd)

Monetary policy instrument	Date	Measure
Open foreign exchange positions	February 2009	On 20 February 2009 the CNB increased the maximum permitted open foreign exchange position for banks from 20% to 30% of own funds, a move designed to make it easier for banks to dispose of the foreign exchange funds freed up by reducing the rate of minimum required foreign currency claims for banks from 25% to 20%.

Source: CNB.

1) For an overview of CNB measures in 2000-07 (mainly with a view to reining in lending growth), see ECB (2008).

1.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

THE STRUCTURE OF THE BANKING SYSTEM

No major structural changes took place in the Croatian banking sector in 2008 or 2009. Over the two-year period, the total number of banks increased by one, to 34, following the market entry of two savings banks⁹ and the merger between Slavenska banka and Hypo Alpe-Adria-Bank in February 2009 (see Table 3). The Croatian banking industry continues to be dominated by foreign ownership. The asset share of foreign banks remained fairly stable at around 91% in 2008 and 2009, but the number of foreign banks decreased by one due to the aforementioned merger. Austria is the largest foreign investor, accounting for slightly over 60% of total banking sector assets, followed by Italy (19.1%), France (7.4%) and Hungary (3.4%).

Despite the large number of banks, the banking sector is fairly concentrated. The market share of the four largest banks even increased slightly further in 2008 and 2009, amounting to some 65% of total assets by the end of 2009. Similarly, the Herfindahl-Hirschman index reached 1,367 points in 2009, up from 1,279 in 2007. The large number of small banks (25 in total), each with a strong regional focus and a tiny market share, suggests potential for further market consolidation.

Market penetration of banking services continued to increase in 2008-09. The number of operating units rose from 1,191 in 2007

⁹ To comply with the *acquis communautaire*, savings and loan co-operatives were obliged to convert either into savings banks in accordance with the Banking Act or into credit unions pursuant to the new Credit Unions Act adopted in December 2006.

Table 3 Croatia: structure of the banking sector

	2002	2003	2004	2005	2006	2007	2008	2009
EBRD index of banking sector reform ¹⁾	3.7	3.7	4.0	4.0	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)	34 (16)	34 (15)
Number of banks per 100,000 inhabitants	1.04	0.92	0.83	0.77	0.74	0.74	0.77	0.77
Assets of private banks	Percentage of total assets	96.0	96.6	96.9	96.6	95.8	95.3	95.8
Assets of foreign banks	Percentage of total assets	90.2	91.0	91.3	91.3	90.8	90.4	90.9
Assets of the four largest banks	Percentage of total assets	58.6	61.6	64.9	64.9	64.0	63.9	64.87
Herfindahl-Hirschmann index ²⁾	1,237	1,270	1,363	1,359	1,299	1,279	1,311	1,367

Sources: CNB and EBRD.

1) Reform progress ranges from 1 (little progress beyond the establishment of a two-tier system) to 4+ (standards and performance norms of advanced industrial economies).

2) Sum of the squared asset shares of individual banks. The index ranges between 0 and 10,000. Below 1,000 it suggests a non-concentrated sector; above 1,800 it is highly concentrated.

to 1,299 by the end of 2009, and the number of ATMs grew by some 600 to 3,601 over the same period. Network expansion went hand in hand with a continued rise in staff levels until the end of 2008, when employment in the sector reached 22,027. However, a less conducive economic environment and the unfolding lower demand for banking services seem to have initiated staff reductions in the second half of 2009, with the number of employees falling to 21,673 by the end of 2009.

According to the EBRD's banking reform index, the Croatian banking sector exhibits well-developed institutional standards and performance norms. In contrast to some other transition economies, Croatia was able to maintain its EBRD ranking during the crisis years 2008 and 2009, at a level above even those of many central, eastern and south-eastern European EU Member States. In 2009 only Hungary and Estonia had a similarly high ranking among the EU10.¹⁰

THE ASSET AND LIABILITY STRUCTURE OF THE BANKING SYSTEM

Financial deepening slowed considerably between 2008 and 2009. Initially, this was attributable to measures taken by the CNB to rein in credit growth, while later on deteriorating economic conditions, the process of global deleveraging, increasing risk aversion on the part of banks and lower credit demand from bank clients played a more prominent role. Expansion of banking sector assets decelerated sharply from 13% in 2007 to 2.5% in 2009. Consequently, increasing financial penetration, from 109.8% of GDP in 2007 to 114.2% of GDP by the end of 2009 (see Table 4), should be seen mainly in the context of sharply falling GDP levels. Croatia's financial intermediation levels continue to rank among the highest in central, eastern and south-eastern Europe but are

¹⁰ The Czech Republic, which had the same ranking at the end of 2007, is no longer given a ranking since the country has ceased to be an EBRD country of operation.

Table 4 Croatia: asset structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Commercial bank assets	Percentage of GDP	83.6	89.9	93.4	98.5	106.4	109.8	108.1	114.2
Total domestic claims	Percentage of total assets	80.6	79.1	77.2	82.7	84.5	84.2	84.3	84.4
Claims on domestic MFIs	Percentage of total assets	18.2	18.8	17.6	18.7	18.4	17.9	13.8	14.9
Claims on domestic non-banks	Percentage of total assets	62.4	60.4	59.6	64.0	66.1	66.3	70.4	69.6
<i>of which:</i>									
claims on general government	Percentage of total assets	13.2	11.2	9.9	11.6	9.7	9.0	10.6	12.2
claims on domestic households and enterprises	Percentage of total assets	49.2	49.2	49.8	52.4	56.4	57.3	59.9	57.4
<i>of which:</i>									
claims on domestic enterprises	Percentage of total assets	25.4	23.2	22.3	23.1	25.8	25.4	26.6	26.1
claims on domestic households	Percentage of total assets	23.8	25.9	27.5	29.3	30.6	31.9	33.3	31.3
Money market fund shares	Percentage of total assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
External assets	Percentage of total assets	14.1	16.5	18.3	13.2	12.6	13.1	12.9	12.6
Claims on domestic households	Percentage of total claims on household and enterprises	48.3	52.7	55.2	55.9	54.3	55.7	55.6	54.5
Loans-to-claims ratio for domestic nonbanks		82.5	86.5	89.0	88.6	90.8	90.8	91.6	92.9
<i>of which:</i>									
Loans-to-claims ratio for general government		29.0	37.4	40.0	42.3	49.0	46.1	55.0	68.2
Loans-to-claims ratio for domestic households and enterprises		97.1	97.8	98.6	98.9	98.3	98.3	98.7	98.6

Source: CNB.

still well below the euro area average of almost 340% of GDP (based on the aggregated balance sheet of other MFIs).

With a share of 57.4% of total assets in 2009, banking sector assets continued to be dominated by claims on domestic households and enterprises. This figure was as high as in 2007, despite the strong slowdown in lending to both corporations and households in 2008 and 2009. In contrast to most other central, eastern and south-eastern European economies, the slowdown in lending was more pronounced in the retail segment, seemingly the result, *inter alia*, of a slump in general-purpose cash loans and car loans.

The banking sector's claims on general government increased during the crisis years of 2008 and 2009 owing to greater government borrowing from banks. In particular, given budgetary financing needs, in early 2009 the government took out a €1 billion syndicated loan from a group of six domestic banks, for which the CNB relaxed liquidity provisions so that the banks were able to extend the loan without recourse to additional external funding. Emerging crowding-out concerns were, however, alleviated by the decreasing risk aversion in global financial markets starting in March 2009 and the two subsequent Eurobond issues by the government in 2009, a €200 million World Bank loan in January 2010, as well as two bond issues on domestic markets (totalling some €830 million) in spring 2010.

Banks' claims on domestic monetary financial institutions, which mostly consist of deposits with the CNB, decreased in 2008 and 2009, largely reflecting CNB measures to ease reserve requirements during the most critical periods of the global financial crisis. These measures included abolishing the marginal reserve requirement in October 2008, reducing the mandatory reserve requirement rate from 17% to 14% in December 2008, suspending the special reserve requirement in February 2009 and removing, in November 2009, the obligation for

banks to subscribe to CNB bills in the event of credit growth exceeding 12% annually, thereby releasing a total liquidity of some HRK 12 billion (approximately €1.6 billion).

The share of foreign assets in total bank assets remained fairly stable over the review period. Thus, despite high global and local liquidity pressures, banks did not need to run down foreign assets on a large scale in an annual comparison.¹¹ This was underpinned by the fact that foreign parent banks were on hand to support their subsidiaries during times of heightened liquidity pressures. In fact, banks' external liabilities, which continued to fall in the context of CNB credit restrictions over the first three quarters of 2008, increased substantially in the final quarter of 2008 and helped to compensate for the decrease in domestic funding sources related to temporary deposit withdrawals. Thus, the banks' net foreign asset position, which had improved strongly in 2007 on the back of CNB measures to contain bank lending based on foreign borrowing,¹² again deteriorated from -4.8% of total assets in 2007 to -7.9% in 2009.

Banks' liabilities continue to be dominated by the deposits of domestic non-banks (51% of liabilities at the end of 2009), especially private sector deposits (i.e. households and enterprises). The solid growth in private sector deposits before the crisis came to a halt in the final quarter of 2008, when the population's waning confidence in the banking sector caused temporary deposit withdrawals. The situation started to stabilise however in the first quarter of 2009, and household deposits (mainly in foreign currency) rose again in particular in the second half of 2009. In fact, household deposits

¹¹ It is important to note, however, that the relaxation of the CNB's foreign currency liquidity regulations in February 2009 (with the aim of facilitating the government's financing needs) led to a temporary recourse to foreign assets in the first quarter of 2009, which were then gradually built up again during the remainder of 2009.

¹² IMF estimates of VAR impulse responses suggest that CNB measures (especially the marginal and special reserve requirements) achieved some success in temporarily reducing the overall volume of capital inflows to Croatia. See IMF (2010), pp.146-148.

in 2009 were up by some 4% on their 2008 levels, as households sharply cut spending in the light of the negative economic environment, deteriorating labour market conditions and the related deterioration in their income position towards the end of 2009. By contrast, corporate deposits fell by some 6% on the back of declining corporate profitability in 2009, so that, by and large, total private sector deposits stagnated during 2009 while their share in total liabilities fell to slightly below 50% (see Table 5).

The term structure of deposits also changed during the crisis years, with the share of time deposits climbing to around 73% of total deposits by the end of 2009, up from 65% in 2007. While this development might be partially explained by the run-down of demand deposits (mainly for confidence reasons), it may also reflect the above mentioned changes in the structure of deposits and customers' attempts to shift deposits over to longer maturities to secure higher interest rates, particularly before the onset of the global cycle of low interest rates (including the flattening of the yield curve).

Foreign currency-denominated positions, while increasing in 2008 and 2009, continued to dominate the liability side of the banking sector,

accounting for about three-quarters of total deposits at the end of 2009. This might be explained by the fact that workers' remittances and tourism revenues are largely earned in foreign currency, but it is also due to confidence issues which may have triggered the conversion of kuna deposits into foreign currency-denominated deposits, leading to a higher propensity within the population to save in foreign currency.¹³ As bank claims continued to grow faster than deposits, claim-to-deposit ratios increased in 2008 and 2009 and remained well in excess of 100%. The implication of this was a continued need for financing from abroad.

The Croatian banking sector's liability structure also exhibited a strong role for capital and reserves as a financing item. This role increased further in 2008 and 2009. In particular, the share of capital and reserves in total liabilities was more than twice as high as in the euro area, for example. The seemingly multiple reasons for this ranged from higher capital adequacy requirements in Croatia via presumably higher risks faced by banks operating in a high growth environment to widespread foreign ownership, with foreign banks providing their subsidiaries

¹³ For further details see Dvorsky, Scheiber and Stix (2009).

Table 5 Croatia: liability structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Deposits of MFIs	Percentage of total liabilities	3.2	2.6	2.1	2.9	3.6	5.6	4.3	4.6
Deposits of domestic non-banks	Percentage of total liabilities	60.2	56.6	54.9	52.9	52.5	53.3	52.6	51.1
<i>of which:</i>									
deposits of general government	Percentage of total liabilities	2.5	1.8	1.6	1.6	1.4	1.5	1.6	1.1
deposits of households and enterprises	Percentage of total liabilities	57.7	54.8	53.0	51.1	51.0	51.7	50.9	49.9
Money market fund shares	Percentage of total liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	Percentage of total liabilities	1.7	1.6	2.7	2.0	1.7	1.4	1.9	1.0
Capital and reserves	Percentage of total liabilities	9.5	8.9	8.6	9.0	10.3	12.5	13.5	13.9
External liabilities	Percentage of total liabilities	18.5	23.0	24.1	23.9	23.5	17.8	18.9	20.5
Remaining liabilities	Percentage of total liabilities	7.0	7.4	7.6	9.3	8.5	9.5	8.8	8.9
Memorandum items:									
Domestic non-banks' claim-to-deposit ratio		103.7	106.7	108.6	121.1	125.8	124.5	133.9	136.2
General government's claim-to-deposit ratio		529.5	620.4	599.7	745.6	703.9	590.6	649.7	1,096.9
Households' and enterprises' claim-to-deposit ratio		85.2	89.7	93.8	102.5	110.6	110.9	117.6	114.9
Source: CNB.									

with a portion of financing in the form of equity.¹⁴ The latter element has been especially important in the case of Croatia, where the high marginal and special reserve requirements on banks' foreign liabilities and issued securities induced parent banks to finance strong credit growth by boosting the capital positions of subsidiaries.

BANKING SECTOR PROFITABILITY

Deteriorating economic conditions started to take a toll on banking profitability in the final quarter of 2008, but the full impact materialised only in 2009. While banks remained profitable throughout the review period, profitability levels declined on the back of less favourable business conditions and higher provisioning needs. Consequently, return on average assets (pre-tax) dropped from 1.6% in 2007 and 2008 (see Table 6) to 1.2% by the end of 2009, while the decline in return on average equity (after-tax) to 6.7% was additionally underpinned by the banks' attempt to strengthen their capitalisation (in particular via retained earnings).

Net interest income continued to constitute the main source of revenue in the banking sector. Despite increasing interest rate spreads in the last two years, which were driven by a pick-up

in lending rates, interest income grew only moderately in 2009 given tighter supply-side credit conditions based on the increased risk aversion of banks and more subdued credit demand. Interest expenses grew more strongly, however, most likely owing to the more widespread use of longer-term, fixed interest rate deposit contracts. Therefore, in 2009 net interest income decreased not only in absolute terms, but also as a share of total operating income.

At the same time, net non-interest income increased considerably in both absolute and relative terms. In this context, net income from fees and commissions remained fairly stable, but strong increases in other less stable sources of income, such as profit from securities and foreign exchange trading activities (including related valuation effects), had pushed the share of total net non-interest income to some 37.5% of total operating income by the end of 2009. In this context, it is important to note that movements in net interest and non-interest income seem closely correlated given certain swap transactions by Croatian banks with parent institutions.¹⁵

14 For more details on the refinancing structure of banks in central, eastern and south-eastern Europe, see Walko (2008).

15 See issue 4 of CNB (2009b), p. 44 onwards.

Table 6 Croatia: profitability of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Total operating income	Percentage of total income	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>of which:</i>									
Net interest income	Percentage of operating income	70.80	75.3	69.2	70.2	70.5	67.5	69.3	62.5
Net non-interest income	Percentage of operating income	29.20	24.7	30.8	29.8	29.5	32.5	30.7	37.5
General administrative expenses	Percentage of operating income	59.30	57.4	54.3	54.4	54.9	52.1	52.4	49.4
Operating expenses (excluding loan loss provisions)	Percentage of operating income								
Loan loss provision expenses	Percentage of operating income	6.60	7.7	6.6	5.3	6.2	7.6	7.6	22.4
Income tax	Percentage of operating income	6.30	6.0	6.4	7.8	7.7	8.2	7.8	5.7
After-tax profit/loss	Percentage of operating income	27.80	28.9	32.6	32.5	31.1	32.1	32.2	22.6
Net interest income	Percentage of average assets	3.30	3.4	3.0	2.9	2.7	2.6	2.8	2.5
Net non-interest income	Percentage of average assets	1.30	1.1	1.3	1.2	1.1	1.3	1.2	1.5
Interest rate spread (total loans – total deposits)	Percentage points	7.70	8.0	7.6	7.0	6.5	6.0	6.3	7.0
Return on average assets – before tax	Percentage	1.58	1.6	1.7	1.6	1.5	1.6	1.6	1.2
Return on average equity – after tax	Percentage	13.73	14.1	16.1	15.0	12.4	10.9	9.9	6.7
Net interest margin	Percentage of average interest-bearing assets	4.90	4.9	4.5	4.2	3.8	3.7	3.8	3.4

Source: CNB.

Despite continued network expansion and ongoing infrastructure deepening (e.g. ATMs), bank efficiency increased and operating expenses fell below 50% of total operating income by the end of 2009, partly on the basis of lower personnel expenses owing to crisis-induced cutbacks in staff. Finally, in order to provide for increased risks related to the deteriorating economic conditions and the pick-up in non-performing loans, banks sharply stepped up their provisioning efforts in 2009.

NON-BANK FINANCIAL INSTITUTIONS

Following several years of rapid expansion, Croatia's non-bank financial sector took a turn for the worse in the crisis years of 2008 and 2009 given the less favourable global financial market developments. Thus, the non-bank financial sector lost market share to the banking sector in 2008 and 2009 in terms of total financial sector assets (see Table 7). Adverse movements in global and local stock markets in 2008 and during the first quarter of 2009 entailed substantial asset losses, particularly for open-end investment funds, which had a fairly strong bias towards equity investments before the crisis. In fact, in 2007 around 50% of open-end investment funds' total assets consisted of equity funds and an additional 30% of balanced funds (which contain a more or less

significant proportion of equity). Consequently, driven by the global stock market slump following the demise of Lehman Brothers, their share in total financial sector assets has contracted by more than two-thirds since 2007. In contrast, growth in (compulsory) pension funds' assets remained buoyant as these funds invest large proportions of their assets (some 75%) in less risky domestic and foreign government bonds. Similarly, insurance company assets increased further, with the life segment outperforming the non-life segment, where in line with the economic downturn, demand in particular for the insurance of land motor vehicles and of goods in transit, as well as for credit insurance, fell considerably. Leasing companies also gained some ground in 2008 and 2009, driven mainly by strong growth in financial leasing (machines and equipment, real estate).

Given the relatively limited size of the sector (some 30% of GDP at the end of 2009) in comparison with the banking system, the risks related to the non-bank financial sector seem rather limited at present and are unlikely to erode financial system stability. However, the strong dependence of some segments on stock market developments (suggesting higher risks in the case of further adverse shocks) and the potential for regulatory arbitrage (parent banks very often

Table 7 Croatia: financial sector structure

	2002	2003	2004	2005	2006	2007	2008	2009
Banks, non-consolidated assets (net) ¹⁾	85.8	84.0	81.7	79.0	76.6	73.8	77.7	76.6
Open-end investment funds, net assets	1.3	1.2	1.6	2.7	4.0	6.4	2.1	2.4
Closed-end investment funds, net assets	0.6	0.4	0.4	1.1	1.4	1.6	0.4	0.4
War veterans' fund ²⁾	0.5	0.4
Insurance companies	5.7	5.2	5.1	5.0	4.9	5.2	5.6	5.8
Housing savings banks, non-consolidated assets (net) ¹⁾	1.1	1.4	1.9	1.9	1.6	1.4	1.5	1.4
Compulsory pension funds, net assets	1.1	1.9	2.8	3.6	4.0	4.5	4.7	5.9
Voluntary pension funds, net assets	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
Savings and loan co-operatives ³⁾	0.6	0.6	0.5	0.5	0.5	0.4	...	...
Savings banks	...	...	...	...	...	...	0.0	0.0
Leasing companies	3.8	5.2	5.9	6.2	6.8	6.5	7.3	6.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: CNB, HANFA and Ministry of Finance of the Republic of Croatia.

1) Supervisory data (figures may differ from monetary statistics because of consolidation).

2) War veterans' fund members can withdraw their shares from the fund freely since 14 April 2008. This fund is therefore excluded from closed-end funds.

3) These intermediaries are in the process of liquidation and were required to convert into banks or credit unions. Latest available data refer to June 2007.

also own non-bank financial intermediaries) call for a cautious policy stance and close cooperation between the CNB, which is in charge of bank supervision, and the Croatian Financial Services Supervisory Agency (HANFA), which oversees non-bank financial institutions.

1.3 RISKS AND SHOCK-ABSORBING CAPACITIES

CREDIT RISK

Credit risk continues to represent the main source of risk to financial stability in Croatia. In fact, after years of strong credit growth, in the second half of the last decade the ratio of private sector credit to GDP had reached fairly elevated levels relative to underlying fundamentals in Croatia.¹⁶ Strong credit growth, albeit decelerating on account of various CNB measures aimed at reining in lending growth based on banks' foreign liabilities, continued during 2007 and in the first three quarters of 2008 (see Table 8). However, credit growth moderated considerably thereafter, as the downturn fully hit the Croatian economy in the first half of 2009. Both demand and supply-side factors contributed to this development, with the slowdown in household lending being more pronounced than in corporate lending.

Croatia's banking sector is highly prone to indirect credit risk arising from the use of foreign currency in domestic operations. The large share of foreign currency-denominated and indexed loans in total loans exposes households and enterprises to exchange rate and foreign interest rate fluctuations, thereby implying credit risk for banks. Given that households account for over 45% of total foreign currency-denominated (and indexed) loans in Croatia, unhedged domestic borrowers seem to bear the bulk of the currency risk. According to CNB (2009c), about 96% of total net placements and contingent liabilities to households are considered as unhedged, implying substantial currency-induced credit risk in this sector. However, this risk is somewhat mitigated by the fact that household deposits are also largely denominated in foreign currencies, as workers' remittances and tourism revenues represent a major source of household income.

Against the background of stricter capital adequacy and liquidity requirements imposed by the CNB, in particular the introduction of higher risk weights on foreign currency-denominated and indexed loans (mainly claims on unhedged borrowers), the degree of currency substitution in bank liabilities declined considerably during 2006 and 2007 and in the first three quarters of 2008. This trend reversed, however, after the collapse of Lehman Brothers, which undermined trust in the stability of global financial markets. In fact, the temporary waning of confidence among the Croatian population and corporations in the local banking sector and in the domestic currency led to an increased share of foreign exchange-denominated bank liabilities (especially as a result of currency conversions of deposits, but also due to local currency deposit withdrawals). This, in conjunction with the release of foreign currency reserves by the CNB, entailed stepped-up foreign currency lending by banks to avoid currency mismatches. Driven mainly by the strong growth in foreign currency lending to the corporate sector, the share in total loans of foreign currency-denominated (including indexed) loans thus increased strongly from 61% of total loans in 2007 to over 70% in 2009. Exchange rate valuation effects (the depreciation of the kuna vis-à-vis the Swiss franc) also played a part in this development.

Before the crisis, the Swiss franc played an important role in domestic borrowing alongside the euro. In fact, given low interest rates, Swiss franc loans had quickly become popular in Croatia during the boom years, with their share of total foreign currency loans (total loans) quintupling (quadrupling) from 5% (3.9%) at the start of 2005 to 27% (16%) by the end of 2007. However, the global financial crisis brought about major changes regarding the currency composition of foreign currency loans, with the CHF share falling to 19% (13%) by the end of 2009. The declining popularity of CHF loans on account of the higher volatility of the kuna vis-à-vis the Swiss franc (relative to that against the euro), a more limited supply of CHF

¹⁶ For further details, see Zumer, Égert and Backé (2009).

Table 8 Croatia: selected banking sector stability indicators

		2002	2003	2004	2005	2006	2007	2008	2009
Risks									
Credit risk									
Credit growth	Percentage, year on year	35.1	17.4	12.8	20.1	22.6	14.8	13.6	3.3
Credit growth to the private sector	Percentage, year on year	32.9	16.2	13.3	18.7	23.7	14.2	12.1	-0.7
Real credit growth to the private sector	Percentage, year on year	30.4	14.5	10.8	14.6	21.3	8.3	8.971	-2.6
Credit growth to households	Percentage, year on year	45.4	27.4	18.0	20.5	21.9	18.1	12.0	-3.0
Mortgage credit (housing loans) growth	Percentage, year on year	28.6	37.4	28.9	28.9	34.0	22.5	15.7	1.2
Non-performing loans	Percentage of total loans	10.2	8.9	7.5	6.2	5.2	4.8	4.9	7.8
<i>of which:</i>									
Non-performing loans of households	Percentage of total household loans	5.8	6.4	4.7	4.5	4.1	3.7	3.9	5.8
Non-performing loans of corporates	Percentage of total corporate loans	15.5	12.9	11.9	9.7	7.6	7.3	7.2	12.8
Non-performing loans in domestic currency	Percentage of total domestic currency loans	...	...	...	...	...	...	...	...
Non-performing loans in foreign currency	Percentage of total foreign currency loans	...	...	...	...	...	...	...	...
Foreign currency credit	Percentage of total credit	79.8	74.2	75.7	77.4	71.5	61.4	65.4	72.7
Foreign currency deposits ¹⁾	Percentage of total deposits	88.4	87.5	87.3	86.4	76.3	66.8	68.5	76.1
Market risk									
Forex risk									
Open foreign exchange position	Percentage of total assets	1.0	1.2	1.0	0.6	0.2	0.7	0.5	0.9
Stock market risk									
Ratio of shares and participations to total assets (equity holdings)		1.8	1.4	0.9	0.8	0.7	0.7	0.2	0.1
Liquidity risk									
Ratio of liquid assets ²⁾ to total assets		29.4	32.8	31.2	28.0	27.5	27.6	23.9	23.7
Ratio of total loans to total deposits		74.2	76.7	80.7	88.5	92.5	92.8	99.5	98.3
Ratio of liquid assets ²⁾ to short-term liabilities		97.7	117.2	120.4	103.1	102.6	107.1	106.1	119.2
Shock-absorbing factors									
Loan loss provisions	Percentage of non-performing loans	67.9	60.9	62.5	60.0	57.0	54.7	49.5	42.5
<i>of which:</i>									
Loan loss provisions for household loans	Percentage of non-performing loans to the household sector	61.4	53.0	69.9	66.2	62.6	67.0	63.8	60.6
Loan loss provisions for corporate loans	Percentage of non-performing loans to the corporate sector	68.4	62.0	57.4	56.4	52.2	45.3	38.1	33.0
Non-performing loans net of provisions	Percentage of capital	19.6	22.6	19.0	16.7	14.0	11.3	12.8	22.2
Capital adequacy ratio		16.6	15.7	14.1	13.5	13.2	15.4	14.2	15.8
Memo									
Number of banks (foreign-owned)		46 (23)	41 (19)	37 (15)	34 (14)	33 (15)	33 (16)	34 (16)	34 (15)
Asset share of foreign-owned banks	Percentage of total assets	90.2	91.0	91.3	91.3	90.8	90.4	90.7	90.9
Source: CNB.									
1) Time deposits.									
2) Liquid assets = cash in vaults + deposits with the CNB + deposits with other banks + treasury bills.									

loans by banks given difficulties in obtaining CHF liquidity and conversions of CHF loans into euro loans presumably contributed to this development.

Credit risk started to materialise through deteriorating credit quality in the final quarter of 2008 and continued at an accelerated pace in 2009 owing to borrowers' difficulties servicing

their loans in a less favourable economic environment. Having decreased for years, largely on the back of strong credit growth, the share of non-performing loans¹⁷ (NPLs) in total loans picked up from 4.8% in 2007 to 7.8% by the end of 2009. NPL ratios in the retail segment are half as high as in the corporate sector, which is associated with the relatively large share of housing loans (some 43% at the end of 2009) in total household loans, where delinquency rates have been fairly low thus far (at around 2.7%). Another possible explanation underpinning this development could be the recourse of large corporations with a solid financial standing to cross-border borrowing (IMF, 2008), which could imply an adverse selection problem. However, in their recent empirical analysis Cerovac and Ivičić (2009) find no evidence of a negative impact of corporations' direct cross-border borrowing on the risk profile of domestic banks' balance sheets. Quite the reverse, in fact, since default rates seem

somewhat higher for corporations with direct foreign financing (often being related to the construction sector). There are no data available on non-performing loans by currency composition, which makes it impossible to infer whether banks applied stricter risk management practices to foreign currency-denominated and foreign currency-indexed loans than to domestic loans so as to offset the higher risks associated with those loans. Being a lagging indicator, NPLs appear to be increasing further in 2010 owing, inter alia, to declining corporate profitability and adverse labour market conditions.

17 Pursuant to the CNB Decision on the classification of placements and off-balance sheet liabilities of credit institutions, placements have to be classified as placements without impairment (risk category "A"), partly recoverable placements (risk categories "B-1", "B-2" and "B-3") and fully irrecoverable placements (risk category "C"). In more detail, in order to be included in NPLs, placements have to be classified as: 1) B-1, if liabilities are overdue by more than 90 but less than 180 days; 2) B-2, if liabilities are overdue by more than 180 but less than 270 days; 3) B-3, if liabilities are overdue by more than 270 but less than 365 days; or 4) C, if liabilities are overdue by more than 365 days.

Table 9 Croatia: selected macroprudential indicators – total debt¹⁾

		2002	2003	2004	2005	2006	2007	2008	2009
Households									
Debt	Percentage of GDP	21.6	25.4	28.0	32.4	36.6	39.5	40.4	40.6
Debt	Percentage of gross disposable income	43.3	52.1	58.3	69.5	78.0	85.1	88.6	84.4
Debt	Percentage, year on year	42.6	28.2	19.4	24.4	22.4	18.5	11.4	-2.7
Implicit interest payments	Percentage of gross disposable income	3.7	4.5	4.8	5.1	5.3	5.7	6.1	6.3
Non-financial enterprises									
Debt	Percentage of GDP	42.2	43.7	45.8	50.8	58.9	66.3	72.0	78.5
Debt	Percentage of corporate bank deposits	331.4	320.2	339.4	398.6	395.9	387.1	498.9	580.0
Debt	Percentage, year on year	16.5	12.9	13.2	19.6	25.5	23.5	18.3	6.1
Implicit interest payments	Percentage of GDP	3.4	3.2	3.1	3.1	3.5	4.2	4.4	...
Total non-financial private sector									
Debt	Percentage of GDP	63.8	69.1	73.8	83.2	95.5	105.8	112.5	119.1
Debt	Percentage, year on year	24.2	18.0	15.5	21.4	24.3	21.6	15.7	2.9
General government^{2),3)}									
Debt	Percentage of GDP	34.9	35.7	37.9	38.5	36.0	33.4	29.3	35.4
Debt	Percentage, year on year	7.3	11.7	14.8	9.2	1.3	2.0	9.1	17.3
Interest paid	Percentage of GDP	1.8	1.8	1.8	1.9	1.9	1.8	1.5	1.7
Total non-financial sector									
Debt	Percentage of GDP	98.7	104.9	111.7	121.7	131.5	139.3	141.8	154.4
Debt	Percentage, year on year	24.2	18.0	15.5	21.4	24.3	21.6	10.9	6.0
Memorandum items:									
Total external debt ⁵⁾	Percentage of GDP	53.9	66.3	70.0	72.1	74.9	76.9	82.6	95.0
Total private external debt ^{4),5)}	Percentage of GDP	34.5	45.1	50.0	54.9	60.4	64.3	73.7	83.5

Source: CNB.

1) All items refer to total (foreign and domestic) debt.

2) Effective from 2008, data exclude Croatian Highways.

3) Growth rate for 2008 adjusted for exclusion of Croatian Highways.

4) All domestic sectors except general government are considered to be private.

5) Round-tripping transactions excluded (for further details, see issue 154, CNB (2009e), p.38).

Household debt, predominantly consisting of bank loans, fell in 2009 (see Table 9) after years of double-digit growth rates. For this reason, as well as on account of increases in disposable income (averaging 2.8% in 2009),¹⁸ household debt also fell relative to gross disposable income (to 84.4%) in 2009. However, household debt levels remained stable at about 40% of GDP during the crisis years given last year's fall in nominal GDP. Implicit interest payments relative to gross disposable income continued to increase in 2008 and 2009, largely driven by a pick-up in interest rates. Mortgage lending, the most dynamic line of business in the household segment during the boom years, lost considerable momentum during the second half of 2009 on the back of lower demand for property and falling real estate prices (by around 4% on average in 2009). In contrast to other segments of household lending, growth in housing loans remained in positive territory in 2008 and 2009, so that their share in total household loans increased slightly to 43% in those two years.

Despite a crisis-driven slump in investment activity, robust growth in corporate sector debt levels continued in 2008 and 2009. However, to some extent this may also have been driven by exchange rate valuation effects (e.g. the depreciation of the kuna vis-à-vis the Swiss franc by some 13% since the start of 2008), even though – given the lack of data on the currency breakdown of loans – the bulk of CHF loans appears to relate more to the household segment (mainly housing loans). In this context, the domestic debt growth of the corporate sector (mainly bank loans) decelerated significantly in 2009 but remained positive, so that corporations' domestic debt climbed to over 78% of GDP, with interest payable also rising considerably in conjunction with increased refinancing costs.

MARKET AND LIQUIDITY RISKS

The banking sector's exposure to interest rate risk is limited. Most of the interest rate risk (both domestic and foreign) has been shifted to bank clients and appears to materialise through the credit risk channel in the event of adverse developments. This is because loan contracts

(including fixed interest rate loans) often allow for pertinent interest rate adjustments by carrying safeguard clauses. In fact, some two-thirds of total loans provide for interest rate adjustments within three months (and 95% for within one year). At the same time, on the liability side deposits are predominantly short-term, with about 85% (55%) of total deposits maturing within less than one year (three months), allowing a fairly broad degree of flexibility during times of high interest rate volatility.

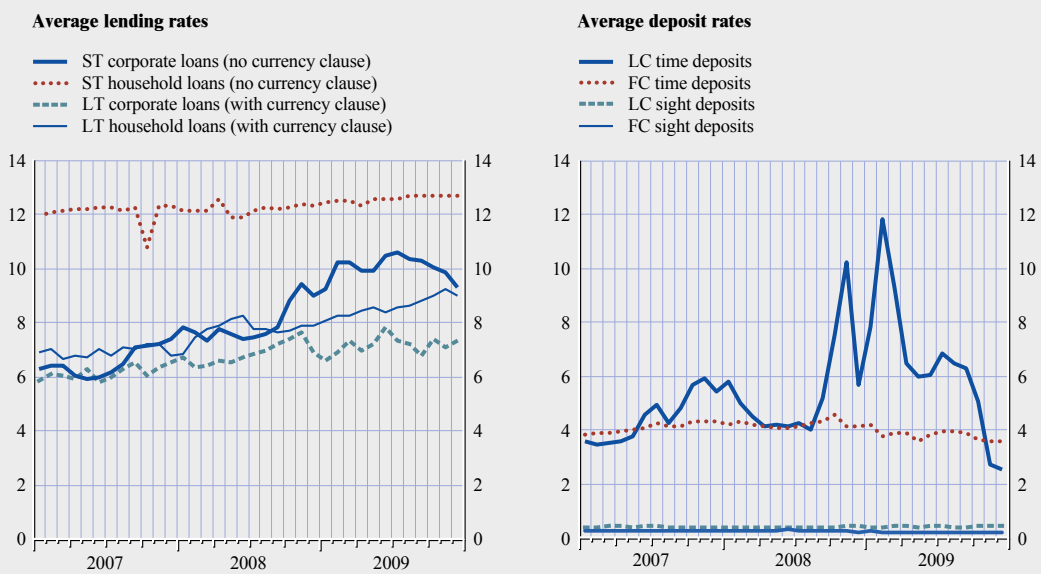
In contrast to global interest rate developments, average lending rates increased substantially in Croatia more or less across the board in 2008 and 2009 (see Chart 1), especially in the case of short-term local currency corporate loans and long-term household loans indexed to foreign currency, thereby increasing indirect domestic and foreign interest rate risks. Average deposit rates remained fairly stable throughout 2008 and 2009, albeit with major fluctuations observed in the case of local-currency time deposits. To some extent, this can be attributed to the banks' attempts to stop deposit withdrawals at the height of the crisis and to prevent large-scale deposit conversions into foreign currencies, but also – given the coincidence with the concurrent spikes in money market rates – to the fairly high bargaining power of corporate treasurers, who demand short-term deposit interest rates comparable with money market rates or otherwise place their funds in the money market.

The share of equity participations in total assets declined by more than two-thirds in 2008 and 2009 in the context of adverse global stock market developments. These positions do not represent a major risk to banking system stability in Croatia, as the banking sector's exposure to stock market risk is negligible in the light of equity positions of only 0.1% of total assets in 2009.

¹⁸ It is important to note, however, that full-year 2009 data mask strongly decelerating intra-year dynamics in disposable income growth, from +8.9% in the first quarter of 2009 to -3.8% in the final quarter of 2009, on the back of the introduction of a special "crisis tax" in July, and the lagged impact of slowing wage growth and worsening labour market conditions.

Chart I Croatia: average lending and deposit rates

(percentages)



Source: CNB.

Note: ST = short-term; LT = long-term; LC = local currency; FC = foreign currency.

Direct foreign exchange risk also appears to be manageable. Open foreign exchange positions did not see major increases over the review period. However, in contrast to previous years short open foreign exchange positions exceeded the long positions throughout 2008 as a whole and in the first quarter of 2009, implying that banks during this period were more exposed to foreign exchange risks associated with a depreciation of the kuna. This changed, however, as of the second quarter of 2009, given the stronger increase in foreign currency-denominated and indexed assets than in corresponding liabilities, so that the ratio of average long foreign exchange positions to regulatory capital exceeded average short positions in the remainder of 2009.

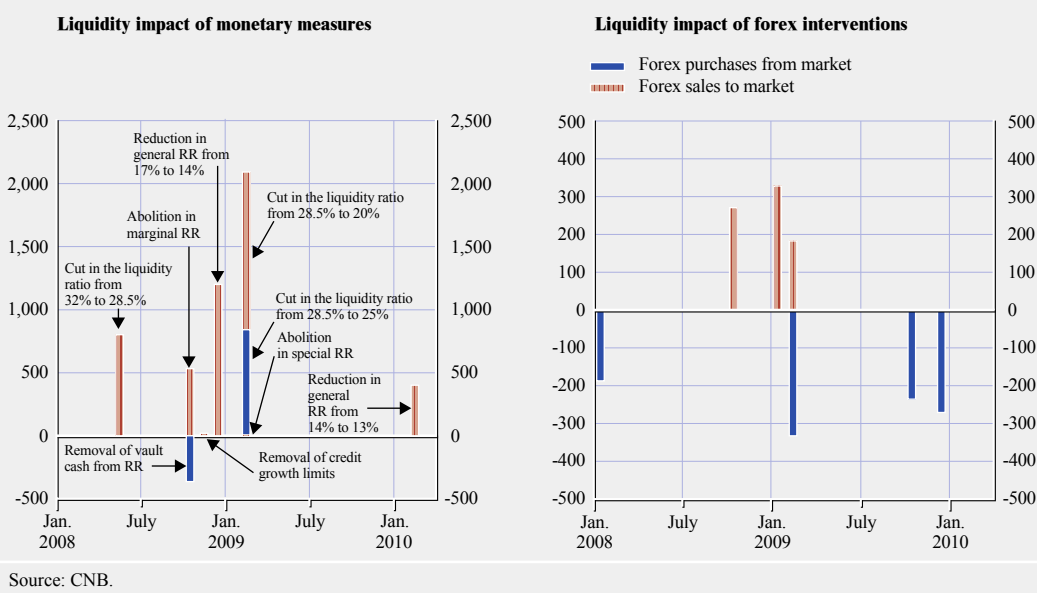
There were substantial changes in legislation related to open foreign exchange positions during the crisis years. In May 2008 the CNB cut the minimum required rate of foreign currency claims from 32% to 28.5%, a move aimed at facilitating the government's budgetary financing needs through the take-up of a €760 million syndicated loan provided by

domestic banks. In order to ease the mounting foreign currency liquidity pressures that emerged at the turn of 2008-09, the ratio of liquid foreign currency claims to foreign currency liabilities was cut further in two steps from 28.5% to 25% in early February 2009 (again with a view to facilitating government financing) and then to 20% in late February 2009, thereby releasing foreign exchange liquidity to banks worth around €2.1 billion. At the same time, as a way of easing the management of the released funds, in February 2009 the CNB increased banks' maximum permitted open foreign currency positions to 30% of their regulatory capital (up from the previous 20%).

As reflected by liquidity indicators (see Table 8), liquidity risks increased somewhat in 2008 and 2009. In 2008 the ratio of liquid assets to total assets declined fairly sharply to 24% mainly on the back of the reduction in mandatory reserve requirements from 17% to 14%, starting from the reserve requirement calculation period on 10 December 2008. This move by the CNB released liquid assets worth a

Chart 2 Effects of CNB measures taken in response to spillovers from the global crisis

(euro millions)



Source: CNB.

total of HRK 8.4 billion (5.9 billion in kuna and 2.5 billion in foreign exchange), corresponding to some €1.2 billion (see Chart 2). In 2009 the ratio of liquid to total assets stabilised. At the same time, the loan-to-deposit ratio increased further in 2008, reaching some 100%. However, given strongly decelerating credit growth in the context of the financial crisis the loan-to-deposit ratio stabilised in 2009 at 2008 levels. Despite the above, liquidity levels can still be considered high, inter alia given the large amounts of free reserves held with the CNB. At the same time, the liquidity risks associated with the high share of liabilities towards non-residents in total liabilities did not materialise during the crisis given parent banks' strong commitments to Croatia.

SHOCK-ABSORBING FACTORS

Croatia's banking sector is well-capitalised in terms of standard capital ratios. Notwithstanding substantial capital increases by banks, capital adequacy fell slightly in 2008 on account of the further tightening of capital adequacy regulations, which required banks to apply higher risk weights on foreign currency

(and indexed) claims vis-à-vis unhedged borrowers. The capital adequacy ratio stood at 15.2% in late 2008 (see Table 8), well above the 10% required by Croatian law. Bank capitalisation improved again in 2009 owing to stepped-up capital increases (mainly via retained earnings) in the context of the global crisis (see also Table 5) and slower growth in risk-weighted assets as a result of the slowdown in credit growth and stepped-up lending to the public sector (which carries lower risk weights). In order to strengthen bank capitalisation further, in line with the section of the new Credit Institutions Act that came into force on 1 January 2009 and additional CNB decisions on the capital adequacy of credit institutions, the CNB increased the banks' minimum required capital adequacy ratio from 10% to 12% as of 31 March 2010, when Basel II standards also became operational in Croatia.

Substantial capital buffers allow the banking sector to withstand shocks stemming from operational and market risks and underpin its shock-absorbing capacities. In fact, CNB stress tests have concluded that even under a shock

scenario, which assumes a GDP decline of 6% and exchange rate depreciation of 10%,¹⁹ the banking sector as a whole would remain adequately capitalised. Moreover, stress tests for individual banking groups suggest that under the shock scenario corporate banks would be the most exposed given their lower initial capital adequacy ratio.

Moreover, despite the severity of the economic downturn and rising non-performing loans, the banking sector retained its profitability in 2009, even if at somewhat lower levels than during the boom years. This should provide banks with an additional buffer to weather the global economic and financial crisis, with retained earnings helping to beef up banks' capital positions.

Finally, as experience during the global crisis has shown, widespread foreign ownership also bolstered banking system stability. In fact, foreign banks' strategic, long-term goals in the region and the related commitment of parent banks to support their Croatian subsidiaries during turbulent times in late 2008 and early 2009 helped to mitigate the impact of the crisis on the Croatian banking sector, both directly and indirectly. Specifically, parent banks were instrumental in further strengthening their subsidiaries' capital base (predominantly via retained earnings) and in providing sufficient funding and liquidity. Moreover, Croatian subsidiaries indirectly benefited from the positive spillovers from foreign banks' commitments to and action in other central, eastern and south-eastern European countries. Last, but not least, they also benefited from private-public coordination under the aegis of international financial institutions (e.g. the European Bank Coordination Initiative), which helped to restore public trust and to alleviate confidence concerns.

I.4 CONCLUDING ASSESSMENT AND POLICY IMPLICATIONS

The previous issue of the financial stability assessment of the candidate countries (ECB, 2008) identified 1) the rapid pace of

financial deepening based on strong credit growth to the private sector, 2) the widespread use of foreign currency-denominated or indexed loans and the related indirect credit risk, 3) high and rising external imbalances, and 4) upward inflationary pressures, as the main risk factors to financial stability in Croatia.

The international financial and economic environment has changed considerably since then, as the deepest crisis for decades affected the global economy in 2008 and 2009. Against this background, the global crisis severely tested Croatia, a test which the country has withstood for the time being and which, to some extent, also altered the country's risk profile. In fact, the crisis itself and the adjustment measures implemented by the authorities to cope with the spillovers from the global crisis reduced some of the existing risks, whereas other risks were amplified by the crisis or materialised during it.

In particular, Croatia was hit hard by the global crisis especially in 2009, when the economy slid into its deepest recession since early transition. The current account improved considerably in 2009 but the country's external position remains an important source of vulnerability, given high (and in 2008 and 2009 further increasing) external debt levels and substantial rollover needs, with the spillovers from the global financial crisis also revealing temporary financing strains in early 2009. Yet, in contrast to other countries in central, eastern and south-eastern Europe, Croatia managed to weather the global financial turbulence without recourse to international support. Still, the country may have benefited indirectly from the positive impact of international support measures in other central, eastern and south-eastern European countries and from the stabilisation and recovery of global financial markets as of March 2009. Nevertheless, Croatia's major macro-financial challenges relate, first and foremost, to alleviating the country's external vulnerabilities, in particular

19 For further details, see CNB (2009b). For a macro stress-testing exercise, refer to section 4.2.

on the financing side. In this context, it is crucial to prevent a further deterioration in Croatia's external debt position. This is a challenging task given corporations' increasing reliance on direct foreign borrowing and Croatia's obligation to liberalise capital flows fully in accordance with the *acquis communautaire*.²⁰

As in other central, eastern and south-eastern European countries, inflationary concerns quickly became a non-issue in Croatia in the context of the global crisis, which gave the CNB the leeway to focus on other emerging priorities, some of them unprecedented. In fact, the CNB successfully managed to preserve financial and exchange rate stability during the period of turbulence by employing a wide set of measures, ranging from verbal interventions and standard monetary policy measures (mainly related to regulations on reserve and liquidity requirements) to outright foreign exchange market operations. However, the CNB's limited room for manoeuvre – against the background of the tightly managed float and the still high external imbalances – highlights the continued need for fiscal prudence with a view to lasting macro-financial stabilisation. Deteriorating public finances actually make fiscal reform and consolidation imperative, all the more so as public finances are still burdened with subsidies for various industries (e.g. shipping), high health and pension commitments, as well as substantial quasi-fiscal expenditures. Therefore, ensuring lasting fiscal consolidation, mainly through spending restraints, remains an important challenge.

Croatia's predominantly bank-based financial system remained stable and profitable in 2008 and 2009, despite less favourable financial and economic conditions and temporary confidence problems (as was also the case in some other central, eastern and south-eastern European countries). Although financial deepening has largely come to a halt on account of the financial crisis, the Croatian banking system is relatively advanced in a central, eastern and south-eastern European context, both as regards the degree of financial intermediation and the institutional

setting. In the wake of the global financial crisis, credit growth decelerated sharply, driven both by supply-side and demand-side factors. Consequently, the CNB's fight against overly high credit growth based on banks' foreign borrowing paled in comparison with previous years' priorities. Still, the management of credit risk remains the most important financial stability challenge for Croatia's banking sector. Indeed, as in other central, eastern and south-eastern European countries and advanced economies, in an adverse economic environment households and corporations increasingly face problems with servicing their debt burden, which ranks among the highest in the region. Credit risk is further compounded by the dominant role of foreign currency positions, which – in a worst-case scenario of a substantial depreciation of the domestic currency – would imply substantial foreign exchange risks for unhedged borrowers. Banks' exposure to market risks seems to be subdued as, by shifting foreign exchange and interest rate risk over to clients, they have transformed much of the market risk into credit risk. Again, this reinforces the need for a careful monitoring of credit risk.

At the same time, it is also important to stress the banking system's shock-absorbing capacities. Thus far the sector's still-high profitability, its strong capitalisation and the strategically-oriented presence of foreign banks have helped to absorb losses stemming from credit risk. Moreover, banks' solid liquidity position before the crisis, which gave the central bank enough room for manoeuvre to carry out liquidity-easing operations during turbulent times, also allowed

²⁰ According to Croatia's Stabilisation and Association Agreement (SAA) with the European Union, from the fourth year of its entry into force (i.e. by 1 February 2009) Croatia has to ensure free movement of capital relating to portfolio investment and financial loans and credits with maturity of less than a year. However, in line with the SAA provisions and owing to exceptional circumstances (i.e. in order to cope with spillovers from the global economic and financial crisis), Croatia and the European Commission have agreed on an extension to the deadline. Accordingly, the liberalisation of short-term loans to non-residents with maturities from three months to one year was postponed until 1 January 2010, while short-term loans with maturities of up to three months are to be liberalised as of 1 July 2010. Deposit transactions of residents abroad will be liberalised as of 1 January 2011.

banks to weather global liquidity pressures. Banks' sizeable net foreign liabilities continue to represent a potential vulnerability factor, however, and require cautious monitoring, even though parent banks are the main external financing source of the Croatian banking sector. These same banks have shown a strong commitment towards the region and proved their readiness to support their subsidiaries in times of crisis.

The main challenge for the CNB continues to be safeguarding both financial and monetary stability in a still uncertain global economic and financial environment, while also contributing to economic recovery. How successful this will be hinges not only on external factors, such as the short to medium-term global economic prospects and the financial position of parent banks, but also on local determinants like the magnitude and speed of debt restructuring by different economic sectors, the pace at which banks can digest the non-performing loan problem and their willingness to reignite lending activity, as well as the degree of support from other policy spheres.

2 THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

2.1 THE MACROECONOMIC ENVIRONMENT

The deepening of the global financial and economic crisis after the collapse of Lehman Brothers led to a deterioration in the macroeconomic conditions in the former Yugoslav Republic of Macedonia. Real GDP growth decelerated in the fourth quarter of 2008 and turned negative in 2009 (-0.7%, see Table 10). This was the result of a steep fall in metal prices, a contraction of economic activity in leading economic partners and a decline in remittances and capital flows, which was only partly offset by the increase in public consumption. Regarding the outlook for 2010, the recovery that started in the fourth quarter of 2009 is expected to gain pace, but real GDP growth will probably remain below the long-term trend. Structural unemployment remains significant, with the official unemployment rate at 32.2% in December 2009. It should be noted, however, that unemployment has been persistently high for the whole decade and increased only marginally in 2009.²¹

Since the mid-1990s, the former Yugoslav Republic of Macedonia has anchored its exchange rate, initially to the Deutsche Mark and then to the euro, in the form of a soft peg.²²

This policy has been largely motivated by the significant degree of openness, close trade links with the European Union and the widespread private use of the euro. This exchange rate regime influences the conduct of monetary policy and its maintenance is pivotal in safeguarding macroeconomic and financial stability. At the onset of the global financial crisis, the main vulnerability of the former Yugoslav Republic of Macedonia was its large current account deficit in the context of the exchange rate peg to the euro. Against this backdrop, the National Bank of the Republic of Macedonia (NBRM) in November 2007 embarked on a cycle of tightening monetary policy to contain mounting inflationary pressures (on the back of rising energy and food prices) and alleviate the pressures on the exchange rate. Specifically, the NBRM made consecutive increases in the central bank bill rate (i.e. the main monetary policy instrument) from 4.7% in November 2007 to 7% in June 2008.

21 The high unemployment rate can be partly attributed to administrative factors (e.g. if not employed, an individual needs to be registered as unemployed to enjoy health insurance) as well as to hidden employment in the unofficial sector (i.e. the black economy).

22 The de jure exchange rate regime is managed floating; the de facto regime involves a stabilised arrangement with the euro.

Table 10 The former Yugoslav Republic of Macedonia: Main macroeconomic indicators

	Description	2003	2004	2005	2006	2007	2008	2009	2010 ¹⁾	2011 ¹⁾
Real GDP growth	Percentage, period average	2.8	4.1	4.1	4.0	5.9	4.8	-0.7	1.3	2.0
Inflation	Percentage, period average, harmonised definition	1.2	-0.4	0.5	3.2	2.3	8.3	-0.8	1.3	2.0
Central Bank Bill Rate ²⁾	Percentage, end of period	6.2	10.0	8.5	5.7	4.8	7.0	8.5	...	...
Nominal effective exchange rate	Index (2001 = 100), period average	106.8	109.6	110.9	111.1	112.6	114.4	116.7	...	...
Current account balance	Percentage of GDP	-4.1	-8.4	-2.6	-0.9	-7.2	-13.1	-7.3	-7.8	-9.5
FDI	Percentage of GDP	2.4	6.0	1.6	6.8	8.8	6.3	2.6	5.1	5.1
Gross external debt	Percentage of GDP	50.0	51.9	51.5	51.8	52.2	47.0	59.3	57.8	58.4
General government balance	Percentage of GDP	-0.1	0.4	0.2	-0.5	0.6	-1.0	-2.8	-2.5	-2.0
General government gross debt	Percentage of GDP	39.0	36.6	39.5	31.5	23.4	21.5	24.5	26.2	26.3
Unemployment rate	Percentage	36.7	37.1	37.3	36.0	34.9	33.8	32.2	31.7	31.0

Sources: Eurostat (AMECO), Haver Analytics, IMF, national sources and ECB calculations.

1) Forecasts.

2) Monetary policy rate; weighted average 28-day interest rate.

The escalation in the global financial crisis in September 2008 and growing risk aversion among investors resulted in a collapse of export demand and a loss of external financing at the end of 2008. These factors caused a sharp slowdown in the economy and a decline in tax revenues. They also forced a rapid sell-off of central bank foreign exchange reserves and raised uncertainties about the sustainability of the exchange rate peg. Currency substitution and cash outflows by residents added to pressures on reserves, while elections in spring 2009 created additional uncertainties. By May 2009 central bank reserves had fallen below €1.2 billion (75% of short-term debt), 30% down from the October 2008 peak. The NBRM responded to reserve outflows by raising its policy rate from 7% to 9% and tightening bank reserve and liquidity requirements.²³ These actions helped to slow credit growth and contain the loss of reserves. In response to the improved trends in the external sector and the more favourable outlook, the NBRM started a loosening cycle in November 2009 and had reduced its policy rate in six steps by 400 basis points to 5% by the middle of June 2010.

Inflation, which had been contained successfully at low levels until 2007, spiked in 2008, reaching 8.3% (annual average) mainly on account of the increase in global food and energy prices. In 2009 the downward adjustment of import prices was the key driver behind a remarkable reversal, and negative inflation was recorded (-0.8%).

The fiscal position of the former Yugoslav Republic of Macedonia, underpinned by prudent fiscal policy, had been improving for the whole of this decade until the collapse of Lehman Brothers. In the fourth quarter of 2008 the government adopted an expansionary fiscal policy. Specifically, taxes on personal income and profits were reduced (10% flat rate, down from 12%) while wages in public administration were increased (4.1%), as was public expenditure on goods and services (32.8%). These measures were aimed at stimulating domestic economic activity through an increase in household disposable income and public consumption.

As a result, the government registered a small fiscal deficit (-1% of GDP) in 2008, which widened somewhat in 2009 (-2.8% of GDP). In July 2009 the government issued a €175 million Eurobond (at 9.875%), which bolstered foreign reserves and ensured sufficient budget financing. Central government debt also increased moderately in 2009 to reach 24.5% of GDP, but still remained significantly lower than the levels recorded in the early part of the decade. Gross external debt also increased in 2009, reaching about 59% of GDP.

The current account balance deteriorated in 2008 to reach a multi-year high of 13.1% of GDP, but improved considerably in 2009 (-7.3%). The underlying trade deficit remains structurally significant, peaking at 26.7% in 2008. In the course of 2009 the trade deficit improved, mainly on account of a significant reduction in imports, while the current account also benefited from increasing private transfers. FDI flows hovered around 6-9% of GDP in 2006-08, but declined to about 2.6% in 2009.

2.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

THE STRUCTURE OF THE BANKING SYSTEM

The banking sector of the former Yugoslav Republic of Macedonia is dominated by foreign-owned private banks, which have gained market share in the last couple of years. In 2009 foreign-owned banks represented 93% of total banking sector assets, up from 86% in 2007, while their number has also increased (see Table 11). Concentration in the sector remains high with the three largest banks controlling two-thirds of total assets in 2009, a feature common in many small open economies. The total number of banks has remained stable since 2008.

In the last couple of years several institutional reforms in the banking system have been implemented, including the adoption of a new

²³ In particular, it increased the reserve requirement for foreign currency-denominated liabilities from 10% to 13% and for foreign currency-indexed liabilities from 10% to 20%.

Table 11 The former Yugoslav Republic of Macedonia: structure of the banking sector

	2002	2003	2004	2005	2006	2007	2008	2009
EBRD index of banking sector reform ¹⁾	2.7	2.7	2.7	2.7	2.7	2.7	3.0	3.0
Number of banks (foreign-owned)	20 (7)	21 (8)	21 (8)	20 (8)	19 (8)	19 (11)	18 (14)	18 (14)
Number of banks per 100,000 inhabitants	1.04	0.92	0.83	0.77	0.83	0.94	0.89	0.89
Assets of private banks	Percentage of total assets	98.0	98.2	98.1	98.4	98.4	98.6	98.8
Assets of foreign banks	Percentage of total assets	44.0	47.0	47.3	51.3	53.2	85.9	93.1
Assets of the three largest banks	Percentage of total assets	64.0	66.9	66.8	66.1	66.1	67.1	66.1
Herfindahl-Hirschmann index ²⁾	1,667	1,842	1,685	1,607	1,595	1,625	1,579	1,637

Sources: EBRD and NBRM.

1) Reform progress ranges from 1 (little progress beyond the establishment of a two-tier system) to 4+ (standards and performance norms of advanced industrial economies).

2) Sum of the squared asset shares of individual banks. The index ranges between 0 and 10,000. Below 1,000 it suggests a non-concentrated sector; above 1,800 it is highly concentrated.

banking law in June 2007. The EBRD index of banking sector reform rose to 3.0 in 2009 (from 2.7 in 2007).²⁴ In 2008 the following laws strengthening the institutional framework were enacted:

- The Credit Bureau Law, enabling the establishment of private credit bureaus covering liabilities based on loans, payment cards, financial leasing, insurance, taxes, social insurance contributions, telecommunication, energy and other utilities fees, etc. Private credit bureaus are intended to complement the information provided by the NBRM's Credit Registry, which only covers liabilities to banks and savings houses;
- The Law on Financial Collateral, which consolidates the regulations of the former Yugoslav Republic of Macedonia with EC Directive 2020/47 on financial collateral agreements;
- The Law on Voluntary Fully Funded Pension Insurances, which regulates the sector establishing the so-called third pension pillar for the first time.

THE ASSET AND LIABILITY STRUCTURE OF THE BANKING SYSTEM

Financial intermediation in the former Yugoslav Republic of Macedonia showed an upward trend in the period 2002-07, but has remained almost flat since. Measured by the share of total banking

system assets in GDP, financial intermediation stood at about 66% in 2009, only slightly higher compared with 2007 (63.1%), while in 2002 it had stood at 38% (see Table 12).²⁵ Compared with the EU countries, only Romania has a lower level of financial intermediation.

Banks in the former Yugoslav Republic of Macedonia focus on traditional banking activities, with credit to the private sector playing a predominant role. The share in total assets of claims on the non-bank corporate sector and households increased steadily until 2008, reaching 66.7%, but declined in 2009 (to 59.3%). Claims on households increased at a faster pace, representing 40% of total claims to the private sector at the end of 2009. They also proved to be more resilient in the recent downturn. External assets represent only 10.2% of total assets and their share recorded a moderate increase in 2009 compared with 2008. The share of claims on domestic MFIs has experienced some volatility over recent years, but remained low at 8.7% in 2009. Lastly, claims on the general government sector have declined in the last couple of years.

²⁴ According to the EBRD a score of "3" means that a country has achieved substantial progress in developing the capacity for effective prudential supervision, including procedures for the resolution of bank insolvencies, and in establishing hardened budget constraints on banks by eliminating preferential access to concessionary refinancing from the central bank.

²⁵ Since 2009 banks have disclosed their financial statements in accordance with International Financial Reporting Standards (IFRS). This has prompted some changes to the composition and structure of the positions in this table.

Table 12 The former Yugoslav Republic of Macedonia: asset structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Commercial bank (net) assets	Percentage of GDP ¹⁾	38.2	41.7	44.5	49.4	56.4	63.1	62.9	66.0
Total domestic claims	Percentage of total assets	56.4	57.1	59.1	63.2	67.5	73.7	80.8	72.6
Claims on domestic MFIs	Percentage of total assets	6.3	9.0	7.6	11.1	10.7	13.9	10.0	8.7
Claims on domestic non-banks	Percentage of total assets	50.1	48.1	51.4	52.1	56.8	59.9	70.8	63.9
<i>of which:</i> group impairment (general provisions for credit risk)	Percentage of total assets	...	...	...	...	...	...	...	-0.3
<i>of which:</i> Claims on general government	Percentage of total assets	8.6	6.0	5.9	5.0	7.4	5.6	3.8	4.8
Claims on domestic households and enterprises	Percentage of total assets	41.5	42.1	45.5	47.1	49.4	53.9	66.7	59.3
<i>of which:</i> Claims on domestic enterprises	Percentage of total assets	35.6	33.7	33.5	32.7	32.6	33.4	40.6	35.4
Claims on domestic households	Percentage of total assets	5.9	8.4	12.0	14.4	16.8	20.5	26.0	23.9
Money market fund shares	Percentage of total assets								
External assets	Percentage of total assets	31.4	28.2	28.1	24.2	20.6	15.5	8.8	10.2
Claims on domestic households	Percentage of total claims on households and enterprises	14.3	19.9	26.5	30.6	34.0	38.1	39.1	40.3
Loans-to-claims ratio for domestic nonbanks		79.8	81.8	86.1	86.8	85.1	88.2	92.6	91.6
<i>of which:</i> Loans-to-claims ratio for general government		18.6	0.7	7.9	2.6	3.0	3.1	4.6	1.0
Loans-to-claims ratio for domestic households and enterprises		92.4	93.2	96.3	95.8	97.4	97.6	98.0	99.0

Sources: NBRM and State Statistical Office.

Note: Since 2009 banks have disclosed their financial statements in accordance with IFRS, which has led to changes in the table's composition and structure.

1) For 2009, estimated GDP has been used.

Table 13 The former Yugoslav Republic of Macedonia: liability structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Deposits of MFIs	Percentage of total liabilities	2.7	1.8	0.9	1.6	2.0	2.0	2.3	0.6
Deposits of domestic non-banks	Percentage of total liabilities	57.8	64.0	67.1	66.8	68.2	70.0	70.4	71.5
<i>of which:</i> Deposits of general government	Percentage of total liabilities	2.8	2.1	1.4	1.2	1.0	0.6	0.9	0.5
Deposits of households and enterprises	Percentage of total liabilities	55.1	61.8	65.6	65.5	67.2	69.4	69.5	71.1
Money market fund shares	Percentage of total liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	Percentage of total liabilities	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.3
Capital and reserves	Percentage of total liabilities	20.7	19.1	17.5	15.9	13.3	11.4	11.5	11.4
External liabilities	Percentage of total liabilities	12.8	9.3	8.5	10.2	9.7	10.3	9.4	10.6
<i>of which:</i> Parent entities non capital instruments (deposits, loans, subordinated and hybrid capital instruments)		...	...	...	...	39.5	40.5	51.6	60.1
Remaining liabilities (provisions for off-balance sheet liabilities, subordinated and hybrid capital instruments and other liabilities)	Percentage of total liabilities	3.4	2.6	3.6	3.1	4.0	3.3	3.4	2.6
Remaining liabilities (short-term borrowings up to one year)	Percentage of total liabilities	1.0	1.8	0.2	0.1	0.1	0.1	0.3	0.3
Remaining liabilities (long-term borrowings over one year)	Percentage of total liabilities	1.6	1.4	2.2	2.3	2.7	2.7	2.3	2.7
<i>Memorandum items:</i> Domestic non-banks' claim-to-deposit ratio		89.8	81.8	83.4	84.1	88.6	90.3	102.7	89.3
General government's claim-to-deposit ratio		322.0	303.6	450.3	433.0	777.5	914.9	430.7	1,010.1
Households' & Enterprises' claim-to-deposit ratio		78.1	74.2	75.4	77.5	78.2	82.1	98.0	83.5

Source: NBRM.

The banking sector has a solid funding structure. Domestic non-bank deposits represented 71.1% of total liabilities at the end of December 2009, and capital and reserves 11.4% (see Table 13). External liabilities stood at 10.6% of total liabilities, almost unchanged since 2007. Non-equity instruments (e.g. deposits, subordinated and hybrid capital instruments, etc.) extended by parent banks represented 60% of external liabilities, up from 41% in 2007. Hence, the degree of dependence on external and, in particular, parent funding remains limited.

BANKING SECTOR PROFITABILITY

The adverse macroeconomic environment in the aftermath of the Lehman Brothers episode impacted negatively on the profitability and efficiency of the banking sector. Already in 2008 a moderate decline in return on average assets and return on average equity was recorded, while in the course of 2009 profitability indicators halved to 0.7% and 5.6% respectively

(see Table 14). The main driver behind this deterioration was the increase in loan loss provisions, which represented 27% of total operating income in 2009. Revenue generation was also affected, as indicated by the moderate increase in the cost-to-income ratio in the last couple of years. Nevertheless the banking sector in the former Yugoslav Republic of Macedonia has significantly improved its performance compared with the period 2000-04.

Net interest income has traditionally been the key driver of revenues, generating 65% of total operating income in 2009. The net interest margin (i.e. net interest income over average total assets) increased somewhat in 2009 to reach 4.1%, providing a first line of defence against potential loan losses. It is noteworthy that the interest rate spread (i.e. the spread between loans and deposits) has widened in foreign exchange and foreign exchange clause loans since 2006, the difference increasing substantially in 2009.

Table 14 The former Yugoslav Republic of Macedonia: profitability of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Total operating income ¹⁾	Percentage of total income	75.6	72.2	82.7	83.5	93.3	93.5	94.6	99.5
<i>of which:</i>									
Net interest income	Percentage of operating income	47.0	48.7	52.0	56.3	59.6	59.7	61.9	65.5
Net non-interest income	Percentage of operating income	53.0	51.3	48.0	43.7	40.4	40.3	38.1	34.5
General administrative expenses	Percentage of operating income	90.9	87.0	74.5	66.6	62.0	58.4	62.1	62.8
Operating expenses (excluding loan loss provisions)	Percentage of operating income								
Loan loss provision expenses	Percentage of operating income	30.9	39.8	34.7	28.6	15.5	17.3	16.9	27.0
Income tax	Percentage of operating income	1.3	1.4	2.5	2.8	2.8	2.2	3.2	0.3
After-tax profit/loss	Percentage of operating income	6.4	7.6	8.1	17.9	26.7	28.8	23.2	10.3
Net interest income	Percentage of average assets	2.8	2.9	3.5	3.9	4.0	3.8	3.8	4.1
Net non-interest income	Percentage of average assets	3.2	3.0	3.2	3.0	2.7	2.6	2.4	2.2
Interest rate spread (total loans – total deposits)	Percentage points								
Denar spread ²⁾	Percentage points	...	...	...	6.9	6.5	4.6	3.7	3.2
Foreign exchange spread ²⁾	Percentage points	...	...	...	6.5	6.7	6.5	4.2	4.2
Denar with foreign exchange clause spread ²⁾	Percentage points	...	...	...	6.8	7.0	5.6	4.0	5.7
Return on average assets ³⁾	Percentage	0.4	0.5	0.6	1.2	1.8	1.8	1.4	0.7
Return on average equity ³⁾	Percentage	2.0	2.3	3.1	7.5	12.3	15.2	12.5	5.6

Source: NBRM.

1) Data revised to include extraordinary income in total income.

2) Figures for 1999-2004 are incompatible with data from 2005 onwards owing to a change in methodology for calculating banks' weighted interest rates.

3) 2009 data calculated using pre-tax profits.

NON-BANK FINANCIAL INSTITUTIONS

The financial sector of the former Yugoslav Republic of Macedonia continues to be dominated by the banking sector, which accounted for 89% of total financial sector assets in 2008.²⁶ Nonetheless, the non-bank financial sector experienced far-reaching structural changes in 2006-08. The share of insurance companies in total financial sector assets shrank considerably to 4.2% (from 7.5% in 2006), mainly on account of the reduction in the sector's assets in 2007. The share of leasing companies doubled (3.1% in 2008 against 1.4% in 2006), while pension funds, launched only in 2006, expanded to 1.8% of total assets. The share of savings banks (1.2%) remained flat, while brokerage houses, pension fund management companies and investment funds together accounted for around 0.4% of financial sector assets.

Like the banking sector, the non-bank financial system is highly concentrated and largely foreign-owned (except for brokerage houses). However, concentration decreased in most segments in 2006-08, a trend which is expected to continue in the near future (e.g. the number of leasing companies doubled in 2008). Certain activities remain underdeveloped (e.g. life insurance represents only 4% of gross insurance premiums; real estate leasing represents only 1.5% of the total value of active leasing agreements). Cross-sector ownership is at a relatively low level. The business ties between banks and non-bank financial institutions consist of the deposits of the non-bank financial institutions placed with banks, which in turn constitute only 3.4% of the total deposits of the banking sector.

2.3 RISKS AND SHOCK-ABSORBING CAPACITIES

CREDIT RISK

Credit risk is the key risk that banks in the former Yugoslav Republic of Macedonia are facing – as already mentioned, the loan book represents a very significant part of their balance sheet. In addition, since 2004 the former Yugoslav Republic of Macedonia has experienced a prolonged credit boom, with private sector credit recording a year-on-year

growth of 24-39% (see Table 15). In 2009 a deceleration in credit growth was recorded, with private sector credit growth declining to 8.9% year on year (from 34.6% in 2008). This deceleration is not necessarily negative from a financial stability perspective. Previous growth rates were not sustainable in the long term and might have raised concerns over asset quality. Moreover, there has been no credit crunch, considering that credit growth remains positive; more importantly, credit growth has only halved in real terms (since inflation turned negative in 2009).

The deceleration in credit growth has been more pronounced for household loans. Their annual growth rate declined to 2.6%, while in the period 2004-08 it was in the range of 37-64%. This development can be partly explained by the introduction of prudential measures. Firstly, in March 2008 the risk weights for calculating banks' capital requirements on credit cards and current account overdraft exposures were increased to 125% (from 100%). The share of these types of claims in total household loans is important: credit card balances represent around one-third and overdrafts 11%. As a result of the aforementioned measure, a significant slowdown in the growth of credit card balances has been recorded, while the impact on overdraft balances has been muted. Secondly, quantitative restrictions on household credit growth were applied – basically aiming at limiting the cumulative growth rate of household credit at 18.1% between May and December 2008 and at 11.3% for the whole of 2009.²⁷ This measure was abandoned in 2010, by which time household credit growth had already decelerated significantly.

Overall indebtedness of households and non-financial enterprises increased in 2008 but levelled off in 2009. Household debt (including

²⁶ Data on the overall financial sector were available only up to 2008 by the cut-off date.

²⁷ In particular, if the household credit growth rate of a bank or savings house exceeded the monthly growth rate set by the NBRM at the end of a specified month, the bank or savings house then had to place a compulsory deposit with the central bank.

Table 15 The former Yugoslav Republic of Macedonia: selected banking sector stability indicators

		2002	2003	2004	2005	2006	2007	2008	2009
Credit risk									
Credit growth	Percentage, year on year	9.0	8.4	23.7	20.1	30.9	38.7	34.3	4.4
Credit growth to the private sector	Percentage, year on year	10.4	15.6	26.8	23.4	31.0	39.0	34.6	8.1
Real credit growth to the private sector	Percentage, year on year	8.4	14.2	27.3	22.8	26.9	35.9	24.3	8.9
Credit growth to households	Percentage, year on year	47.5	59.5	63.2	40.8	42.9	56.2	37.4	2.6
Mortgage credit (housing loans)	Percentage, year on year	...	...	60.4	37.0	52.2	63.8	45.0	7.6
Non-performing loans	Percentage of total loans	23.1	23.4	19.3	16.1	11.8	7.8	6.7	9.0
<i>of which:</i>									
Non-performing loans of households	Percentage of total household loans	10.7	7.2	6.8	6.5	5.1	4.2	5.3	8.2
Non-performing loans of corporates	Percentage of total corporate loans	25.9	26.0	20.4	18.8	14.3	9.3	7.5	9.6
Non-performing loans in domestic currency	Percentage of total domestic currency loans	23.8	24.0	19.8	17.7	13.4	8.6	7.6	8.5
Non-performing loans in foreign currency ¹⁾	Percentage of total foreign currency loans	19.5	19.4	10.6	7.1	5.3	4.1	3.9	11.0
Foreign currency credit	Percentage of total private sector credit	16.8	19.7	20.0	25.4	26.3	24.6	22.9	22.6
Foreign currency deposits	Percentage of total deposits	52.3	52.7	54.4	55.7	52.6	44.5	48.1	56.2
Market risk									
<i>Forex risk</i>									
Open foreign exchange position ¹⁾	Percentage of total assets	11.5	10.4	8.5	7.7	6.0	4.5	3.3	1.6
<i>Stock market risk</i>									
Ratio of shares and participations to total assets (equity holdings)		1.7	1.3	1.1	1.1	0.8	0.6	0.5	0.2
Liquidity risk									
Ratio of liquid assets ²⁾ to total assets		14.7	13.5	12.5	15.0	18.0	20.9	16.9	20.6
Ratio of total loans to total deposits		67.0	64.4	69.7	70.3	72.9	74.1	92.8	92.5
Ratio of liquid assets ²⁾ to short-term liabilities		23.2	20.5	18.5	21.7	25.2	28.2	24.0	30.1
Shock-absorbing factors									
Loan loss provisions	Percentage of non-performing loans	90.4	91.4	102.7	110.8	113.6	132.6	133.5	112.6
<i>of which:</i>									
Loan loss provisions for household loans ³⁾	Percentage of non-performing loans to the household sector	...	...	102.7	100.4	116.3	125.6	104.9	91.7
Loan loss provisions for corporate loans ⁴⁾	Percentage of non-performing loans to the corporate sector	...	...	112.7	108.4	108.9	127.9	140.0	117.6
Non-performing loans net of provisions for the overall credit exposure of the banking sector ⁵⁾	Percentage of capital	4.6	0.0	-4.5	-5.7	-6.0	-11.3	-11.3	-5.7
Capital adequacy ratio		28.1	25.8	23.0	21.3	18.3	17.0	16.2	16.4
<i>Memorandum items:</i>									
Number of banks (foreign-owned)		20 (7)	21 (8)	21 (8)	20 (8)	19 (8)	19 (11)	18 (14)	18 (14)
Assets of foreign-owned banks	Percentage of total assets	44.0	47.0	47.3	51.3	53.2	85.9	93.1	93.6

Source: NBRM.

1) The data series has been revised. Before the revision the open foreign exchange position was calculated as an average open foreign exchange position of the banking sector in the last month of each year. In this series the open foreign exchange position for each year represents the open foreign exchange position of the banking sector on 31 December.

2) The data series has been revised. Liquid assets = cash in vaults + deposits with the NBRM + central bank bills + treasury bills (liquid assets exclude reserve requirements with the NBRM, deposits and correspondent accounts with domestic banks, but include correspondent accounts with foreign banks). Total assets exclude assets with domestic banks and short-term liabilities exclude short-term liabilities to domestic banks.

3) Refers to "loan loss provisions for credit exposure to households" (the credit exposure includes: performing and non-performing loans, regular interest, off-balance sheet items and other claims).

4) Refers to "loan loss provisions for credit exposure to corporates" (the credit exposure includes: performing and non-performing loans, regular interest, off-balance sheet items and other claims).

5) Refers to "own funds" according to the Decision on the methodology for determining capital adequacy ("Official Gazette of the Republic of Macedonia" 159/2007, 32/2008, 31/2009, 96/2009).

loans extended by leasing companies) reached 17.7% of GDP and 30.7% of gross disposable income in 2008²⁸ (see Table 16). The bulk of this debt (around 80%) has been accrued for consumption purposes. Non-financial enterprises debt reached 26.8% of GDP and 173% of corporate bank deposits. However, indebtedness levels remain low by international comparison. Indeed, debt servicing costs still appear to be manageable. Implicit interest payments for households stood at 2.9% of gross disposable income, while for non-financial enterprises they represented 1.8% of GDP. Nonetheless, it should

be borne in mind that many borrowers have no prior experience with financial products and lack any credit history. This is particularly true for households and small and medium-sized enterprises (SMEs).

Indirect credit risk through credit exposure with a foreign currency component is material. Foreign currency-denominated and indexed loans represented 58.5% of total private sector credit in 2009 (up from 54.7% in 2007). Many

²⁸ Indebtedness data for 2009 are incomplete.

Table 16 The former Yugoslav Republic of Macedonia: selected macro-prudential indicators – domestic debt

		2002	2003	2004	2005	2006	2007	2008	2009 ²⁾
Households									
to banks and savings houses									
Debt	Percentage of GDP	2.7	4.1	6.2	8.0	10.6	13.5	16.7	16.6
Debt	Percentage of gross disposable income	4.0	5.7	9.1	12.4	16.3	22.6	29.0	...
Debt	Percentage, year on year	44.6	58.1	59.8	39.3	43.5	44.4	39.1	1.6
Implicit interest payments	Percentage of gross disposable income	0.6	0.7	1.0	1.5	1.7	2.2	2.9	...
+ to leasing companies									
Debt	Percentage of GDP	...	...	6.7	8.7	11.5	14.5	17.7	...
Debt	Percentage of gross disposable income	...	...	9.7	13.4	17.5	24.3	30.7	...
Debt	Percentage, year on year	...	...	...	40.7	43.1	44.2	37.0	...
Non-financial enterprises									
to banks and savings houses									
Debt	Percentage of GDP	13.2	14.3	15.7	16.5	19.0	21.5	25.3	26.6
Debt	Percentage of corporate bank deposits	173.8	143.9	135.3	137.7	129.1	133.9	163.2	196.9
Debt	Percentage, year on year	-2.2	11.2	16.0	13.7	24.6	29.2	32.0	7.2
Implicit interest payments	Percentage of GDP	1.4	1.2	1.1	1.2	1.3	1.5	1.8	2.1
+ to leasing companies									
Debt	Percentage of GDP	...	...	16.1	17.1	19.7	22.8	26.8	...
Debt	Percentage of corporate bank deposits	...	...	138.6	142.4	134.1	141.6	173.3	...
Debt	Percentage, year on year	...	...	...	14.9	25.2	31.6	32.5	...
Total non-financial private sector									
to banks and savings houses									
Debt	Percentage of GDP	15.9	18.4	21.9	24.6	29.6	35.0	42.0	43.2
Debt	Percentage, year on year	3.5	19.1	25.8	21.0	30.8	34.7	34.7	5.0
+ to leasing companies									
Debt	Percentage of GDP	...	...	22.7	25.8	31.2	37.3	44.5	...
Debt	Percentage, year on year	...	...	...	22.5	31.2	36.2	34.3	...
Central government¹⁾									
Debt	Percentage of GDP	15.7	14.5	13.6	12.9	12.8	9.5	7.2	7.4
Debt	Percentage, year on year	-7.8	-5.0	-0.6	2.1	7.4	-14.7	-15.5	5.2
Interest paid	Percentage of GDP	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2
Total non-financial sector									
Debt	Percentage of GDP	31.6	32.9	35.6	37.5	42.4	44.6	49.1	50.6
Debt	Percentage, year on year	-2.5	7.2	14.2	13.8	22.8	19.8	24.0	5.0
Memorandum items:									
Total external debt	Percentage of GDP	...	...	48.1	54.0	49.3	49.1	50.9	57.8
Total private external debt	Percentage of GDP	...	...	20.1	22.2	24.3	30.8	33.8	37.8

Sources: NBRM, Ministry of Finance and State Statistical Office.

1) Total domestic public debt of central government.

2) For 2009, estimated GDP has been used.

factors have contributed to the large share of foreign currency-denominated and indexed loans, including the fact that foreign currency-denominated and indexed deposits account for 60.9% of the total. Moreover, the interest rate differential for loans in domestic and foreign currency is high, rendering the latter attractive to domestic borrowers. The dominant role of foreign-owned banks has further contributed to the proliferation of foreign currency-denominated and indexed loans. Last, but not least, prudential rules for management of the banks' direct foreign exchange position provide an incentive for them to offload their foreign currency to their customers, transforming the exchange rate risk into indirect credit risk. The share of foreign currency-denominated and indexed loans is higher for non-financial enterprises (66.6% of total non-financial enterprises loans) than for households (45.7% of total household loans). Hence, at first sight it seems that some of the foreign currency loans have been extended to unhedged borrowers. There are, however, mitigating factors at work. Many households have significant income from remittances, while many non-financial enterprises have significant export revenues. In addition, as already mentioned a significant share of deposits is in foreign currency, so some of the foreign currency borrowers may also have deposits in foreign currency. More importantly, the exchange rate regime (a soft peg) protects borrowers in foreign exchange from extreme short-term fluctuations in the exchange rate and, correspondingly, in their debt servicing cost. That said, safeguarding confidence in the sustainability of the peg should be a key anchor of monetary and fiscal policy.

The feeble macroeconomic environment has taken its toll on the banks' asset quality. The ratio of non-performing loans increased to 9.0% in 2009 from 6.7% in 2008.²⁹ This increase in the NPL ratio in the course of 2009 reversed a long-term downward trend that had started in 2001. Both household and non-financial corporate loans were affected, with the respective NPL ratios reaching 8.2% and 9.6% (see Table 2.6). Interestingly, the deterioration was more pronounced for foreign currency-

denominated and indexed loans, where the NPL ratio almost tripled in a year (11.0% in 2009 against 3.9% in 2008), returning to levels last seen in 2004. This deterioration is concentrated in foreign exchange-denominated loans to non-financial enterprises and could be partly attributed to the significant decline in export revenues (as a result of reduced metal prices and export demand).³⁰ Concurrently, the increase in the NPL ratio for loans in domestic currency was moderate (8.5% in 2009 compared with 7.6% in 2008). Overall, the deterioration in asset quality was widespread across the banking system, but tended more to affect banks with relatively low NPLs, as reflected in the frequency distribution of the NPL ratio. Specifically, the inter-quartile range of the NPL ratio narrowed to 6.8-17.7% in 2009 from 3.9-21.7% in 2008.

MARKET AND LIQUIDITY RISKS

Market risk remains limited and its importance has decreased over time. Given that most bank loans are issued with de facto variable interest rates, interest rate risk is limited in the banks' balance sheets. For example, only 11% of household loans have a fixed interest rate. That said, as exposure to interest rate fluctuations is largely passed on to the borrowers, this represents an additional source of indirect credit risk. The open foreign exchange position of banks declined significantly to only 1.6% of total assets in 2009, compared with 4.5% in 2007 (see Table 2.6). Nonetheless, the high degree of foreign currency usage in both deposits and loans renders the careful monitoring of foreign currency risk necessary. This is particularly true in times of turbulence in the global financial markets. For example, at the end of 2008 the NBRM adopted a decision which introduced the possibility for domestic banks to hold foreign currency deposits with the NBRM itself instead of placing them with foreign banks abroad. This measure was aimed at limiting the exposure of banks to counterparty

²⁹ Non-performing loans are classified in the D and E risk category according to the NBRM's classification, and include loans not collected for more than 90 days after the maturity date.

³⁰ The deterioration in the asset quality of foreign currency loans cannot be attributed to exchange rate volatility, since the exchange rate was stable.

risk when placing assets abroad. Banks' exposure to equity price risk is very limited, as the ratio of shares and participations to total assets has been historically low and declined even further to only 0.2% in 2009.

Liquidity risk is also contained. Deposits represent the predominant funding source, with the loan-to-deposit ratio standing at 92% in 2009. Nonetheless, there is considerable dispersion among banks. Around one-quarter of banks have a loan-to-deposit ratio that exceeds 125%. Moreover, in the last quarter of 2008 banks experienced tightened liquidity conditions and recorded an increase in the maturity and currency mismatch of their assets and liabilities. Against this backdrop, the NBRM adopted a decision on liquidity risk management, which entered into force in the first quarter of 2009. Inter alia, the new regulation introduced the requirement for banks to maintain a minimum liquid assets ratio.³¹ As a result, the ratio of liquid assets³² to total assets and to short-term liabilities improved somewhat in the course of 2009.

SHOCK-ABSORBING FACTORS

The banking sector entered the crisis with a strong capital buffer. At the end of 2008 the capital adequacy ratio stood at 16.2%, comfortably above the minimum required level (8%). In 2009 it strengthened further to reach 16.4%, partly on account of the deceleration of credit growth (loans have a high risk weight relative to other assets). In addition, as exhibited by the frequency distribution of the capital adequacy ratio, most banks have a strong capital buffer. Specifically, three out of four banks have a capital adequacy ratio above 15% or so and none of the banks had a capital adequacy ratio below the minimum requirement. Moreover, the leverage ratio (i.e. total assets over total accounting equity) stood at 8.4 for the sector as a whole, a very satisfactory level by international standards. Retained earnings have been the most important source of capital generation, followed by subordinated instruments through parent entities. Financing through equity issuance is of very limited relevance.

The banking sector also had a significant provisioning buffer. At the end of 2008 the coverage ratio stood at 133.5%, although in 2009 it declined to 112.6%, still above 100% (see Table 15). Nonetheless, the frequency distribution of the coverage ratio shows that some banks are relatively under-provisioned, with one out of four banks having a coverage ratio below 77%. Still, these deviations should be regarded with caution since the appropriate coverage ratio depends on the composition and risk profile of the loan book of each individual bank. In any case, provisioning levels remain high by international standards, acting as a second layer of defence against losses. This is underpinned by the fact that the share of net (i.e. after provisions) non-performing loans as a percentage of prudential own funds is negative (-5.7%).

Last but not least, profit indicators reached record highs from a very low level in 2006-08 (see Table 14). This is a positive development since profits are the first line of defence against expected and unexpected losses. Banks followed conservative dividend policies over this period, with retained earnings representing more than two-thirds of after-tax profits, contributing to the strengthening of the capital base. As mentioned earlier, however, the capital adequacy ratio declined owing to the rapid increase in risk-weighted assets. More importantly, returns on equity and on assets halved in 2009, mainly as a consequence of increased impairment charges. In addition, certain banks recorded losses.

31 The minimum liquidity ratio equals 1, and is calculated as a ratio between (i) assets and liabilities that mature in the next 30 days (separately for assets and liabilities in domestic and in foreign currency) and (ii) assets and liabilities that mature in the next 180 days (separately for assets and liabilities in domestic and in foreign currency). The concentration of deposits is an additional criterion for the calculation of relevant liabilities.

32 Liquid assets are defined as cash in vaults, deposits with the NBRM, central bank bills and treasury bills (liquid assets exclude reserve requirements with the NBRM, deposits and correspondent accounts with domestic banks, but include correspondent accounts with foreign banks). Total assets exclude assets with domestic banks, and short-term liabilities exclude short-term liabilities to domestic banks.

According to the results of regular stress tests based on different shock scenarios, the banking system of the former Yugoslav Republic of Macedonia is relatively resilient. The various stress test simulations show that even in the case of simultaneous materialisation of credit, currency and interest rate risk of a severe nature, the capital adequacy of the banking sector would not fall below the minimum requirement of 8%. This simulation assumes a simultaneous increase of 50% in the credit exposure of the riskiest categories of loans (C, D and E risk categories according to the NBRM classification), a 20% depreciation in the denar's value against the euro and the US dollar, and an increase of 5 percentage points in domestic interest rates.³³

2.4 CONCLUDING ASSESSMENT AND POLICY IMPLICATIONS

The banking system in the former Yugoslav Republic of Macedonia has so far weathered the global financial and economic crisis quite successfully, limiting its impact on the domestic economy. In the case of the former Yugoslav Republic of Macedonia the transmission of the global crisis occurred through the real sector, since the banking sector was not exposed to "toxic" assets and was not materially affected by the disruption of the global money and capital markets, as it is not dependent on external financing. The resilience of the banking sector has been underpinned by significant capital and provisioning buffers, as well as by its strong deposit base.

The macroeconomic outlook is favourable, with the first signs of recovery already observed in late 2009. To the extent that advanced economies do not experience a double-dip recession, the anticipated return to positive real GDP growth will support bank revenue growth and mitigate credit risk. Lower than anticipated growth in the south-eastern European region remains a downside risk.

Fiscal consolidation would contribute to the maintenance of a significant foreign currency reserves buffer, which in turn would underpin

international investors' confidence in the long-term sustainability of the currency peg. Concurrently, the increased focus on sovereign risk and its interplay with financial sector risks has raised market sensitivity regarding fiscal vulnerabilities worldwide. Hence, the financial stability implications of fiscal deficit and debt developments might merit a less expansionary fiscal policy than otherwise would be appropriate at this phase of the economic cycle. The aforementioned considerations also apply to the monetary policy stance. It should be highlighted that as economic recovery gains pace, policy-makers will enjoy higher degrees of freedom, since investors and domestic economic agents will feel increasingly reassured.

Turning to the banking sector, the key challenge remains credit risk. A persistently high NPL ratio is a structural weakness that needs to be addressed in the medium term. To this end providing further incentives for loan restructuring or write-offs might be beneficial. In any case the banking sector as a whole remains sound and resilient and seems to have avoided the excesses that have been observed in some other emerging European countries. Financial deepening in the former Yugoslav Republic of Macedonia is expected to continue contributing to economic growth and social welfare.

³³ For a macro stress-testing exercise, see section 4.2.

3 TURKEY

3.1 THE MACROECONOMIC ENVIRONMENT

As a consequence of the global economic and financial crisis, the Turkish economy slowed down considerably in 2008 and entered a recession in 2009 after a period of rapid growth during previous years. Real GDP growth decelerated to 0.9% in 2008 and fell to -4.7% in 2009 (see Table 17). Falls in private investment and consumption contributed strongly to this decline, whereas public consumption and investment increased and net exports also contributed positively, as Turkish exporters redirected part of their exports to higher-growth regions.³⁴ The Turkish economy is expected to grow again at a rate of 4.7% in 2010 and 4.5% in 2011.³⁵

The inflation rate fell to 6.3%, down from 10.4% in 2008, a very low rate in comparison with those observed during previous years. Currently the Central Bank of the Republic of Turkey (CBRT) sees no need for monetary policy tightening in the short term, especially in the context of the lacklustre growth of credit to the private sector, even if rate hikes are expected in the second half of the year. The CBRT has lowered the overnight borrowing rate on several occasions since October 2008 (when it stood at 16.75%) to 6.5% (November 2009).

The current account deficit, previously a notable vulnerability of the Turkish economy, has significantly improved to -2.2% of GDP owing to reduced domestic consumption and investment, as well as falling energy prices. It is expected to widen again to -4.5% in 2010. Its financing should benefit from improved external financing conditions and the expected recovery in foreign direct investment (FDI). Turkey, however, remains vulnerable to a deterioration in external financing in view of its gross external debt position of 44.8% of GDP in 2009.³⁶ The financing structure of the current account deficit has changed as a result of the crisis. Before the crisis, the deficit was mainly financed by increasing long-term private sector external debt. In the meantime, although decreasing in absolute terms, FDI has become the most important financing item. In addition, external public borrowing has increased.

As in many other countries, measures to sustain economic growth and falling tax revenues have caused the fiscal deficit to increase substantially. The Turkish general government deficit is

34 As of end-January 2010, however, western Europe still accounted for around 44% of Turkish exports.

35 Based on AMECO projections, spring 2010.

36 Nevertheless, the external debt ratio is relatively low compared with some other emerging market economies. Moreover, gross external debt decreased in nominal terms in 2009, although it worsened as a ratio to GDP due to the pronounced drop in nominal GDP.

Table 17 Turkey: main macroeconomic indicators

	Description	2003	2004	2005	2006	2007	2008	2009	2010 ¹⁾	2011 ¹⁾
Real GDP growth	Percentage, period average	5.3	9.4	8.4	6.9	4.7	0.9	-4.7	4.7	4.5
Inflation	Percentage, period average, harmonised definition	25.3	10.1	8.1	9.3	8.8	10.4	6.3	9.0	7.8
Policy rate	Percentage, end of period	26.0	18.0	13.5	17.5	15.8	15.0	6.5	...	...
Nominal effective exchange rate	Index (2001 = 100), period average	66.1	64.6	67.8	63.3	65.0	62.5	55.6	...	...
Current account balance	Percentage of GDP	-2.5	-3.7	-4.6	-6.1	-5.9	-5.7	-2.2	-4.5	-5.4
FDI	Percentage of GDP	0.4	0.5	1.9	3.6	3.1	2.1	1.0	1.5	1.7
Gross external debt	Percentage of GDP	47.5	41.0	35.2	39.2	38.4	38.1	44.8	40.2	41.1
General government balance	Percentage of GDP	-10.4	-4.4	-0.6	-0.6	-2.1	-2.9	-6.2	-4.0	-3.5
General government gross debt	Percentage of GDP	67.4	59.2	52.3	46.1	39.4	39.5	45.5	44.5	44.3
Central government balance	Percentage of GDP	-10.0	-3.9	0.0	0.1	-1.7	-2.4	-5.6	-3.4	-3.0
Unemployment rate	Percentage	10.5	10.8	10.6	10.2	10.3	11.0	14.0	13.9	13.4

Sources: Eurostat (AMECO), Haver Analytics, IMF, national sources and ECB calculations.

1) Forecasts.

estimated to have reached 6.2% of GDP in 2009, a level markedly higher than in previous years. The primary balance, which has continually decreased since 2005, fell to only 0.1% in 2009 from 3.5% in 2008. The general government gross debt is estimated to have surged to 45.5% in 2009, up from 39.5% in 2008. However, forecasts show only a stabilisation in the next two years. On 16 September 2009 the Turkish government presented a medium-term programme aimed at gradually reducing the central government deficit to 3.2% of GDP in 2012. The programme comprises a significant number of policies, including the prioritisation of public investments and expenditures, an increase in the efficiency of health expenditures and social aid, and reduced tax loss and fraud. The programme is also aimed at improving education, enhancing the efficiency of the Credit Guarantee Fund (see below) and fostering the efficiency of the judicial system.

Rating agencies welcomed the medium-term programme and the relative resilience of the Turkish economy during the crisis. In fact, the Republic of Turkey's issuer rating was recently upgraded (to one or two notches below investment grade) by the three major rating agencies.

3.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

THE STRUCTURE OF THE BANKING SYSTEM

The Turkish banking sector experienced two significant crises at the beginning of the last

decade. In 2000 volatility in international capital markets and deteriorating domestic economic conditions resulted in significant losses in the banking system. This in turn triggered significant capital outflows and a sharp fall in international reserves. In December 2000 the IMF and the Turkish authorities agreed on a rescue package in order to avoid the unravelling of the existing disinflation programme. However, as inflation did not come down as quickly as predicted and, in addition, foreign investors withdrew from the Turkish market owing to the political uncertainty and fears that the stabilisation policies might be reversed, the authorities floated the Turkish lira on 22 February 2001 to avoid further reserve losses.

Following the 2000 and 2001 crises, the Turkish banking sector went through several structural transformations, including the restructuring of state-owned banks, the resolution of banks transferred to the Savings Deposit Insurance Fund (SDIF) and the strengthening of privately owned banks. Since then, concentration in the banking sector has increased as a result of liquidations or mergers and acquisitions, and foreign participation has risen markedly. This latter trend came to a halt in 2009, with the share of foreign banks in total assets falling for the first time since 2003 (see Table 18). The share of (domestic) privately owned banks in total assets also decreased in 2009. Hence, the share of state-owned banks and, to a lesser extent, participation banks has increased, which could be explained by the relatively lower

Table 18 Turkey: structure of the banking sector

	2002	2003	2004	2005	2006	2007	2008	2009
EBRD index of banking sector reform ¹⁾	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.0	3.0
Number of banks (foreign-owned ²⁾)	54 (18)	50 (16)	48 (15)	51 (17)	50 (21)	50 (24)	50 (25)	49 (24)
Number of banks per 100,000 inhabitants	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
Assets of private banks								
Percentage of total assets	56.2	57.0	57.4	58.3	53.2	50.5	50.5	49.6
Assets of foreign banks								
Percentage of total assets	3.3	3.0	3.5	6.3	13.1	16.1	17.0	15.8
Assets of the four largest banks								
Percentage of total assets	49.6	51.9	51.1	53.5	51.1	51.1	51.4	52.7
Herfindahl-Hirschmann index ³⁾	883	942	949	935	911	879	886	913

Sources: CBRT, BRSA and EBRD.

1) Reform progress ranges from 1 (little progress beyond the establishment of a two-tier system) to 4+ (standards and performance norms of advanced industrial economies).

2) Banks whose controlling shareholders are foreign (51% share or higher); participation banks have been included since 2005.

3) Sum of the squared asset shares of individual banks. The index ranges between 0 and 10,000. Below 1,000 it suggests a non-concentrated sector; above 1,800 it is highly concentrated.

propensity of private banks to expand their activities than in previous years. The Turkish banking sector counts three major state-owned banks whose privatisation remains on hold on account of unfavourable global conditions.

THE ASSET AND LIABILITY STRUCTURE OF THE BANKING SYSTEM

The total assets of the banking sector continued to grow in 2009, albeit at a slower pace than in previous years (by approximately 10%), reflecting the impact of the economic slowdown. The crisis also triggered a reversal of the ongoing transformation of the asset structure of banks. Since the early 2000s banks had gradually shifted towards core activities and decreased their holdings of government securities. From mid-2008 onwards the share of loans in total assets started declining to the benefit of growing exposures to sovereign securities, the rising share in total assets of claims on general government reflecting a certain preference of the banking sector for assets with

a lower regulatory risk weight (see Table 19). At the end of 2009 around one-third of total assets were securities holdings. Almost all of these are exposures on the Republic of Turkey, making these securities portfolios vulnerable to concentration risk and sovereign risk.

At the end of 2009, 49.8% of bank assets were loans to domestic non-banks. The loans to the domestic private sector grew at an annual rate of 7%, sharply below the growth rates observed during recent years (which varied between 28% and 61%). Housing and other consumer loans increased in 2009³⁷ as a consequence of the fiscal stimulus package and the general improvement in expectations. The average maturity of assets has increased over the past few years owing to an increasing share of mortgage loans.

³⁷ Car loans count as an exception, as their growth rate turned negative despite a lowering of the private consumption tax rates on the automotive sector.

Table 19 Turkey: asset structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Commercial bank assets ¹⁾	Percentage of GDP	60.7	54.9	54.8	62.7	65.9	69.0	77.1	87.4
Total domestic claims ²⁾	Percentage of total assets	77.7	81.7	83.9	86.9	85.6	90.2	89.8	90.9
Claims on domestic MFIs ³⁾	Percentage of total assets	11.7	10.8	9.4	11.3	9.0	9.4	9.9	8.3
Claims on domestic non-banks ²⁾	Percentage of total assets	66.0	70.9	74.4	75.6	76.6	80.9	79.8	82.6
<i>of which:</i>									
claims on general government ²⁾	Percentage of total assets	39.0	42.0	41.5	36.4	32.3	31.0	29.2	34.0
claims on domestic households and enterprises	Percentage of total assets	27.0	28.9	32.9	39.2	44.3	49.8	50.7	48.6
<i>of which:</i>									
claims on domestic enterprises	Percentage of total assets	23.8	23.4	24.0	27.3	29.9	32.9	33.9	31.9
claims on domestic households	Percentage of total assets	3.3	5.5	8.9	11.9	14.3	16.9	16.7	16.7
Money market fund shares ⁴⁾	Percentage of total assets	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0
External assets	Percentage of total assets	8.7	5.8	6.2	5.6	7.9	5.1	5.4	5.2
Claims on domestic households	Percentage of total claims on household and enterprises	12.0	19.2	27.1	30.4	32.4	33.9	33.0	34.3
Loans-to-claims ratio for domestic non-banks ²⁾		42.3	42.3	46.3	53.7	59.6	63.1	65.3	60.3
<i>of which:</i>									
Loans-to-claims ratio for general government ²⁾		3.1	4.6	5.4	5.3	5.2	5.8	7.6	5.5
Loans-to-claims ratio for domestic households and enterprises		98.8	97.0	98.0	98.5	99.3	98.8	98.6	98.7

Sources: CBRT and Turkish Statistical Institute.

Note: Participation banks have been included since 2005.

1) All banks (public, private, foreign, investment and development, and participation banks) are included in line with the other data provided.

2) Securities portfolio shown at balance sheet value.

3) Deposits, loans, reverse repo and reserve requirement claims on the central bank and/or banks are included.

4) Claims on securities mutual funds.

Table 20 Turkey: liability structure of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Deposits of MFIs	Percentage of total liabilities	1.3	1.5	1.5	1.7	1.4	1.3	0.9	0.9
Deposits of domestic non-banks	Percentage of total liabilities	62.6	60.1	60.3	59.6	59.6	59.7	60.2	59.8
<i>of which:</i>									
deposits of general government	Percentage of total liabilities	2.2	3.3	3.4	3.4	3.2	3.5	2.9	3.0
deposits of households and enterprises	Percentage of total liabilities	60.4	56.9	56.9	56.1	56.4	56.2	57.3	56.8
Money market fund shares ¹⁾	Percentage of total liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	Percentage of total liabilities	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Capital and reserves	Percentage of total liabilities	12.1	14.2	15.0	13.4	11.9	13.0	11.8	13.3
External liabilities	Percentage of total liabilities	10.7	11.7	11.7	14.1	15.5	13.5	14.9	13.2
Remaining liabilities	Percentage of total liabilities	12.9	12.3	11.4	11.2	11.6	12.5	12.2	12.9
<i>Memorandum items:</i>									
Domestic non-banks' claim-to-deposit ratio ²⁾		105.4	118.0	123.5	126.9	128.5	135.5	132.7	138.1
General government's claim-to-deposit ratio ²⁾		1,755.5	1,290.5	1,230.6	1,057.9	1,019.4	893.3	1,011.7	1,125.8
Households' and enterprises' claim-to-deposit ratio		44.7	50.9	57.8	69.8	78.5	88.7	88.4	85.6

Source: CBRT.

Note: Participation banks have been included since 2005.

1) Liabilities to securities mutual funds.

2) Securities portfolio shown at balance sheet value.

Turning to the liability structure of the banking sector, deposits of domestic non-banks made up 60% of total liabilities at the end of 2009, leaving some limited dependency on more volatile wholesale funds. The deposit share of the Turkish banking sector's liabilities has shown a very stable profile since 2001. External liabilities accounted for 13% of total liabilities and consisted primarily of loans from banks abroad, which decreased in 2009. However, funds from repo transactions denominated in Turkish liras have increased since 2007, especially for state-owned banks. Capital and reserves grew from 11.8% of total liabilities in 2008 to 13.3% in 2009. Book equity rose as a result of capital increases and rising profits (see Table 20).

BANKING SECTOR PROFITABILITY

Despite the global financial volatility, the Turkish banking sector remained profitable in 2008 and 2009. In 2009 net profits even increased markedly compared with 2008. Returns on equity reached 24.9% at the end of 2009 from 20.4% in 2008. This increase in profits was made possible, inter alia, by the lack of direct exposure to sub-prime mortgages or

other toxic assets. Moreover, operating income increased by around 35% in 2009 on account of rising net interest income and other operating income, particularly trading income. Turkish banks increased their net interest margin (from 5.0% in 2008 to 5.8% in 2009), as policy rate cuts were not transmitted to rates on loans at the same pace as on deposits. The difference between the weighted average interest rates for loans and deposits rose to 7.6% for corporates in 2009, up from 7.3% in 2008, and to 9.8% for natural persons, up from 3.4% (see Table 21).

Operating expenses, including personnel expenses, remained broadly stable in 2009 in absolute amounts, but declined markedly as a share of operating income. By contrast, loan loss provision expenses rose in absolute terms, at an even faster pace than operating income. Hence, their share in operating income increased. As the increase in provisions was offset by improvements in interest and trading incomes, the net profit of the banking sector reached 34% of total operating income, 4.4 percentage points higher than in 2008. As margins are expected to normalise as a consequence of the combined lagged effect of rate cuts on loan rates and rising

Table 21 Turkey: profitability of the banking sector

		2002	2003	2004	2005	2006	2007	2008	2009
Total operating income ¹⁾	Percentage of total income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<i>of which:</i>									
Net interest income	Percentage of operating income	64.5	47.5	67.0	63.2	64.1	65.1	68.9	70.2
Net non-interest income ²⁾	Percentage of operating income	-38.6	-7.3	-22.9	-33.1	-21.7	-22.8	-34.7	-29.2
General administrative expenses ³⁾	Percentage of operating income	18.9	17.9	18.2	18.8	19.9	20.1	21.8	17.3
Operating expenses (excluding loan loss provisions ⁴⁾)	Percentage of operating income	49.6	44.5	41.8	50.3	45.0	43.5	46.8	36.6
Loan loss provision expenses ⁵⁾	Percentage of operating income	24.5	15.2	14.1	19.6	12.7	14.2	19.0	22.4
Income tax	Percentage of operating income	5.8	10.4	10.0	11.5	9.6	8.4	7.1	8.4
After-tax profit/loss	Percentage of operating income	14.6	23.7	24.5	19.7	34.2	37.1	29.6	34.0
Net interest income	Percentage of average assets	6.6	5.0	6.2	5.2	4.5	4.8	4.6	5.3
Net non-interest income	Percentage of average assets	-3.9	-0.8	-2.1	-2.7	-1.5	-1.7	-2.3	-2.2
Interest rate spread (total loans – total deposits) ⁶⁾	Percentage points	12.4	12.3	11.0	6.9	5.9	5.9	7.3	7.6
Interest rate spread (total loans – total deposits) ⁷⁾	Percentage points	9.2	15.2	13.2	6.4	4.8	5.0	3.4	9.8
Return on average assets – before tax	Percentage	2.1	3.6	3.2	2.6	3.1	3.3	2.4	3.2
Return on average equity – before tax	Percentage	20.1	25.5	22.7	18.5	25.5	26.0	20.4	24.9
Net interest margin ⁸⁾	Percentage	8.2	6.0	7.2	5.8	5.0	5.2	5.0	5.8

Sources: CBRT and BRSA.

Note: Owing to changes in operating principles, calculations in this table do not include participation banks.

1) Operating income = net interest income + net fees and commissions income + dividend income + net trading income (loss) + other operating income.

2) Net non-interest income = net fees and commissions income + dividend income + net trading income (loss) + other operating income – provision for credits and other receivables - other operating expenses.

3) Includes personnel expenses and provision for termination indemnities.

4) Operating expenses = personnel expenses + provision for termination indemnities + depreciation + taxes, duties, charges and funds + other non-interest expenses.

5) Includes special provision for non-performing loans, provision for general loan losses, provision for securities impairment, provision for affiliates, subsidiaries and joint ventures impairment and other provisions.

6) The difference between the weighted average interest rate for corporate loans and deposits.

7) The difference between the weighted average interest rate for consumer loans and deposits.

8) Net interest margin = net interest income / average interest-earning assets.

competition in credit granting, and loan loss provisions are expected to remain important, it is unlikely that the results observed in 2009 will be achievable again in 2010.

NON-BANK FINANCIAL INSTITUTIONS

The financial sector of the Republic of Turkey continues to be dominated by the banking sector, which accounted for 88.2% of total financial sector assets in June 2009. This share remained stable in 2008 and 2009, slightly up from 87.1% in 2007. From a financial stability perspective, non-bank financial activities remained marginal. The share of insurance companies in the financial sector remained stable at 3.3%. Securities mutual funds, which accounted for 3.9% of the financial sector assets at the end of 2007, now represent 3.3%. Shares of leasing and factoring companies also slightly decreased, to 1.8% and 1% respectively. The remaining activities together account for 2.6% of the sector's assets. Like the banking sector, the insurance market

is underdeveloped and there is thus room for growth in the years ahead.

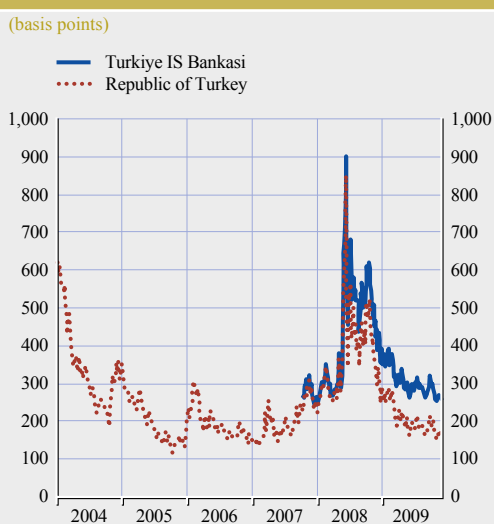
3.3 RISKS AND SHOCK-ABSORBING CAPACITIES

OVERALL RISK INDICATORS

Over the past two years, risk perceptions of the banking sector have largely followed the international risk perception of Turkish sovereign bonds. This is the case, in particular, for credit default swap (CDS) premia, which are plotted in Chart 3 for both the Republic of Turkey and a selected Turkish bank (Turkiye IS Bankasi, the largest privately-owned bank).³⁸ Throughout the crisis, the risk profiles of the Turkish government and the selected bank have been considered as highly correlated. Since peaking at almost 900 basis points at the end of October 2008, CDS premia for Turkish sovereign bonds and bonds of the selected bank

38 CDS data are not available for other Turkish banks.

Chart 3 Turkey: credit default swap premia



have decreased and almost reached their pre-crisis levels.

This strong link between sovereign risk and banking sector risk also emerges from a review of recent rating decisions. Following the three major rating agencies' recent upgrades of the Republic of Turkey's issuer rating, the ratings of Turkish banks underwent a similar change. Standard & Poor's reported that "Turkish banks' ratings and fundamentals will remain closely correlated with sovereign creditworthiness through, among other things, their significant holdings of government securities and exposure to the domestic economic and financial environment". Indeed, the majority of Turkish banks' activities are directed at the domestic market and almost all debt securities held by Turkish banks are Turkish sovereign bonds. In the current context of uncertainty in the sovereign bond market, this highly concentrated exposure could make Turkish banks vulnerable to a contagion effect in the event of a lack of fiscal discipline by the Turkish government.

Another aggregate risk indicator for the financial sector is the "Financial strength index" computed by the CBRT. This index is constructed on the

Chart 4 Turkey: Financial strength index



basis of six sub-indices³⁹ covering all major risks facing the banking sector. It points to a consolidation of Turkish banks' financial strength since the index has increased and remains above its long-term average (see Chart 4).

CREDIT RISK

The growth of credit to the private sector fell markedly in 2009 after the rapid growth of previous years. Although credit to the private sector recovered in the second half of the year, its year-on-year real growth rate was only slightly positive at the end of 2009 (0.8%). This decrease in private sector credit growth can mainly be attributed to the corporate loan segment. Loans to households continued to increase, albeit at a slower pace than in previous years. Housing and personal finance loans contributed to credit growth, while consumer car loans decreased. Consumer credit card amounts also grew but at a slower pace than other consumer loans.

One-third of the Turkish banks' private sector credit portfolio consists of loans to households

39 Asset quality, liquidity, exchange rate risk, interest rate risk, profitability and capital adequacy.

(including mortgage loans and credit cards). Slightly less than half of the portfolio consists of corporate loans (excluding SMEs) and a little over one-fifth is constituted by loans to SMEs.

Despite the slowdown in credit growth, credit risk continues to represent the largest risk factor for the banking sector. Non-performing loans (NPLs)⁴⁰ amounted to 5.3% of total loans, up from 3.7% at the end of December 2008. The non-performing loan ratio of corporates rose to 4.9% by the end of 2009, up from 3.7% at the end of the previous year. The NPL ratio for SME loans reached 7.6% at the end of 2009, from 4.8% at the end of 2008, underlining the larger impact of the crisis on SMEs. For loans to micro-enterprises only (slightly over one-third of SME loans), the NPL ratio amounted to 10.5%. The increase in the NPL ratio for other corporate loans was more moderate. Although the level of NPLs for SME loans is a source of concern, it is expected to decrease as a result of the support of the Credit Guarantee Fund, which is being used to guarantee SME loans (see section 4.7).

The non-performing loan ratio of households stood at 6% at the end of 2009, up from 3.7% at the end of 2008. The NPL ratio for credit cards rose to 10.4% at the end of 2009, compared with 6.5% one year earlier. Deterioration in the other consumer lending segment, with the NPL ratio increasing from 3% in 2008 to 5.5% in 2009, could become a source of concern because of the tight margins in this business segment. Since repayments on housing loans are prioritised owing to the fear of losing property, NPL ratios for this segment are lower than for credit cards or other loans, including car loans, where the NPL ratio reached 10.3% at the end of 2009 from 6.0% at the end of 2008.

Looking ahead, NPLs may continue to weigh on the profitability of the Turkish banking sector. Even though the latest figures show a decrease in the NPL ratio, asset quality is a lagging indicator and thus some renewed deterioration cannot be ruled out. However, the high number of non-performing credit card loans that are

rescheduled, as stipulated in Law 5464 on bank cards and credit cards (see section 4.3) or on a voluntary basis, are expected to have a positive effect on NPL ratios.

Credit-risk stress tests performed by the CBRT have shown that the NPL ratio would need to rise by more than 15 percentage points before the solvency threshold (capital adequacy ratio) of 12% came under threat.

Household debt rose steadily in previous years to reach 14.6% of GDP by the end of 2009. However, this level is still low when compared with that in many other countries. Hence, interest payments represent only 2.3% of gross disposable income. The percentage of foreign exchange-denominated or indexed loans and that of floating rate loans is low, making households less vulnerable to unfavourable developments in economic conditions. At the same time, the low proportion of floating rate loans (only 0.03% for housing loans at the end of October 2009) prevents existing debtors from reaping the benefits of the recent cuts in interest rates. As regards households, it is also worth noting that strong social links in Turkey bolster repayment capacities. The high unemployment rate remains a major source of concern, as it climbed to 14% in 2009⁴¹ from 11% in 2008.

Both domestic and foreign sales were adversely affected during the crisis, leading to a decrease in the net profits of the corporate sector. Firms in manufacturing suffered the most. Indeed, NPLs are highest in the textile as well as in the beverages, food and tobacco industries, and have increased strongly in machinery and equipment and also in the metal manufacturing industries. However, high levels or increases in NPL

40 For Turkey, non-performing loans include loans and other receivables classified as loss, doubtful loans and other receivables, and loans and other receivables with limited collectability. According to "The BRSA Regulation on the Procedures and Principles for Determination of Qualifications of Loans and Other Receivables by Banks and Provisions to be Set Aside", published in Official Gazette 26333 of 1 November 2006, loans are recorded as non-performing receivables when they are more than 90 days past their due date.

41 Based on AMECO data, spring 2010.

ratios have also been observed in other sectors such as wholesale and retail, construction and agriculture. These sectors, in which NPL ratios were highest or increasing the most, form an important part of the banking sector's sectoral exposures.

As with households, debt among corporates as a percentage of GDP increased only moderately in 2009 and is still low in comparison with international levels. In contrast to households, around half of corporate loans are short-term loans. Hence, corporates were able to benefit from the recent interest rate cuts, either for foreign exchange loans or loans denominated in Turkish liras. Nevertheless, this also makes them more vulnerable to an increase in interest rates.

MARKET AND LIQUIDITY RISK

Turkish banks face a limited direct exchange rate risk, as their overall foreign exchange position is almost balanced (an on-balance

sheet short position offset by an off-balance sheet long position). By the end of 2009, the net open foreign exchange position of the Turkish banking sector represented -0.4% of Tier I capital (see Table 22).

Thus, exchange rate risk for Turkish banks mainly takes the form of indirect risk. Depreciation of the Turkish lira could result in an increase in corporate NPLs. While loans from Turkish banks to individuals are almost all denominated in Turkish liras, the share of foreign exchange-based lending to non-bank corporations is much higher (almost 50%).

Previously, Turkish banks were not allowed to lend directly in foreign exchange to unhedged borrowers, with the result that companies borrowed from off-shore branches of foreign banks or used foreign exchange-indexed loans. As regards individuals, only foreign exchange-indexed loans were allowed. The regulation was amended in June 2009 and now

Table 22 Turkey: selected banking sector stability indicators

		2002	2003	2004	2005	2006	2007	2008	2009
Credit risk									
Domestic credit growth	Percentage, year-on-year	28.9	35.2	50.0	57.5	40.0	30.4	28.6	6.9
Real domestic credit growth ¹⁾		-0.6	14.2	37.2	42.5	27.7	20.3	16.9	0.3
Credit growth to the private sector	Percentage, year-on-year	29.0	32.5	50.5	60.8	41.7	30.7	27.6	7.4
Real credit growth to the private sector ¹⁾		-0.6	11.9	37.7	45.4	29.2	20.6	16.0	0.8
Credit growth to households	Percentage, year-on-year	27.4	113.2	96.2	76.7	47.9	37.5	23.3	10.9
Growth of consumer housing loans	Percentage, year-on-year	-4.2	80.2	224.9	395.5	79.3	38.8	19.9	15.4
Non-performing loans ²⁾		17.6	11.5	6.0	4.8	3.8	3.5	3.7	5.3
<i>of which:</i>									
Non-performing loans of households ²⁾	Percentage of total household loans	4.6	1.8	2.7	3.2	3.0	2.9	3.7	6.0
Non-performing loans of corporates ²⁾	Percentage of total corporate loans	19.2	13.7	7.2	5.4	4.1	3.8	3.7	4.9
Non-performing loans in domestic currency	Percentage of total domestic currency loans	...	...	...	...	...	...	...	...
Non-performing loans in foreign currency	Percentage of total foreign currency loans	...	...	...	...	...	...	...	...
Foreign currency loans	Percentage of total loans	58.9	45.4	35.2	27.4	25.5	24.0	28.7	26.6
Foreign currency deposits	Percentage of total deposits	57.3	48.6	44.7	36.8	39.4	35.4	35.3	33.7
Growth of foreign liabilities ^{3),10)}	Percentage, year on year	...	37.1	58.2	55.0	53.8	-5.9	16.5	-23.5
Foreign liabilities ^{3),10)}	Percentage of total liabilities	3.3	4.0	5.2	6.1	7.5	6.2	5.6	3.9
Market risk									
<i>Interest rate risk</i>									
Interest income	Percentage of total assets	20.9	15.7	13.2	10.7	11.2	12.2	11.7	10.2
Net non-interest income ⁴⁾	Percentage of total assets	-3.6	-0.7	-2.0	-2.4	-1.4	-1.6	-2.1	-2.1

Table 22 Turkey: selected banking sector stability indicators (cont'd)

		2002	2003	2004	2005	2006	2007	2008	2009
<i>Forex risk</i>									
Foreign exchange assets	Percentage of foreign exchange liabilities	85.7	87.8	90.1	87.1	87.6	84.4	86.9	84.5
Foreign exchange assets	Percentage of total assets	43.2	38.0	36.2	31.3	33.1	28.3	30.3	26.7
Foreign exchange liabilities	Percentage of total liabilities	50.4	43.3	40.1	35.9	37.8	33.5	34.9	31.6
Net open foreign exchange position	Percentage of Tier I capital	-0.6	-0.4	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4
<i>Liquidity risk</i>									
Liquid assets ⁵⁾	Percentage of total assets	40.8	40.6	39.2	37.6	34.2	29.7	28.9	31.6
Ratio of loans to deposits ⁶⁾		43.1	48.2	55.3	64.8	73.5	82.3	83.4	79.9
Liquid assets ⁷⁾	Percentage of short-term liabilities	73.4	80.6	77.2	73.4	62.2	53.9	51.0	55.8
<i>Shock-absorbing factors</i>									
Net interest margin between loans and deposits ⁸⁾	Percentage points	3.2	2.0	6.9	6.5	4.6	4.8	4.4	6.7
Loan loss provisions (specific provisions)	Percentage of gross non-performing loans	64.2	88.5	88.1	88.7	89.7	86.8	79.8	83.6
<i>of which:</i>									
Loan loss provisions for household loans	Percentage of non-performing loans to the household sector	69.0	94.3	83.7	82.5	85.1	80.9	76.7	86.3
Loan loss provisions for corporate loans	Percentage of non-performing loans to the corporate sector	64.0	88.4	88.6	90.2	91.2	89.0	81.2	81.9
Non-performing loans net of provisions	Percentage of capital	14.5	2.8	1.7	1.6	1.5	1.8	3.3	3.2
Capital adequacy ratio		25.6	31.0	28.8	23.7	21.8	18.9	18.0	20.5
Number of banks (foreign-owned) ⁹⁾		54 (18)	50 (16)	48 (15)	51 (17)	50 (21)	50 (24)	50 (25)	49 (24)
Assets of foreign-owned banks	Percentage of total assets	3.3	3.0	3.5	6.3	13.1	16.1	17.0	15.8

Sources: CBRT, BRSA and Turkish Statistical Institute.

Note: Participation banks have been included since 2005.

1) Deflated using CPI (1994 = 100).

2) Nonperforming loan ratio = gross non-performing loans/gross loans.

3) Data for participation banks is not included.

4) Net non-interest income = net fees and commissions income + dividend income + net trading income (loss) + other operating income – provision for credits and other receivables – other operating expenses.

5) Liquid assets = cash + due from Central Bank of the Republic of Turkey + due from interbank + due from banks + securities that are not used as collateral or for repo transactions.

6) Loans exclude non-performing loans.

7) Short-term liabilities are considered as 0 to 3-month deposits according to their remaining maturity.

8) Calculated as the difference between interest income on loans/average loans and interest expenses on deposits/average deposits.

9) Deposit-accepting foreign-owned banks.

10) Foreign liabilities include syndicated loans and securitisation loans.

allows lending in foreign exchange by local branches of Turkish banks to corporates of up to TRY 5 million. Hence, foreign exchange loans to non-bank corporations now tend to be granted by local branches instead of foreign branches of Turkish banks. The same amendment prohibits foreign exchange lending (including foreign exchange-indexed loans) to individuals.

As mentioned above, besides lending in foreign currencies from domestic and foreign branches of Turkish banks, corporates have received foreign exchange loans from foreign

banks located abroad and non-banks. Hence, their total foreign exchange exposure is larger than stated above. The foreign exchange short position (net excess of liabilities) of corporates decreased from USD 79.5 billion at the end of 2008 to USD 73.9 billion at the end of September 2009, but remained above its end-2007 level (USD 63.2 billion) and end-2006 level (USD 37.6 billion).

Banks also face some interest rate risk in comparison with international standards even though maturity mismatches are alleviated by the

Table 23 Turkey: selected macro-prudential indicators – domestic debt

		2002	2003	2004	2005	2006	2007	2008	2009
Households¹⁾									
Debt	Percentage of GDP	1.8	3.0	4.9	7.6	9.8	12.0	13.1	14.6
Debt	Percentage of gross disposable income	1.8	3.1	4.9	7.7	9.9	12.1	13.2	14.8
Debt	Percentage, year-on-year	27.4	119.4	97.1	81.5	50.5	35.6	22.9	11.7
Interest payments	Percentage of gross disposable income		0.9	1.3	1.6	1.6	1.9	2.1	2.3
TL Consumer Loan Interest Rates ^{2),3)}		48.2	38.7	29.9	19.6	20.5	19.6	19.5	16.4
Non-financial enterprises^{4),5),6),7)}									
Debt	Percentage of GDP	12.2	11.6	13.0	16.9	19.8	22.6	26.3	27.5
Debt	Percentage of corporate bank deposits ⁸⁾	160.6	161.3	166.4	167.1	188.6	209.8	200.4	178.4
Debt	Percentage, year-on-year	29.2	23.6	38.2	50.5	36.6	27.2	31.3	5.0
Interest payments ⁹⁾	Percentage of GDP	1.7	1.2	1.3	3.0	2.0	2.6	3.1	2.9
TL Corporate Loan Interest Rates ²⁾		51.7	35.8	28.3	20.6	21.7	20.8	24.2	15.3
Forex Corporate Loan Interest Rates ²⁾		6.9	6.0	6.1	6.6	7.3	7.4	7.6	6.0
Total non-financial private sector									
Debt	Percentage of GDP	14.0	14.6	17.9	24.5	29.6	34.6	39.4	42.1
Debt	Percentage, year-on-year	28.9	36.0	50.5	58.9	41.0	30.0	28.4	7.2
General government									
Debt	Percentage of GDP	43.1	43.2	40.6	38.1	33.4	30.4	29.2	34.9
Debt	Percentage, year-on-year	22.8	30.1	15.5	9.1	2.4	1.3	8.0	20.2
Interest paid	Percentage of GDP	12.4	11.6	9.0	6.1	5.1	4.9	4.7	4.9
Total non-financial sector									
Debt	Percentage of GDP	57.1	57.8	58.5	62.7	63.0	65.0	68.6	77.0
Debt	Percentage, year-on-year	24.3	31.5	24.3	24.4	17.5	14.8	18.9	12.7
<i>Memorandum items:</i>									
Total external debt	Percentage of GDP	56.2	47.3	41.2	35.2	39.4	38.4	37.5	43.9
Total private external debt	Percentage of GDP	18.6	16.0	16.4	17.4	22.9	24.7	25.0	28.2

Sources: BRSA, CBRT, Turkish Statistical Institute, TOKI and Treasury.

Note: Participation banks have been included since 2005.

1) Household debt excludes non-performing loans and includes loans extended by banks, consumer finance companies and liabilities to TOKI. Liabilities to TOKI for 2009 are October 2009 values.

2) Data for 2009 are provisional and based on stock values.

3) Cash, housing and vehicle loans are included, other loans are excluded.

4) Non-financial enterprises loans = total domestic private sector loans – household loans.

5) Data for non-financial enterprises have been available since 2002.

6) Data for non-financial enterprises debt includes loans extended by the banking system.

7) Loans extended to non-financial enterprises include loans extended to government entities, however the latter loans are negligible.

8) Corporate loans include nonperforming loans.

9) Owing to differences in operating principles, participation banks are not included.

short-maturity profile of loans. As the maturity mismatch allowed banks to increase their interest margin in 2009 following rate cuts by the CBRT, an increase in interest rates could adversely affect their profitability. Moreover, as 44% of the securities held by the Turkish banking sector are classified as “available for sale” assets, an increase in interest rates could lead to mark-to-market corrections (through equity).

Turning to liquidity and funding risks, it is apparent that the overall impact of the liquidity squeeze on Turkish banks has remained limited. No banks faced funding problems that required access to the central bank emergency liquidity facilities. To ensure sound liquidity management in the banking sector, the CBRT started using

repo transactions with a maturity of up to three months in June 2009. In August 2009 it also resumed the foreign exchange buying auctions it had suspended in October 2008, and in October 2009 it reduced the required reserve ratio on liabilities denominated in domestic currency.

Non-bank deposits increased by 10% in 2009 and remained stable as a percentage of total liabilities at 60%. At the same time, amounts due to (parent and other) banks decreased by 7.2%, but funds collected through repo transactions increased and more than offset this decrease. The loan-to-deposit ratio declined from 83.4% at the end of 2008 to 79.9% at end of 2009, mainly on account of the shift by banks from loans to

debt securities,⁴² but remained much higher than its level at the beginning of the last decade. For foreign-owned banks only, this ratio was greater than 110% at the end of 2009.

Liquid assets increased both as a percentage of total assets and in terms of short-term liabilities, to 31.6% and 55.8% respectively, albeit to much lower levels than those reached in 2003 (40.6% and 80.6% respectively).

Stress tests were performed in October 2009 for both interest rate and exchange rate risks (assuming a 30% depreciation of the lira and a 5-6% increase in interest rates). They resulted, under the worst-case scenario, in a decrease in the capital adequacy ratio of 2 percentage points, which nevertheless would remain above the 12% target rate.⁴³ However, these stress tests do not measure the impact of interest and exchange rate developments on the repayment capacity of corporates and the resulting rise in NPLs.

SHOCK-ABSORBING FACTORS

The Turkish banking sector still follows the Basel I rules but the supervisory framework already features many aspects of Basel II, including in the area of operational risk, which was added in 2007. The evolution of the capital adequacy ratio, as shown in Table 22, is partly attributable to convergence towards Basel II. A fully-fledged Basel II-compliant supervisory framework is set for adoption in Turkey by 2011, in line with the commitment of G20 countries. The move to Basel II is expected to weigh on the capital adequacy ratio, especially in a scenario where Turkish government securities denominated in foreign exchange are assigned a risk weight of 100% instead of 0% under Basel I.

Although the capital adequacy ratio decreased in 2008 owing to the rise in loans and convergence towards Basel II, it increased in 2009 to 20.5%, from 18.0% at the end of 2008.⁴⁴ The average risk weight of Turkish banks' assets decreased on account of their lower appetite for higher risk-weighted assets (a shift from loans to sovereign debt securities), and high profitability contributed to the strengthening of own funds.

Turkish banks have also been able to count on retained earnings with dividend pay-out ratios declining as a consequence of specific measures implemented to limit profit distribution (see section 4.7). Finally, the sector strengthened its regulatory own funds via the available-for-sale revaluation reserve due to the effect of lower interest rates on the value of debt securities. This latter effect would be reversed in the event of an increase in interest rates.

The Turkish banks' coverage ratio of NPLs (including only specific provisions) stood at 84% in 2009. Although this rate increased in comparison with 2008, it was lower than the level reached in 2006 (90%).

3.4 CONCLUDING ASSESSMENT AND POLICY IMPLICATIONS

The previous report on financial stability challenges in candidate countries (ECB, 2008) identified three main sources of risk for the banking sector, namely credit risk, interest rate risk and exchange rate risk. The international financial crisis has highlighted the fact that credit risk remains a major potential risk factor, as the severe economic slowdown triggered some deterioration in asset quality. Overall, however, the banking sector has withstood the shockwaves of the crisis reasonably well, suggesting that the reform efforts in the banking sector over recent years have paid off.

Although Turkish real GDP contracted by 4.7% in 2009, it is expected to bounce back to an annual growth rate of 4.7% in 2010, underlining the relative strength of the Turkish economy in the face of the global financial crisis. The current account deficit was corrected to -2.2% of GDP. The government deficit and gross debt expanded to 6.2% and 45.5% of GDP respectively as a result of support measures and the operation of

42 The same shift results in an increase in free securities (neither held as collateral, nor used for repo transactions), which is the largest item in liquid assets.

43 For a macro stress-testing exercise, see section 4.2.

44 While the regulatory minimum capital adequacy ratio is 8%, the target rate needed to continue opening new branches is 12%.

automatic stabilisers. The primary surplus fell to 0.1% of GDP, underlining the weakening fiscal performance.

In the light of the strong correlation between the ratings of the Turkish government and those of Turkish banks, owing primarily to the high level of government securities holdings and their focus on domestic activities, weak fiscal performance in the future – namely a lack of commitment to the consolidation plans as announced in the medium-term programme – could lead to problems for the Turkish banking sector. However, the most recent indicators show some improvement in fiscal performance. This would reinforce the generally positive perception about fiscal policy credibility and ease the government's financing requirement, which remains vulnerable to a deterioration in external conditions. Fiscal consolidation is also important for avoiding the crowding-out of credit to the private sector as the economy recovers. Following buoyant credit growth developments since the end of 2007, and in spite of a quasi-halt to credit growth in 2009, credit risks have become even more important as asset quality deteriorated markedly in 2009. Even though different measures have been taken to limit a further deterioration in NPL ratios, and despite some decline since November 2009, loan loss provisions are expected to remain above pre-crisis levels in 2010. In addition, as already identified in the previous report (ECB, 2008), exchange rate and interest rate shocks could increase the vulnerability of the corporate sector. In 2009 banks were able to offset increasing loan loss provisions with increased interest and trading incomes, and even managed to improve their results. This supported the rise in the capital adequacy ratio to above 20%. However, the profitability observed in 2009 is unlikely to persist in 2010, as interest margins are expected to normalise and loan loss provisions are expected to continue weighing on profitability. A marked increase in CBRT interest rates could also expose banks to a larger negative impact on their profitability.

Like credit risk (including risks induced by interest rate and potential exchange rate shocks), liquidity and funding risks also need to be monitored closely. However, compared with credit risk, they remain less important.

Despite these risks, the Turkish banking sector has shown a remarkable resilience to the crisis due, inter alia, to high capital adequacy levels. Not a single Turkish bank has had to request capital or liquidity support from the authorities. Nevertheless, Turkish banks remain vulnerable to the risks discussed above, and these risks would require particularly close monitoring if the international or domestic macroeconomic environment were to turn out less favourably than expected.

4 SPECIAL FEATURES

4.1 DISTRIBUTION OF MAJOR BANKING STABILITY INDICATORS ACROSS INDIVIDUAL BANKS IN THE CANDIDATE COUNTRIES

While the average values of prudential indicators allow a quick assessment of the stability of the financial system as a whole, the distribution of values can provide important additional information on the resilience of individual institutions and the degree of systemic risk. This section presents a comparison of five key banking indicators in Croatia, the former Yugoslav Republic of Macedonia and Turkey, using several distribution parameters: average, median, and first and third quartiles.⁴⁵ The indicators considered are the capital adequacy ratio, the liquidity ratio (the ratio of liquid assets over total assets), the NPL ratio, the return on assets and the loan-to-deposit ratio (see Chart 5). In order to allow an assessment of recent trends, the values are presented at pre-crisis levels, i.e. as at December 2007 and December 2009.

In the two-year period under consideration, the median capital adequacy ratio decreased slightly in Croatia and the former Yugoslav Republic of Macedonia and increased in Turkey. However, regulatory increases in risk weights in 2008 in Croatia and the former Yugoslav Republic of Macedonia led to a mechanical decline in capital adequacy ratios (in Croatia the estimated impact of this measure on the average is about 0.9 percentage points, hence there is no decrease on average after allowing for this mechanical impact). The spread between the first and third quartiles is quite narrow in Croatia and Turkey and has been squeezed further, driven on the one hand by the requirements for adequate capital in anticipation of credit quality deterioration and on the other by lower profitability in the aftermath of the crisis. The former Yugoslav Republic of Macedonia stands out, with some banks having considerably larger capital buffers than in the other two countries possibly on account of the higher NPL ratios they are facing. However, in the three countries all banks remain relatively

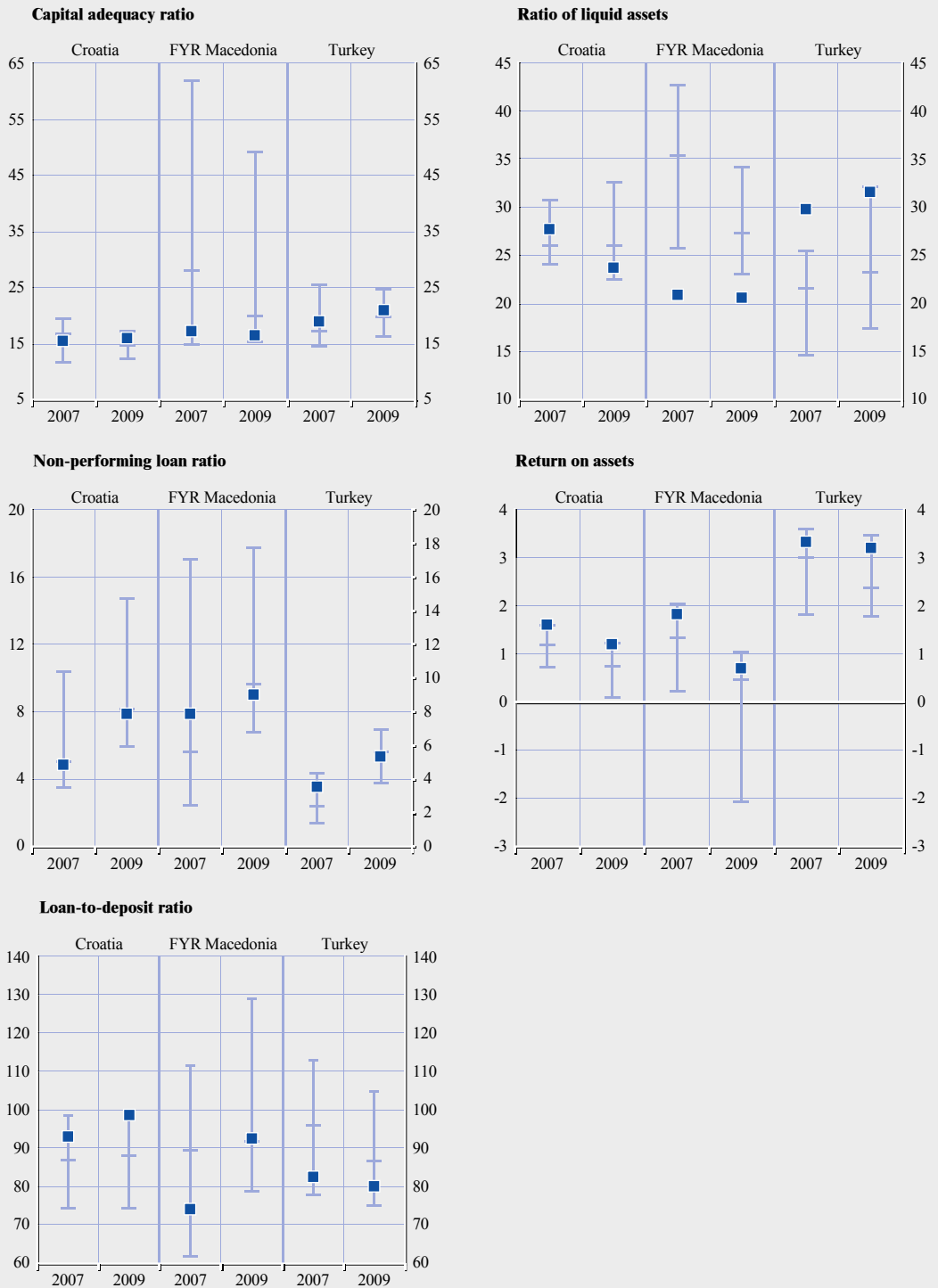
well-capitalised and the minimum capital adequacy ratio stands above 10%.

Developments in the average liquidity ratio of banks were different across the three countries, as the ratio decreased in Croatia, remained roughly the same in the former Yugoslav Republic of Macedonia (although the median and quartiles declined) and increased in Turkey. The declines in Croatia and the former Yugoslav Republic of Macedonia may be related to temporary deposit withdrawals stemming from depositors' weakened confidence and the high cost of holding large stocks of liquid assets during a period of decreased profitability and competitive pressure. An additional factor for Croatia was the reduction in general reserve requirements and the abolition of the marginal reserve requirements in 2008, and for the former Yugoslav Republic of Macedonia (where distribution as a whole shifted downwards) the outflow of liquid funds owing to the repayment of external liabilities. In Turkey, although the weighted average value is quite high (31.6% in December 2009), it seems to be driven by several large banks with high liquidity, since three-quarters of all banks have below-average liquid assets.

Over the two-year period, the average non-performing loan ratio increased in all three countries, reflecting the negative impact of the economic slowdown on loan collectability. The percentage change was higher in Croatia and Turkey, whereas in the former Yugoslav Republic of Macedonia the average and median NPL level for 2009 was higher than in the other two countries (9.4%). Moreover, while NPL levels in the upper half of the distribution do not reach excessively high levels in Croatia and Turkey, the third quartile and the maximum values are high in the former Yugoslav Republic of Macedonia (at 18% and 38% respectively), indicating the presence of several institutions facing very high rates of borrower default.

⁴⁵ Where relevant, the analysis also refers to minimum and maximum values (not shown in Chart 5).

Chart 5 Distribution of five financial stability indicators across the banking systems



Source: National sources.
 Note: Horizontal lines show the median, and first and third quartiles of the distribution; dark blue squares indicate the weighted average.

With regard to the return on assets, the three candidate countries are in very different positions. Although in Croatia the entire return distribution shifted downwards, the indicator remains positive for three-quarters of the banks. In the former Yugoslav Republic of Macedonia, the decrease is much more pronounced, with individual values for almost half of the banks in the negative range. This may be due to increased impairment charges related to the adverse developments in loan portfolio quality (see the respective country section). In stark contrast to these two countries, in Turkey the average return on assets remained high and all banks reported positive returns on account of improved interest and trading incomes (see the respective country section for more details).

Turning to the loan-to-deposit ratio, its average has increased in Croatia and the former Yugoslav Republic of Macedonia, reaching a value very close to 100% in the former. This development can be traced back to the episodes of deposit withdrawals and the incomplete recovery of deposit levels in these two countries. The former Yugoslav Republic of Macedonia stands out, with outliers on the upper side, a third quartile of 129% and a maximum value as high as 260%, suggesting a very high level of credit exposure for some banks.⁴⁶

4.2 RESULTS OF MACRO STRESS TESTS IN THE CANDIDATE COUNTRIES

The recent global downturn and the possible spillovers into the financial sector have directed attention to macro-prudential analysis methods. This horizontal issue presents the results of a two-step macro stress-testing exercise for Croatia, the former Yugoslav Republic of Macedonia and Turkey. First, the major sources of risk were identified and their potential impact on the credit quality of the banking system was assessed. In the second step, the identified link between macroeconomic factors and credit quality was used to project the likely impact of different macroeconomic scenarios on individual banking institutions and on the system as a whole. This allowed an assessment

of the propensity of the financial system to withstand shocks and an evaluation of the degree of systemic risk. Interbank exposures and hence potential contagion were also taken into account.⁴⁷ The main finding is that under extreme but not implausible scenarios, the banking systems of the three candidate countries appear well-capitalised and sufficiently endowed with liquidity to withstand shocks, provided that such shocks do not occur simultaneously.

The main sources of risk in the candidate countries appear to be the unfavourable external environment lasting longer than currently expected and a further deterioration in the domestic business cycle, spilling over into the local banking systems through a deterioration in credit quality and constrained access to foreign funding. Moreover, the high share of foreign-denominated lending is an additional source of risk in the event of adverse exchange rate developments.⁴⁸

The link between economic activity and credit quality is addressed empirically through a simple econometric model using historical data. Changes in credit quality (measured by the ratio of non-performing loans to total credit) are regressed to allow for lags in real GDP growth and changes in the exchange rate. The estimated results for the individual country models are listed in the first three columns of Table 24.

There are two important caveats, namely the low number of observations and the simplified model structure, disregarding potential feedback effects from credit quality to the macroeconomic variables of the model. Nevertheless, in line with intuition, a real GDP decline is related to worsening credit quality as a consequence of the increased difficulty on the part of borrowers to

46 This high loan-to-deposit ratio for some banks in the former Yugoslav Republic of Macedonia mainly concerns banks that are not very active in attracting deposits.

47 The risk of possible interbank contagion is taken into account by estimating bilateral exposures using the maximum entropy principle. See, for example, Upper and Worms (2002).

48 For a detailed overview of recent trends in foreign exchange-denominated lending in the three countries, see section 4.6.

Table 24 Econometric estimates: credit quality model

(Dependent variable: percentage change in the non-performing loan ratio)

	FYR Macedonia	Croatia	Turkey	Panel regression
Constant	0.77	2.27**	-0.94	2.29**
Δ GDP				
Δ GDP (-1)			-1.72**	-1.78***
Δ GDP (-2)	-2.36**		-2.17***	-1.32**
Δ GDP (-3)	-2.86**	-1.41**		
Δ GDP (-4)		-1.30**		
Δ ER				
Δ ER (-1)		1.98**	0.61**	0.58***
Δ ER (-2)				
Δ ER (-3)		2.14**	0.35**	0.69***
Adj. R ²	0.34	0.51	0.53	0.38
Sample	2003Q4-2009Q4	1999Q2-2009Q4	2002Q1-2009Q4	2000Q2-2009Q4

Source: ECB staff estimates using data from national sources.

Notes: *, ** and *** denote coefficients significant at the 10%, 5% and 1% level respectively. The exchange rate used is the nominal effective exchange rate, expressed as the domestic currency price of a trade-weighted basket of currencies. The unbalanced panel includes the three candidate countries, as well as Bulgaria, Romania, Russia and Ukraine. The panel regression uses a fixed-effect estimate, and the length of the time series varies country by country.

repay their loans. In the individual regressions, the differing lag structures and coefficients suggest that the magnitude and speed of the impact will vary across the countries. For instance, the impact of a 1 percentage point decrease in real GDP appears to be much stronger in the former Yugoslav Republic of Macedonia and Turkey than in Croatia (by considering the cumulative value, obtained by taking the sum of GDP lag coefficients). The exchange rate is significant for Croatia and Turkey, meaning that an increase in the exchange rate (depreciation of the domestic currency) might lead to an additional increase in NPLs. These individual results are broadly compatible with those of an extended panel model covering several additional eastern European countries (shown in the fourth column of Table 24). Although the individual regressions provide an insight into the country-specific credit quality patterns, the panel arrangement was preferred for compiling the NPL forecast owing to its larger number of observations and better out-of-sample forecasting properties.

In the second step of the process, the estimated coefficients are used as an input for a macro stress test of the banking system using an approach similar to the IMF stress-testing method.⁴⁹ It considers the impact of a one-off NPL increase on the bank's capital adequacy

ratio via additional provisions,⁵⁰ and does not take profits into account as a buffer against potential shocks. This gives the method a static character, but it is a prudent way of assessing the shock impact (Cihak, 2007). For each country, the top ten banks in terms of total assets are considered.⁵¹

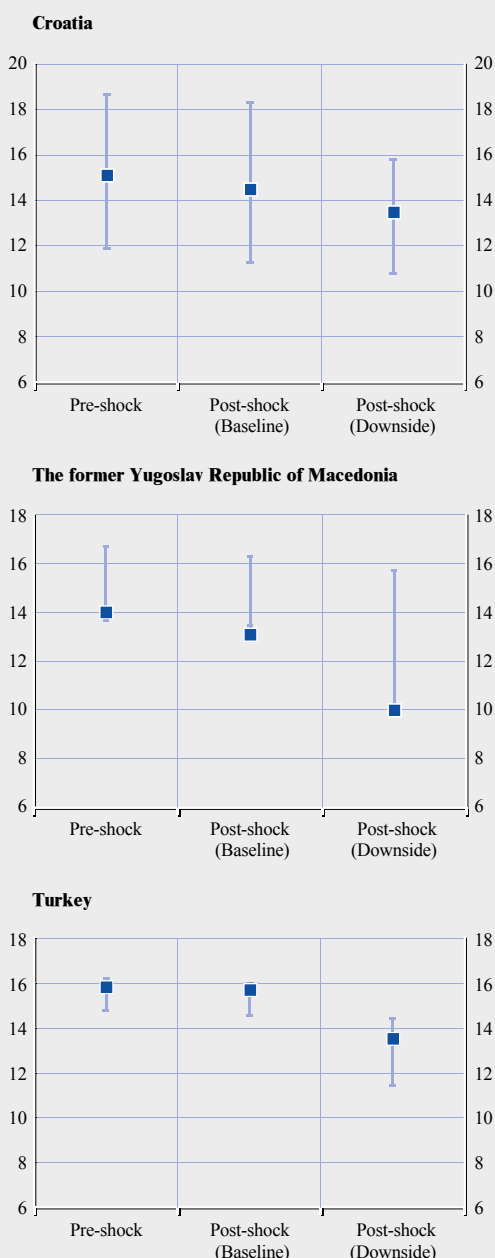
A baseline and a downside credit shock scenario are considered for all countries, as follows: country-specific GDP forecasts are used to obtain plausible forecasts for NPL ratios. At the same time, it is assumed in the baseline scenario that exchange rates remain stable. The downside scenario incorporates the idea of a double-dip recession and has identical assumptions across the countries: a real GDP decline in the first three quarters and a return to the projected path from the baseline scenario thereafter, combined with a 5% domestic currency depreciation in two consecutive quarters. The magnitude and quarter-on-quarter profile of the GDP decline is broadly in line with those observed in the three candidate countries in the period 2008Q3-2009Q2 during

49 See Čihák (2007).

50 A uniform provisioning rate of 50% of new NPLs was assumed for all banks.

51 An important caveat in these calculations is the timeliness of the bank data used as input: data are taken from BankScope and refer to the end of 2008 given the unavailability of more recent and sufficiently detailed individual bank data.

Chart 6 Changes in the capital adequacy ratio under the baseline and downside scenarios



Source: ECB staff estimates using data from national sources.
Notes: Horizontal lines show the first and third quartiles of the distribution; dark blue squares indicate the weighted average. Since no bank failures are observed, the results with and without contagion are identical and therefore not shown separately.

the recent crisis. Moreover, the resulting NPL change is also in line with assumed NPL increases in stress tests conducted by the

respective central banks.⁵² In addition to the two credit scenarios, a liquidity scenario is also considered, which assumes the withdrawal of deposits that have to be paid out of the liquid assets available to the bank. It is also designed in two versions: a moderate and a severe bank run, corresponding, respectively, to 4% and 8% deposit withdrawals on each of two consecutive days.⁵³

The following panel of charts compares the results of the two credit shock scenarios for the three candidate countries, presenting the weighted average along with the first and third quartile of the capital adequacy ratios for the top ten banks before and after each of the shocks.

For Croatia and Turkey the impact of the baseline and even of the downside scenario is relatively modest, with the top ten banks staying well above the minimum capital adequacy ratio. Although the average decrease in the capital adequacy ratio is more substantial for the former Yugoslav Republic of Macedonia, there are no bank failures⁵⁴ or contagion. However, the shock might also result in some institutions not meeting the minimum capital requirements or having insufficient Tier 1 capital,⁵⁵ and thus requiring recapitalisation. The estimated recapitalisation needs of the top ten banks resulting from the two scenarios are modest when measured as a share of GDP (in Turkey, no recapitalisation is needed even under the downside scenario).

As a result of the liquidity scenario (not shown in the charts), the banks appear to have sufficient liquid assets to withstand the assumed deposit withdrawals: in the three countries, there is

52 For instance, for Croatia the NPL increase in the downside scenario (55%) is comparable with the 48% increase in the stress-testing of the CNB, see CNB (2009b) as of August 2009.

53 The “moderate” rate of withdrawal roughly corresponds to the withdrawal rate during the run on the Kaupthing bank (Iceland, 2009).

54 A bank failure is defined as equity capital falling below zero.

55 Tier 1 capital consists of equity capital and Tier 2 of hybrid capital and subordinated debt. The requirement that Tier 2 capital makes up no more than 50% of total capital forms part of the Basel I accord.

no incidence of a bank becoming illiquid and requiring a liquidity injection.

Overall, the results of the credit risk scenarios reveal that the banking systems of the candidate countries are considered relatively resilient under the assumed scenarios, with no bank failures being observed. The credit model suggests that NPLs in the candidate countries peaked in 2009 and are likely to level off in 2010, provided that the economic recovery gathers pace and exchange rates remain stable.

4.3 CREDIT QUALITY IN CANDIDATE COUNTRIES⁵⁶

Croatia, the former Yugoslav Republic of Macedonia and Turkey entered the last decade with high non-performing loan ratios. Turkey inherited a significant stock of non-performing loans⁵⁷ from the 2000 and 2001 crises, while in Croatia and the former Yugoslav Republic of Macedonia earlier economic and financial shocks had left high levels of non-performing loans. From 2002 until the recent global financial crisis, non-performing loan ratios kept on falling substantially in all three countries.

Apart from the favourable macroeconomic environment, a major underlying factor in improving asset quality indicators was a lending boom in the candidate countries. Croatia and Turkey had already recorded rises in the stock of non-performing loans in the years preceding the global financial crisis.⁵⁸ Nevertheless, high credit growth generally led to receding non-performing loan ratios. In Turkey, the stock of non-performing loans has risen since 2005. This development, however, has long been masked by high nominal credit growth rates to the private sector, which averaged 39% over the period from 2002 to 2008. In Croatia, non-performing loan ratios continued to fall until 2007 owing to rapid credit growth, while non-performing loans started to grow in 2006. In the former Yugoslav Republic of Macedonia, credit grew at double-digit rates, thus reducing the non-performing loan ratio in 2007 to roughly one-third of its value in 2002.

The fallout from the global financial crisis, however, led to a significant surge in the ratio of non-performing loans in all three candidate countries. For the Turkish banking sector, the ratio of non-performing loans to gross loans rose by 160 basis points to 5.3% between 2008 and 2009, as asset quality deteriorated in the private sector and credit growth abated. In Croatia, credit growth deceleration and a significant deterioration in the macroeconomic environment caused a steep rise in the ratio of non-performing loans to total loans from 2008 onwards.⁵⁹ This ratio increased by 290 basis points to 7.8% between 2008 and 2009. Following a 230-basis point surge to 9.0%, the former Yugoslav Republic of Macedonia registered the highest non-performing loan ratio. Declining foreign and domestic demand and, hence, the contraction of economic activity in 2009, led to a rising non-performing loan ratio for the first time in six years. A simultaneous slowdown of lending in the second half of 2008 and a gradually more pronounced deceleration in 2009 also contributed to the rise.

Analysing asset quality by sector, the deterioration has been particularly sharp for consumer loans. This is especially true in the former Yugoslav Republic of Macedonia and Turkey, while in Croatia the deterioration in the corporate loan portfolio has been even more pronounced.

In Turkey, the non-performing loan ratio of corporate loans, which constitute 67%⁶⁰ of all loans, rose to 4.9% in 2009. Surging to 6%, the increase in the non-performing loan ratio

⁵⁶ Although considerable efforts were made to guarantee the consistency of data across the countries, the underlying definitions for national asset quality indicators may differ according to national classifications.

⁵⁷ For the definitions of non-performing loans, see footnote 17 for Croatia, footnote 29 for the former Yugoslav Republic of Macedonia and footnote 40 for Turkey.

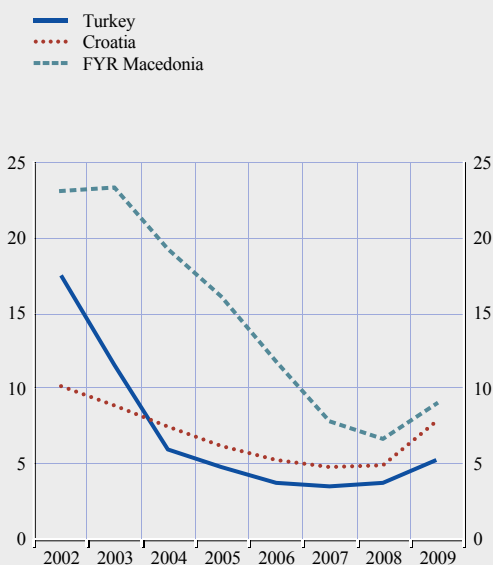
⁵⁸ According to NBRM data, the stock of non-performing loans decreased until 2007 and started to increase in 2008.

⁵⁹ In Croatia, the loan classification scheme changed in 2004. This has prompted a methodological change for non-performing loans and loan loss provisions.

⁶⁰ Data for the sectoral composition of loans and indebtedness by sector in Turkey has been taken from the latest available Financial Stability Report. See CBRT (2009).

Chart 7 Non-performing loan ratios

(percentage of total loans)

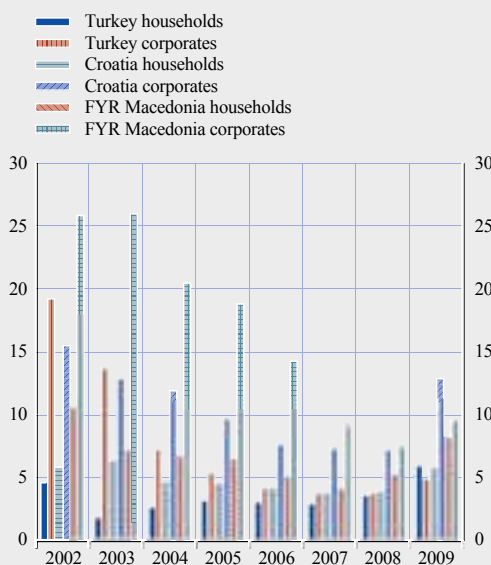


Source: National sources.

Note: The non-performing loan ratio = gross non-performing loans/gross loans.

Chart 8 Non-performing loan ratios by sector

(percentage of total loans)



Source: National sources.

Note: The non-performing loan ratio = gross non-performing loans/gross loans.

was even sharper for retail loans. Credit quality deteriorated most in the credit card and vehicle loans segment, while the deterioration in asset quality was less pronounced for housing loans. Even though retail loans account for no more than about one-third of total lending in Turkey, credit growth had been especially elevated in this segment prior to the crisis. High credit growth in credit card balances and consumer loans have led to a doubling of household indebtedness since 2005, outpacing household asset or disposable income growth. Thus, while household indebtedness, with a ratio of 14.1% of GDP, remains low by international standards, this newly generated credit could be particularly susceptible to higher default rates.

In Croatia, the non-performing loan ratio for both the household and the corporate sector recorded a steep increase. With the non-performing loan ratio rising by 5.6 percentage points to 12.8%, the sharpest deterioration in asset quality came from the corporate loan segment. The corporate non-performing loan

ratio is more than double that of the household loan segment. With regard to household loans,⁶¹ asset quality declined most in the credit card and other loans segment, while defaults of housing loans grew at a lower pace.

In the former Yugoslav Republic of Macedonia, the initial signs of a deterioration in asset quality had already started to emerge in the household sector⁶² in 2008, when the household non-performing loan ratio began to rise, whereas the deterioration in credit quality indicators for the corporate sector lagged behind this. Credit quality to the household sector registered the steepest deterioration, as the non-performing loan ratio surged by 290 basis points to 8.2% between 2008 and 2009. With a share of 78.3%,⁶³ household debt primarily consists of

61 The share of household loans in the total bank loan portfolio fell below 50% by the end of 2008 owing primarily to the sharp rise in loans to the government.

62 Data for the household sector includes small businesses (sole proprietors). See NBRM (2009).

63 Data for the composition of debt and credit dynamics by sector has been taken from NBRM (2009).

loans for consumption purposes (consumer loans, automobile loans, current account overdrafts and credit cards). In 2008 credit card balances and current account overdrafts recorded the fastest growth. As this is unsecured lending, it may pose a particular risk for asset quality, especially when taking into account the high unemployment rate. That said, despite growing household indebtedness, the ratio of total household debt to GDP, which stood at 17.7% at the end of 2008, was still moderate, although this does not rule out high indebtedness in individual household segments. Loans denominated in or indexed to foreign currency recorded a particularly sharp drop in asset quality as the ratio of non-performing loans almost tripled for this segment, while the non-performing loan ratio for credit denominated in local currency rose by about 12% in the former Yugoslav Republic of Macedonia.⁶⁴

While exchange rate and interest sensitivity constitute substantial risks for asset quality in Croatia and the former Yugoslav Republic of Macedonia, this is less true for Turkey.⁶⁵ The share of foreign exchange-indexed loans, which was low in the Turkish household sector (4.9% in 2008⁶⁶), continued to decline as consumers were discouraged from taking out foreign exchange loans in 2009 by new regulation.⁶⁷ This has left asset quality in the consumer credit sector less sensitive to exchange rate movements than in eastern Europe. In the corporate sector, however, foreign exchange-denominated debt accounted for 46.2% of total loans, making credit quality significantly more vulnerable to potential fluctuations in the exchange rate than in the household sector. In Croatia, the financial crisis in 2007 had the effect of reversing a trend, observed over several years, of declines in foreign exchange-denominated lending and the growing importance of local currency loans. While households moved part of their deposits into foreign currency in the face of rising uncertainty, Croatian banks stepped up the extension of foreign currency loans until the first quarter of 2009. To some extent this was also a response to the provision of foreign currency liquidity

by the central bank. Consequently, the share in total loans of foreign currency loans increased to 72.7% in 2009.⁶⁸ In the former Yugoslav Republic of Macedonia, debt denominated in or indexed to foreign exchange amounted to about 66.6% in the corporate sector, making corporate loans especially vulnerable to currency risk. For household credits this ratio amounted to more than 46%, meaning that sensitivity to adverse exchange rate movements remains a key vulnerability of the credit portfolio in the latter two countries, whereas in Turkey exchange rate sensitivity is primarily an issue in the corporate loan sector.

In Turkey, exposure among households to interest rate changes is lower than in central and eastern European peers, as variable rate loans are less common. In Croatia and the former Yugoslav Republic of Macedonia, however, the interest rate risk exposure of the household sector is significant. Since late 2008 the interest rate exposure of Croatian households has increased. According to the CNB, at the end of March 2009 almost 97% of total household loans had been issued at interest rates adjustable within a year. In the former Yugoslav Republic of Macedonia, adjustable interest rate loans accounted for 87.3% of total household loans (2008). As borrowing is mostly long-term, this has led to a considerable vulnerability of households to interest rate risk and therefore could impair asset quality. In the corporate sector, borrowing is also dominated by adjustable-rate credit.

In all three candidate countries, high credit growth has been a significant driver of falling NPL ratios in the period since 2002. Hence, the quality of this newly generated credit is still unknown. However, it may have been compromised by the extension of credits to

64 Separate NPL ratios for loans denominated in foreign exchange and local currency were not available for Croatia or Turkey.

65 See the country sections for a more detailed discussion of exchange rate regimes.

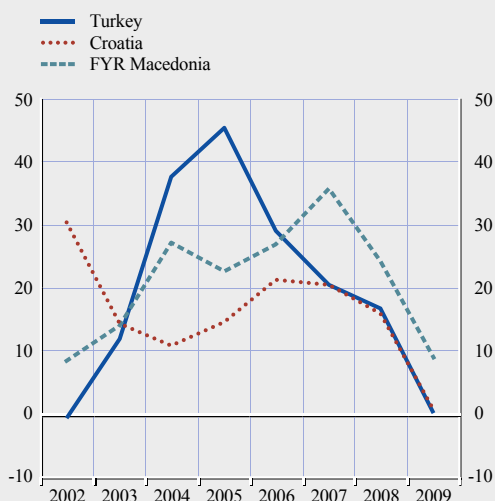
66 See CBRT (2009), p 40.

67 See the country section for more details.

68 This was also partly due to a substantial increase in foreign currency borrowing from the banking sector by the government.

Chart 9 Real credit growth to the private sector

(percentage; year on year)



Source: National sources.

new borrower segments and more lax lending standards. Since the quality of this credit portfolio is currently being tested in a harsh economic environment, asset quality is likely to deteriorate further in 2010 in Croatia and the former Yugoslav Republic of Macedonia.

At a level of 5.3%, the overall NPL ratio in Turkey does not seem alarming when compared with the level of peers and historical highs. Nevertheless, steep credit growth in recent years – from 2002 to 2008, total loans grew at an annual average rate of approximately 20% – as a by-product of strong growth and prospects for EU accession may have endangered credit quality. The latest data available from the Turkish Banking Regulation and Supervision Agency suggest a halt in the deterioration in asset quality, with overall non-performing loan ratios declining slightly and the stock of non-performing loans itself retreating marginally. Nevertheless, as asset quality is a lagging indicator and with credit growth subdued, Turkish banks in the short term could still see non-performing loan ratios above pre-crisis levels. The main cyclical risks to credit quality are deteriorating labour market

conditions and a subdued economic recovery in western Europe, as Turkey's real sector is largely dependent on exports to this region.⁶⁹

In Croatia, the current recession will put additional pressure on asset quality in the near term. Unfavourable economic conditions and more expensive funding due to rising interest rates have reduced corporate liquidity to historic lows and considerably added to the corporate debt burden. As recovery is likely to be fragile on account of sluggish bank lending and tight fiscal policy, there could be a further rise in defaults in the corporate sector. Additionally, unfavourable employment and wage dynamics owing to persistent negative trends in the domestic labour market coupled with receding house prices could further erode asset quality in the consumer loan and mortgage segments. This can be expected to put a further strain on asset quality in 2010.

In recent years growing indebtedness and decreasing liquidity in the corporate sector of the former Yugoslav Republic of Macedonia have intensified vulnerabilities to adverse dynamics in the real sector. As the slow pace of recovery in main trading partners and tight external financing conditions will continue to put a strain on the economy, credit quality is expected to deteriorate further. With regard to the household sector, the labour market outlook will be crucial as the unemployment rate stood at 32.2% in 2009.

While asset quality is likely to come under further strain in the current year, potential rises in non-performing loan ratios are expected to be manageable, given the satisfactory level of capital adequacy. Moreover, loan loss provisions seem comfortable in Turkey, where the indicator exceeds 80% of non-performing loans for both the total and the sectoral loan portfolios. In the former Yugoslav Republic of Macedonia, loan loss provisions (112.6% of non-performing

⁶⁹ Despite the growing importance of the Middle East as a destination for Turkish exports, western Europe still accounted for approximately 40% of all exports in 2009 according to national statistics.

Table 25 Shock-absorbing factors

(percentage)

	2002	2003	2004	2005	2006	2007	2008	2009
Loan loss provisions								
Croatia	67.9	60.9	62.5	60.0	57.0	54.7	49.5	42.5
FYR Macedonia	90.4	91.4	102.7	110.8	113.6	132.6	133.5	112.6
Turkey	64.2	88.5	88.1	88.7	89.7	86.8	79.8	83.6
<i>of which:</i>								
Loan loss provisions for household loans								
Croatia	61.4	53.0	69.9	66.2	62.6	67.0	63.8	60.6
FYR Macedonia	n.a.	n.a.	102.7	100.4	116.3	125.6	104.9	91.7
Turkey	69.0	94.3	83.7	82.5	85.1	80.9	76.7	86.6
Loan loss provisions for corporate loans								
Croatia	68.4	62.0	57.4	56.4	52.2	45.3	38.1	33.0
FYR Macedonia	n.a.	n.a.	112.7	108.4	108.9	127.9	140.0	117.6
Turkey	64.0	88.4	88.6	90.2	91.2	89.0	81.2	81.9
Non-performing loans net of provisions								
Croatia	19.6	22.6	19.0	16.7	14.0	11.3	12.8	22.2
FYR Macedonia	4.6	0.0	-4.7	-5.7	-6.0	-11.3	-11.3	-5.7
Turkey	14.5	2.8	1.7	1.6	1.5	1.8	3.3	3.2
Capital adequacy ratio								
Croatia	16.6	15.7	14.1	13.5	13.2	15.4	14.2	15.8
FYR Macedonia	28.1	25.8	23.0	21.3	18.3	17.0	16.2	16.4
Turkey	25.6	31.0	28.8	23.7	21.8	18.9	18.0	20.5

Source: National sources.

Notes: Loan loss provisions as a percentage of non-performing loans. Non-performing loans net of provisions as a percentage of capital.

loans) are high despite a decline since 2006. In Croatia, loan loss provisions as a share of non-performing loans have declined to 42.5%.

4.4 FUNDING STRUCTURES OF BANKING SYSTEMS

The structure of bank financing may have implications for the financial stability of individual countries. Banks typically fund their balance sheets in layers, starting with a capital base comprising equity, subordinated debt and hybrid instruments, plus medium and long-term senior debt. The next layer consists of customer deposits: even though they can be withdrawn at short or no notice, they are assumed to be a stable source of financing as long as the general banking system's health and financial safety nets ensure continued investor confidence. On the other hand, relying heavily on deposits tends to add pro-cyclicality to banks' lending behaviour when local liquidity conditions tighten. However, other forms of domestic financing, such as via wholesale or inter-bank

markets, tend to be even more volatile during periods of market stress.

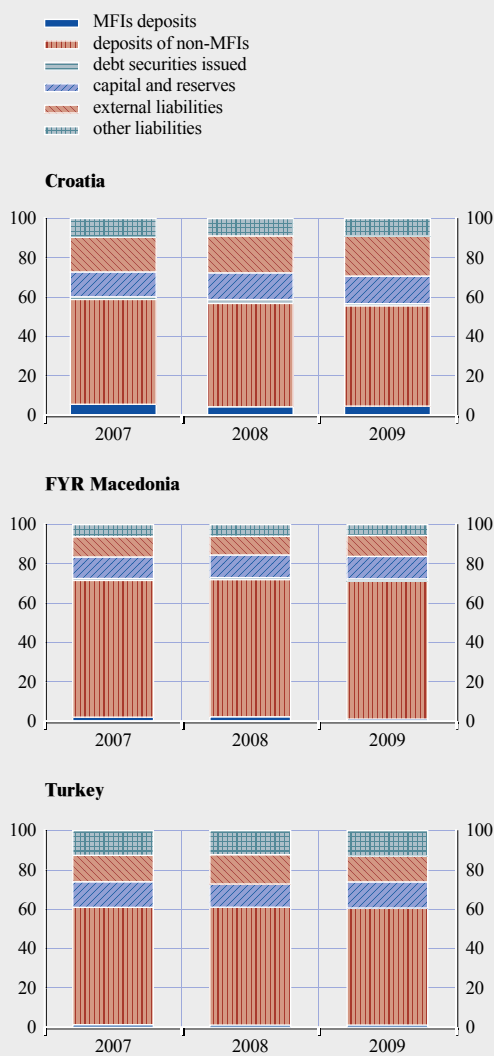
The relevance of foreign financing has been a distinctive feature of the funding structure of banking systems in emerging economies in recent years. In fact, before the crisis, the global economy was characterised by low interest rates and risk premia and abundant liquidity. Banks' leverage expanded rapidly and the growth in loan stocks was only partly offset by the growth in deposits. Given the availability of ample liquidity, it was not difficult for banks in emerging economies to raise funds from abroad. Until the onset of the crisis, the balance of evidence seemed to support the view that foreign financing was a stabilising force for host markets in the presence of a deterioration in the business cycle and during periods of financial distress (Goldberg, 2009). Much of the analysis, however, had been in the context of shocks originating in emerging markets, and the literature did not rule out the possibility that a local banking system could be hit by shocks that

seriously affected banks in advanced economies, as demonstrated by the latest crisis.⁷⁰ These shocks might be large and more difficult for the local authorities to deal with by themselves. Lending fluctuations in host market economies in response to external shocks may also reflect the composition of banks' exposure to various sources of foreign financing. Local banks are likely to be affected differently by global liquidity conditions according to their relative exposure to funding in wholesale international interbank markets, as opposed to financing directly from their own international banking groups' headquarters or related affiliates ("internal capital market"). More generally, subsidiaries of large global groups may find it easier to raise funds in international financial markets, as information barriers are likely to be more limited for these entities and, even when wholesale international markets dry up, they may still have access to financial support from their parent group, largely on account of the long-term nature of the investment and reputational considerations (Winkler, 2009).⁷¹

A general look at banks' funding structures in the countries under review at the onset of the global crisis highlights similarities but also significant differences (see Chart 10). Such differences reflect not only national and institutional factors, such as prudential regulations and the relevance of foreign ownership, but could also be explained by the level of sophistication of the banks' business models and of domestic financial markets, as well as by differences in asset composition. For instance, less mature banking systems tend to be more reliant on retail deposits for their funding, and this is indeed the case in all countries under review. In the case of the former Yugoslav Republic of Macedonia, customer deposits accounted for 70% of banks' total liabilities in 2007; in comparison, their shares were substantially lower in Turkey (60%) and markedly so in Croatia (53%), where the relative importance of customer deposits as a funding source has significantly decreased since 2001.⁷² By contrast, the external liability position of banks in Croatia was relatively high, larger than

Chart 10 Bank liabilities structure

(percentage of total liabilities and capital)



Source: National sources.

⁷⁰ The response of the Japanese banks to the capital and real estate market collapse in the early 1990s is indicative of how banks in advanced economies can transmit domestic financial shocks to foreign markets (Peek and Rosengren, 1997).

⁷¹ By contrast, in the Asian crisis in the 1990s, as domestic banks had engaged in maturity transformation financed by short-term loans from many western banks on the basis of an arm's length relationship, international lenders did not have information about the long-term solvency of the borrowers in host markets. Nor had they particular incentives to acquire such information, given the short-term nature of their engagement.

⁷² By comparison, in 2007 deposits accounted, on average, for around 39% of total liabilities of European banks (ECB, 2009).

in both Turkey and the former Yugoslav Republic of Macedonia.⁷³

Given the large market share held by local subsidiaries of international banking groups, financing by foreign parent banks through non-capital instruments accounted for a sizable share of total external liabilities in Croatia and the former Yugoslav Republic of Macedonia: in the former country it represented about 66% of total external liabilities in 2007, corresponding to 13% of GDP, while in the latter the share was lower (40.5%, corresponding to 2.8% of GDP). On the other hand, funding in international wholesale markets (syndicated lending and placement of bonds, notes and money market instruments) represented a relevant source of external financing for Turkey and, to a much lesser extent, for Croatia, while it was practically non-existent for banks in the former Yugoslav Republic of Macedonia (see Chart 11).

Financing through capital and reserves plays an important role, representing more than 10% of total liabilities in 2007, a high level when compared with the average in the European

Union (around 4%). The stronger capital position in part reflects the high capital adequacy requirements as well as the presumably higher risks faced by banks. It should also be seen in the light of the high level of foreign participation in some countries under review, as parent banks provide a portion of financing to their subsidiaries in the form of equity capital (Walko, 2008).

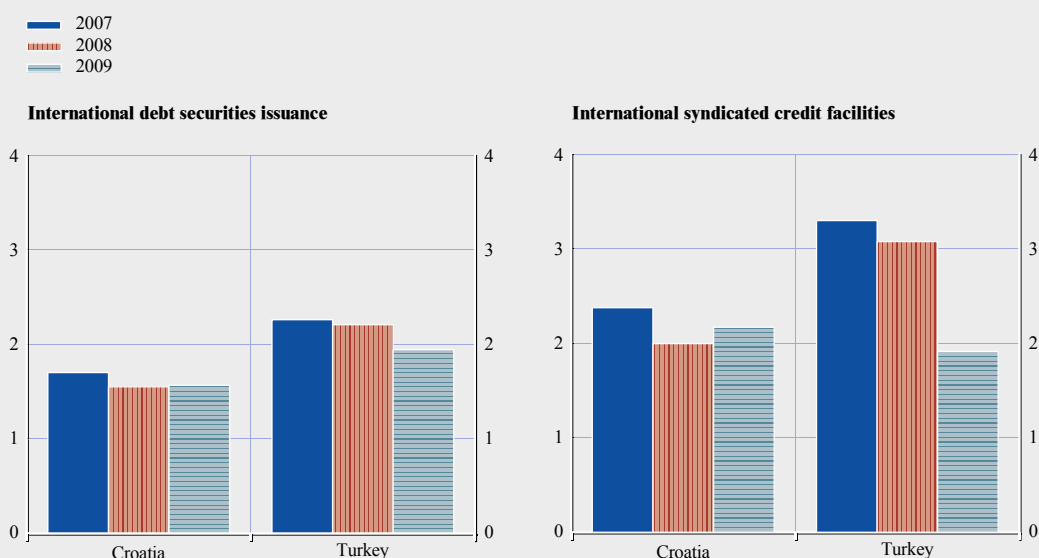
Financing through domestic debt securities was negligible in all countries, in sharp contrast with the trend prevailing in EU banking systems.⁷⁴ This reflected a generally low level of development in corporate debt markets and the limited scope for institutional investors, as well

⁷³ At an individual level, however, the dependence on external financing in the banking system in the former Yugoslav Republic of Macedonia varies considerably.

⁷⁴ In 2007 capital market funding accounted for around 27% of the total liabilities of European banks (ECB, 2009). It should be noted that this figure comprises both funding in domestic and international capital markets, which are considered separately in the text. The limited reliance on this funding segment by banks in the countries under review may have represented a stabilising factor, considering that the issuance of banks' debt instruments rapidly dried up during the recent crisis.

Chart 11 Funding in international wholesale markets

(percentage of total liabilities)



Sources: BIS, CNB and CBRT.

as the absence of a legal framework for the issuance of covered bonds.

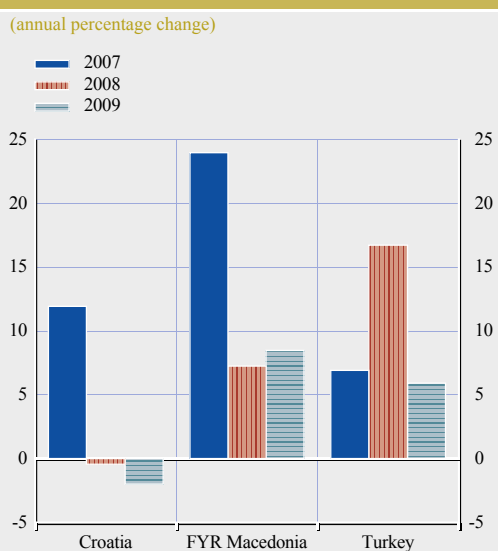
Following the eruption of the financial crisis in August 2007, liquidity became scarce and all funding sources were more or less affected, even though immediate spillovers into the banking systems of the countries under review seem to have been generally contained.

Customer deposits were initially affected only to a limited extent, as central bank liquidity remained available throughout the turmoil and local authorities were quick to step up their efforts to support funding needs, for instance by raising deposit insurance limits where deemed necessary and preventing bank runs even in countries where public confidence in the banking system was more fragile. As the global crisis unfolded, however, it spilled over into domestic funding markets, marking their more recent developments, when the liquidity position of banks was adversely affected by a marked slowdown in both corporate and household deposits that reflected the severity of the shock. In 2009 the growth rates of household and enterprise deposits sharply decelerated in real terms in comparison with the pre-crisis level in Croatia and in the former Yugoslav Republic of Macedonia, and were subdued in Turkey (see Chart 12).

Looking at the foreign sources of financing, there was a relatively larger impact in international wholesale markets. Indeed, funding in these markets had not kept pace with balance sheet growth since the end of 2007, and after the collapse of Lehman Brothers these sources of financing almost dried up. In Turkey, rollover ratios of long-term loans borrowed from abroad by the banking sector declined sharply at the end of 2008, stabilising at 90% in subsequent quarters, while net debt securities issuance was negative in 2008 and picked up again only modestly in 2009.

In Croatia, the increasing constraints in international wholesale markets were offset by

Chart 12 Real growth in households' and enterprises' deposits



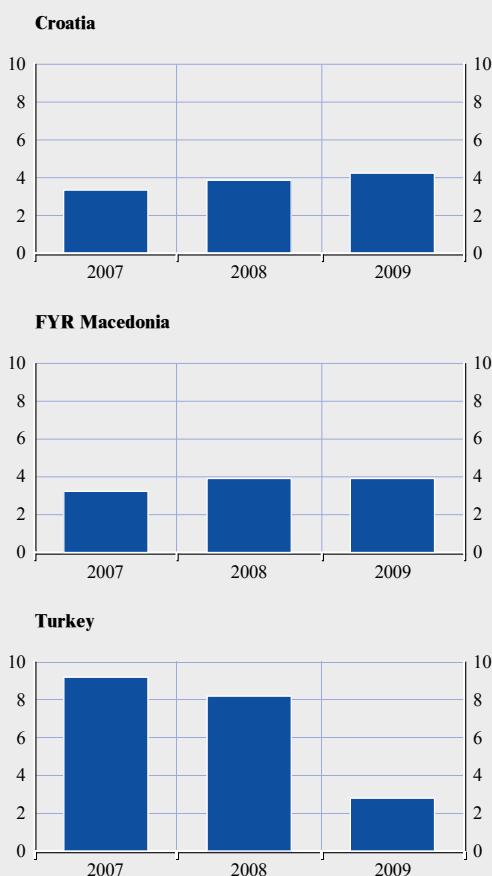
Source: National sources.

an increase in parent banks' financing of their own subsidiaries, as shown by the parent groups' share of deposits and loans, which reached 73% of total liabilities (15% of GDP) in 2008 and increased further in the first half of 2009. As a result, foreign liabilities grew on average by about 10% yearly. In the former Yugoslav Republic of Macedonia foreign bank support also increased during the crisis, accounting for 66% of total foreign financing at the end of 2009.

Despite a drop in benchmark interest rates in major advanced economies, higher risk premia and slowing deposits have significantly raised banks' domestic and external funding costs in Croatia and the former Yugoslav Republic of Macedonia, where banks in particular have been forced to compete for resident deposits by offering higher rates, which in turn has increased pressure on their interest margins (see Chart 13). In Turkey the pressure on the liability side has been balanced by the marked decline in the central bank's policy rates to date (10 percentage points since November 2008; see the country section).

Chart 13 Interest expenses

(percentage of total interest-bearing liabilities)



Source: National sources.

The most recent developments may imply that, in the near term, funding could represent a key constraint for banking activity in all

the countries under review. Should banks in advanced countries continue to deleverage and to rebalance globally, the reduced availability and higher cost of external financing would weigh on banks that rely on these sources of finance. On the other hand, greater reliance on domestic sources may offer limited scope for raising funds, as domestic savings in these countries will likely remain rather subdued in the foreseeable future and the increased competition for retail deposits may force banks to increase rates, thus raising funding costs and possibly eroding net interest margins.

4.5 THE ROLE OF PARENT BANKS IN CANDIDATE COUNTRIES

As a result of privatisation and financial sector liberalisation, foreign-owned banks have established a dominant position in the banking sectors of Croatia and the former Yugoslav Republic of Macedonia, where, respectively, they held 90.9% and 93.3% of total banking assets at the end of 2009. Such high levels of foreign ownership are a common feature of many transition economies in central, eastern and south-eastern Europe, but are unprecedented in recent economic history. In contrast, the foreign bank presence is less substantial in Turkey, where 15.8% of banking assets were under foreign control in 2009.

Foreign ownership of banks predominantly takes the form of subsidiaries (see Table 26), established mainly as a result of the acquisition of domestic banking institutions in the process of privatisation or restructuring. Branches of

Table 26 Foreign bank presence in candidate countries

	Croatia	FYR Macedonia	Turkey
Number of banks under foreign control ¹⁾	15	14	24
<i>of which:</i>			
Subsidiaries of foreign banks	15	8	18
Branches of foreign banks	0	0	6
Other forms of foreign ownership	0	6	0
Share of assets held by foreign banks	90.9	93.3	15.8

Source: National sources.

1) Banks with at least 50% of their capital under foreign control (banks, other financial institutions, non-financial legal entities or legal persons).

foreign banks operate only in Turkey. The preference for subsidiaries can be explained by restrictive host country regulation⁷⁵ of the opening of branches, the focus of foreign bank activities on retail services and the preferences and business models of parent banks. In the former Yugoslav Republic of Macedonia some foreign majority shareholders are non-banking corporations or natural persons in the case of some very small banks. It is also important to note that the subsidiaries of foreign banks in the former Yugoslav Republic of Macedonia barely depend on external funding from their parent banks (see section 4.4).

IMPLICATIONS FOR FINANCIAL STABILITY IN HOST COUNTRIES

On balance, the experience so far suggests that financial stability in the region has benefited from the presence of foreign banks. Recent empirical research⁷⁶ has argued that the reduction in cross-border bank flows to emerging Europe during the current crisis was more limited than the reduction in the flows to emerging Asia and Latin America because of a high penetration of foreign banks and a relatively sound banking system in the region. The strength of the banking system is the result of a focus on mainstream banking activities in a growing market, low exposure to toxic assets and sound prudential management.

Other empirical research⁷⁷ has found that foreign banks contributed to credit market stabilisation in transition economies, as their lending activities were more resilient to local shocks than those of domestic banks. In addition to having easier access to cross-border lending in general, foreign bank subsidiaries dependent on external funding were able, in particular, to draw on the deep pockets of their parent banks, which were willing to support them. Considering that parent banks entered the region with a long-term perspective related to EU integration and convergence, expected future profits, as well as the potentially high costs of damage to their reputation in the event of a pull-out, underpin their decision to maintain activities.

In addition, large-scale multilateral support packages and the private sector coordination orchestrated by multilateral institutions and foreign creditors (European Bank Coordination Initiative) were also very instrumental in encouraging the continued commitment of cross-border banks to the broader region.

At the same time, foreign banks have been the drivers of rapid credit growth and they may have underestimated the build-up of credit risk in a period of buoyant economic growth. They have also promoted foreign currency lending, effectively passing on the exchange rate risk to (mostly unhedged) borrowers. High domestic vulnerabilities to exchange rate shocks have constrained the ability of host country governments to use the exchange rate as an instrument during the economic downturn (except for Turkey).

Foreign bank subsidiaries could also become destabilising factors when they transmit shocks originating in the parent bank or elsewhere in the group. Indeed, research⁷⁸ has found that a deterioration in parent bank health is associated with a decline in growth of credit to emerging markets.

An additional concern for Croatia and the former Yugoslav Republic of Macedonia is that the ownership of their banking system is highly concentrated in a couple of countries (see Chart 14), namely Austria and Italy for the former and Greece and Slovenia for the latter. This amplifies the risk of a transmission of shocks originating in the home country. Contagion can be prevented through rapid and decisive actions by the international community

⁷⁵ The regulation of foreign bank branches in Croatia is still very restrictive, while the former Yugoslav Republic of Macedonia did not allow the opening of foreign bank branches before its new banking law of 2007 came into force.

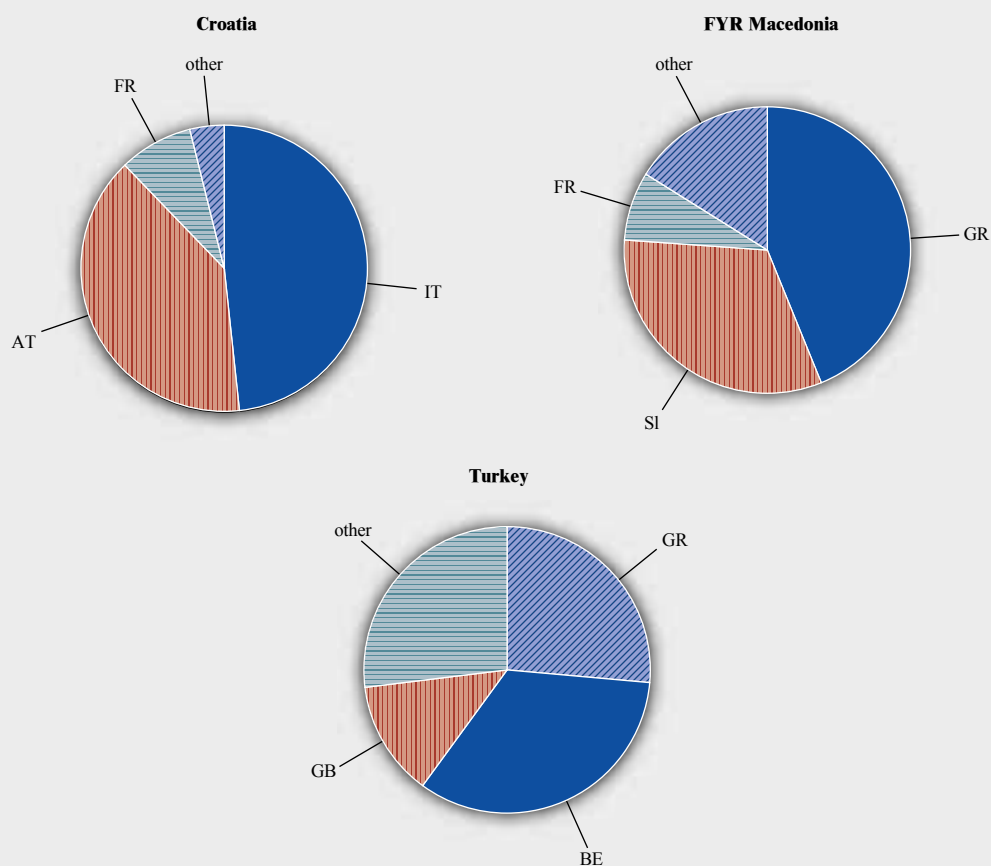
⁷⁶ See, for example, the EBRD Annual Report (2009) and Herrmann and Mihaljek (2010).

⁷⁷ See, for example, De Haas and Van Lelyveld (2010) and Hasselmann (2006).

⁷⁸ See, for example, McGuire and Taraslev (2008), De Haas and Van Lelyveld (2006) and Popov and Udell (2010).

Chart 14 Geographic distribution of parent banks

(percentage share of foreign bank assets held by parent banks of the same country; ultimate owner basis)



Sources: BankScope and national sources.

and home country governments, as the recent troubles with Hypo Group Alpe Adria and Volksbank, which were quickly rescued by the Austrian government, illustrate. In the case of the former Yugoslav Republic of Macedonia, direct spillovers from the Greek crisis are very limited given that local subsidiaries depend little on external funding and are well-capitalised. Sound parent banks can also act as a buffer for the transmission of shocks originating at home (e.g. Greece). By contrast, foreign banks in Turkey come from various countries that are not all closely interrelated (some from the European Union and others from the Middle East), resulting in a better diversification of risks.

SUPERVISION OF BANKING GROUPS

For host countries with a high participation of foreign banks, some of them being systemically important for the host country's banking sector, negative spillovers from parent banks may be a source of concern in times of crisis. Especially in cases where home country authorities turn out to be unwilling or unable to conduct the rescue of an entire group (e.g. the collapse of the Icelandic banks), spillovers into the host countries can be very severe. In the case of branches, the scope for action by host authorities is limited because parent banks are fully responsible for the liabilities of their branches. In the case of subsidiaries, the scope for measures by host

authorities may be larger, as subsidiaries can be ring-fenced from the group and can continue their operations in the host country as independent units, or be liquidated by the host country authorities that are responsible for insuring local depositors. However, the recently observed trend of centralisation at parent bank level of some key functions, such as risk and liquidity management, implies that the viability of the subsidiary as a stand-alone unit may not be taken for granted, hence the cost of a failure to host countries could be high. Moreover, the risk of unilateral actions and recourse to financial protectionism by the home authorities is greater, as there is no legal requirement for the parent bank to support its subsidiaries. Conversely, unilateral actions on behalf of host governments to ring-fence a subsidiary of a troubled bank can also inflict damage on the parent bank, its home government and the subsidiaries in other host countries.

These complexities have highlighted the need for information sharing and cooperation between different national bank supervisors in order to supervise more effectively banks with significant cross-border operations and to coordinate actions during a crisis. One possibility is to establish supervisory colleges – a formal structure bringing together some of the host supervisors with the home supervisor, namely the banking supervisor of the country in which the banking group is headquartered. Supervisory colleges are designed to share prudential information about a particular financial institution with cross-border operations. They operate within the frameworks developed by the Basel Committee of Banking Supervisors, the Financial Stability Board (FSB) and the Committee of European Banking Supervisors (CEBS). Moreover, they have gained in importance since the eruption of the global financial crisis. All systemically important international and European banking groups now have a supervisory college in full operation. At the same time, there has been a reinforcement of the mandates of the FSB and CEBS to promote the functioning of supervisory colleges through the drafting of more stringent principles and guidelines on home-host

cooperation. Reflecting the deep integration of EU financial markets, the framework for supervisory cooperation at the European level is more ambitious, aiming for the convergence of supervisory practices and the development of common reporting formats for prudential information, as well as a centralised database. Recently, CEBS has been granted observer status on all supervisory colleges overseeing European banking groups and a mediator role in conflicts between national supervisors, although it lacks the power to impose its decisions directly on national supervisors or financial institutions.

Another instrument to promote the exchange of information between banking supervisors in the context of the supervision of international banks is the conclusion of memoranda of understanding (MoU) between the supervisors and central banks of two or occasionally more countries. This tool is particularly attractive for smaller countries given that the participation of host supervisors in a supervisory college is often limited to those overseeing subsidiaries that are significant or systemically relevant to the banking group, which tends to favour larger host countries. The candidate countries have concluded many bilateral MoU with their main partners in the European Union as well as with the other countries in the western Balkans. The Bank of Greece has also concluded a multilateral MoU on high-level principles of cooperation and exchange of information in the field of banking supervision across south-eastern Europe.⁷⁹ This MoU foresees regular meetings of Heads of Supervision Departments and Governors, annual information exchanges on macroeconomic and financial sector indicators, joint on-site inspections and the creation of task forces on specific issues to be tackled (e.g. stress-testing).

The above developments are important for the promotion of information sharing between national bank regulators and will hopefully

⁷⁹ This multilateral MoU was signed in 2007 by the central banks of Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Greece, the former Yugoslav Republic of Macedonia, Montenegro, Romania and Serbia.

strengthen the resilience of the banking systems through better supervision of international and European financial institutions and the early identification of problems in these institutions. In the meantime, the current global crisis provides a solid testing ground for the adequacy of the institutional framework to ensure cooperation between supervisors and governments in home and host countries. In particular, the following issues warrant closer examination:

- Is the information shared during a crisis mutually satisfactory? Information sharing under a MoU or in the context of a supervisory college should, in principle, be reciprocal, but may take the form of a predominantly one-way communication from the host to the home supervisor. It should be highlighted that trust is crucial in these arrangements.
- Are supervisory standards in host countries on a par with international standards? Only Turkey, as a member of the G20, benefits from participation in the meetings of the Basel Committee of Banking Supervisors and the FSB. However, none of the three candidate countries participate in CEBS meetings even though they are expected to adopt its regulatory and supervisory standards upon EU accession. This lack of access to information is partly addressed by the Eurosystem's technical assistance programme on strengthening macro and micro-prudential supervision in EU candidates and potential candidates, which is aimed at promoting supervisory standards in the target countries through the transfer of expertise and know-how via extensive training sessions.
- Can the current arrangements prevent unilateral actions by home or host supervisors/governments to the detriment of the banking group? Neither instrument can guarantee a coordinated approach to crisis resolution in the event of a banking failure, as this requires a consensus between different banking supervisors and financial sector regulators. The incentives of national

supervisors to protect their national interests and residents may impede the emergence of a consensus, while there is no supranational institution that can impose binding decisions directly on an insolvent bank with significant cross-border operations.

4.6 TRENDS IN FOREIGN EXCHANGE LOANS AND DEPOSITS

The use of foreign currencies is a potential vulnerability in each of the candidate countries. Particularly in Croatia and the former Yugoslav Republic of Macedonia a majority of loans and deposits are denominated in or indexed to foreign currencies. Households especially tend to save in foreign exchange-denominated accounts, while both corporations and households have borrowed heavily via foreign currency-indexed loans. In Turkey, household lending in foreign currencies is low and – as a consequence of new regulations – declining, but there is widespread provision of corporate credit in foreign currencies. Owing to prudential rules that discourage currency mismatches at credit institutions, open foreign exchange positions in the financial sector are small. However, foreign exchange lending does raise financial stability concerns insofar as it represents a (pro-cyclical) systemic credit risk. While authorities in candidate countries have used a range of measures to discourage such lending both before and during the crisis, the recent global financial turbulence has brought about a decline in trust in local currencies in Croatia and the former Yugoslav Republic of Macedonia, which has led once again to an increasing use of foreign currencies in financial transactions. Appropriate policy responses are needed to manage and reduce systemic risks arising from the use of foreign currency.

FINANCIAL STABILITY CONCERNS RELATED TO THE USE OF FOREIGN CURRENCY

The widespread use of foreign currency in the financial system generates risks due to currency mismatches as a result of which the balance sheets of economic actors can be severely affected by changes in nominal exchange rates (see ECB, 2006 and 2008). There are especially

large risks where mismatches may trigger economy-wide losses in a simultaneous, pro-cyclical manner, particularly during a crisis. In this perspective, *currency mismatches at credit institutions* are a well-known threat to the smooth functioning of the financial system. Yet, in the candidate countries, the use of prudential policies by the authorities has so far been relatively successful in discouraging such mismatches. In all countries, there are additional reserve or liquidity requirements for foreign exchange positions. In Turkey, the banks' open foreign currency position may not exceed 20% of bank equity, but Croatia and the former Yugoslav Republic of Macedonia have similar measures too, according to which the banks' open foreign exchange position is currently limited to 30% of banks' own funds. As long as these measures remain effective, credit institutions should be well-insulated from direct exchange rate risk. On the other hand, the spillovers from the global financial crisis have entailed in some instances a relaxation of related legislation in order to leave banks more room for manoeuvre in times of heightened (foreign exchange) liquidity pressures.⁸⁰

The more salient risk from a systemic stability perspective is constituted by *currency mismatches on the balance sheet of borrowers*, i.e. currency-induced credit risk. In the case of more pronounced exchange rate depreciations, as is common during crises, a short foreign currency position (net foreign currency borrowing) can cause the real debt level of households and corporations to rise, leading to a pro-cyclical decline in credit quality. Because loan values are linked to the value of a foreign currency, both foreign exchange-indexed and denominated loans behave similarly in this regard. Yet, even without depreciation, risks can materialise. In the case of an external shock, a country might need to increase interest rates (sharply) to mitigate downward pressures on the exchange rate. This may in turn affect clients borrowing in local currency at adjustable interest rates and also lead to a deterioration in (local currency) credit quality in the economy. Thus, the authorities of countries with rigid

exchange rates may face a policy conflict owing to the widespread use of foreign currency, which may complicate responses to financial crises.

RECENT TRENDS AND FACTORS INFLUENCING THE USE OF FOREIGN CURRENCIES

Between 2004 and 2007 the candidate countries, in particular Croatia and Turkey, experienced rather substantial declines in the overall use of foreign currency in the financial system on both the asset and liability sides. In the former Yugoslav Republic of Macedonia, a declining use of foreign currencies on the liability side went hand in hand with an increasing use of foreign currencies on the asset side. At the same time, foreign exchange-denominated and indexed loans and deposits were still in the majority in Croatia and the former Yugoslav Republic of Macedonia, where the overall use of foreign currencies in the economy is higher. During the crisis years of 2008 and 2009, this downward trend reversed, and particularly in Croatia and the former Yugoslav Republic of Macedonia the use of foreign currencies increased markedly. In Turkey, however, the degree of foreign currency use remained largely stable at levels comparable with those of 2007.

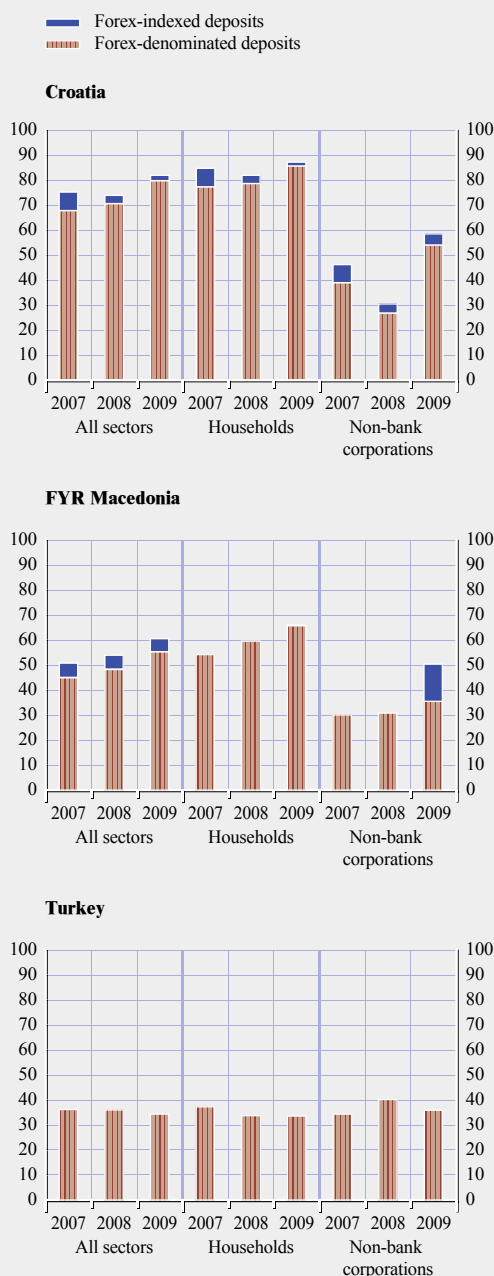
As regards deposits, the share of foreign currency-denominated deposits increased first and foremost in the corporate sector but also (except for Turkey) in the household segment (see Chart 15). There is evidence that the increasing propensity of households to save in foreign currency – or to convert local currency-denominated deposits into foreign currency deposits – followed a general fall in confidence in local currencies and the banking sector as a result of the financial crisis (see Dvorsky, Scheiber and Stix, 2009).⁸¹

⁸⁰ For example, among other measures the Croatian National Bank (CNB) increased the maximum permitted open foreign exchange position for banks from 20% to 30% of equity in February 2009 and decreased the required ratio of foreign currency liabilities to liquid foreign currency claims of banks in several steps, from 32% in May 2008 to 20% in February 2009.

⁸¹ This was accompanied by episodes of temporary deposit withdrawals, mainly in Croatia and the former Yugoslav Republic of Macedonia, in the final quarter of 2008.

Chart 15 Development of foreign currency deposits (2007-09)

(percentage of total deposits)



Source: National sources.
 Note: For forex-indexed deposits no sectoral breakdown is available before 2009 in the former Yugoslav Republic of Macedonia.

Market stabilisation and policy measures, such as the expansion of the deposit guarantee system in Croatia in the final quarter of 2008,

may have begun to underpin public confidence (see section 4.7), but the effects on the use of local currencies are more difficult to gauge and may be more persistent.

Turning to foreign currency-denominated loans, the greater share of foreign exchange deposits and sizeable differentials between local and foreign currency interest rates were mirrored by a greater reliance among firms on foreign currency borrowing (see Chart 16). Throughout the review period, foreign currency lending (domestic foreign currency demand) was buttressed by the large savings position in (the domestic supply of) foreign currency. Foreign wholesale funding (Turkey) and funding by parent banks (Croatia and the former Yugoslav Republic of Macedonia) provided a further supply of foreign exchange to the economy, though this was constrained at the height of the financial crisis as cross-border capital flows slowed (see section 4.4). At such times, candidate country central banks were on the spot to provide the economies with sufficient foreign currency liquidity. Furthermore, as a consequence of the global financial crisis, the currency composition of foreign currency loans has changed. In Croatia, for example, the share of Swiss franc loans in total foreign currency loans – which had grown rapidly in the period 2004-07 as a result of very low interest rates – decreased substantially in 2008 and 2009. Likely causes were the higher volatility of the kuna against the Swiss franc (in contrast to the euro), the more limited supply of CHF loans by banks (difficulties in obtaining CHF liquidity) and subsequent conversions of CHF-denominated loans into euro loans.

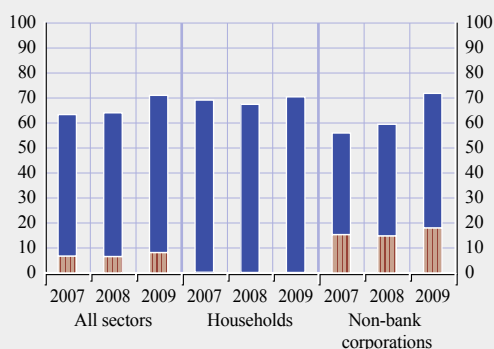
Factors influencing the growth in foreign currency borrowing are manifold. Survey evidence from the national central banks of the three candidate countries exhibits the different motives underpinning borrowing in foreign currency in the respective economies, with both demand-side and supply-side factors playing a key role (see Table 27 and Chart 17). In each country, foreign currency-denominated loans are attractive on account of economic

Chart 16 Development of foreign currency loans (2007-09)

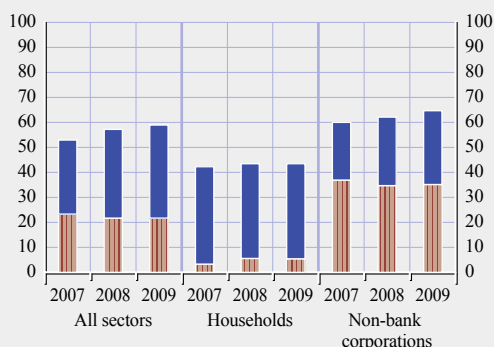
(percentage of total loans)

— Forex-indexed loans
 ■ Forex-denominated loans

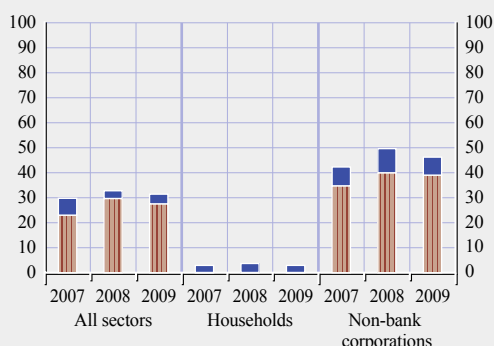
Croatia



FYR Macedonia



Turkey



Source: National sources.

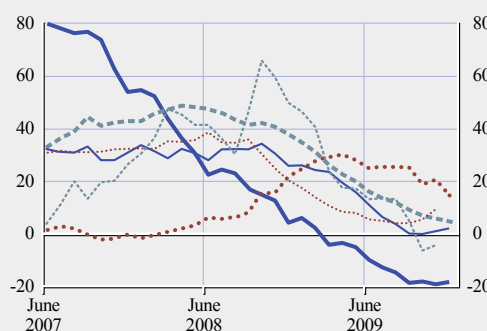
factors, particularly a lower interest rate for borrowers and the lack of availability of medium and long-term local currency financing at a reasonable price. While local currency

Chart 17 Credit and deposit growth in candidate countries (2007-09)

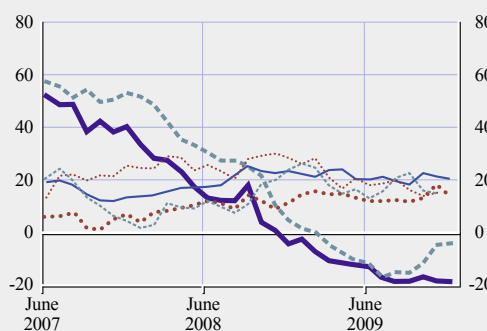
(percentage, year on year; resident non-MFIs)

— Croatia (LC) — FYR Macedonia (FC)
 Croatia (FC) Turkey (LC)
 - - - FYR Macedonia (LC) - - - Turkey (FC)

Credit growth in candidate countries



Deposit growth in candidate countries



Source: National sources.
 Note: LC = local currency; FC = foreign currency.

credit and money markets have continued to deepen in the candidate countries in recent years, interest rate and term factors remain less favourable than in foreign currency markets. The openness of domestic economies also explains the attractiveness of foreign exchange loans. For firms with access to export earnings and households that receive remittances or income from tourism (e.g. Croatia), foreign currency borrowing may represent a means of reducing currency mismatches and smoothing the purchasing power of foreign currency income. However, for households and firms without income in foreign exchange, such borrowing represents an unhedged foreign currency position that increases the credit risk for banks.

Table 27 Factors influencing foreign currency borrowing

	Croatia	FYR Macedonia	Turkey
Demand-side factors			
Interest rate differential for loans in domestic and foreign currency	Medium	High	Medium
High level of “euroisation” in the economy	Medium	High	Low
High openness of the economy	High	Medium	Medium
No or low historical exchange rate volatility	Low	n.a.	n.a.
Fixed/pegged exchange rate to the euro	Low	High	n.a.
Appreciation and/or expectation of appreciation of domestic currency	n.a.	n.a.	High
Persistently low confidence in domestic currency owing to decades of recurring hyper-inflationary episodes	High	n.a.	n.a.
Supply-side factors			
Insufficient domestic savings	Medium	Low	Low
Low-developed local currency credit/money markets	Low	n.a.	n.a.
Unavailability of longer-term debt in local currency	High	Medium	Low
High presence of foreign-owned banks	Low	High	n.a.
Prudential rules for direct foreign exchange risk management by banks	Medium	High	n.a.

Source: National central banks.
Note: n.a. = not available.

The stability of the exchange rate, especially in the former Yugoslav Republic of Macedonia and Croatia, also encourages borrowing in foreign currency, in the expectation that the loan’s value will remain stable. Expectations of future euro accession, while less salient than in new EU Member States, may also play a role. In Turkey, expectation among borrowers of lira appreciation was a further contributing factor. In Croatia, persistently low confidence in the domestic currency given recurring hyperinflationary episodes in the past is cited as an explanation for foreign currency lending. This is probably also valid for Turkey and the former Yugoslav Republic of Macedonia. In the former Yugoslav Republic of Macedonia especially, the high presence of foreign-owned banks may also have contributed to fuelling foreign currency loans.

POLICY RESPONSES: PAST, PRESENT AND FUTURE

Evidence from the central banks of Croatia and the former Yugoslav Republic of Macedonia shows that there are significant unhedged positions on household balance sheets, which means that currency-induced credit risk in the household sector is a key risk. In general, it is estimated that in Croatia 82% of all foreign currency loans were unhedged as of June 2009, while at the same time 96% of households’

net placements and contingent liabilities in foreign currency were not hedged. The fall in tourism and remittance income during the crisis, particularly in the western Balkan countries, may have also deprived borrowers of foreign currency income and thus contributed to declining credit quality (see section 4.3). On the other hand, the low interest rates on euro-denominated loans may actually have been a stabilising factor in credit quality, especially as local currency interest rates proved to be more volatile.

For firms, there is evidence that foreign currency lending is most common among borrowers with foreign exchange income (Brown, Ongena and Yesin, 2009), although unhedged currency positions could also represent a risk for corporations. Borrowing based on appreciation expectations – “carry trade behaviour” by firms – appears to be present in Turkey. This is a source of particular concern insofar as borrowers are purposefully taking on currency risk, speculating on a falling real debt level. If exchange rate expectations materialise – i.e. nominal appreciation occurs – foreign currency lending becomes attractive; in the case of unexpected adverse exchange rate movements, however – particularly during economic downturns or crises – such lending increases credit risk in a pro-cyclical manner.

The Turkish authorities' decision in June 2009 also to ban foreign currency-indexed borrowing by households may have been a reaction to these concerns. Thus, in Turkey, foreign currency-denominated and indexed loans are now available only for commercial purposes, but foreign exchange-denominated loans must have a maturity greater than one year and a volume greater than USD 5 million. Central banks in Croatia and the former Yugoslav Republic of Macedonia have also taken measures to discourage foreign exchange lending to households (see Table 28), in particular by tightening reserve requirements on banks' foreign currency liabilities. The Croatian authorities also proactively increased these risk weights between 2005 and 2008, thus lowering capital adequacy ratios and spurring capital increases by banks. Such measures were likely to have been constructive, even if they could not fully dampen the provision of new unhedged foreign currency lending.

In the aftermath of the crisis, it is a challenge for authorities to find policies which can effectively reduce systemic risks and yet be implemented over an appropriate time period without hampering the recovery of the economy and the financial system. There is a balance between loosening regulations in order to support recovery and reforming them so as to prevent the build-up of new systemic risks. While restrictions on foreign currency lending may be desirable from a financial stability point of view, their implementation – given the lack of long-term funding in local currency markets – may drastically restrict the supply of credit to the economy. As a result, both the design and the timing of policy are critical.

Therefore, developing long-term local currency funding markets seems of key importance. In finding effective policies, there is also the need to differentiate between the stock and flow problem, as recent or future regulations only target newly-generated foreign exchange lending and do not deal with the available stock of foreign exchange-denominated or indexed loans. Furthermore, there is a very clear link between the microeconomic choice of foreign currency lending and macroeconomic imbalances. Tackling persistent external deficits, for example through fiscal restraint, therefore may also contribute to reducing foreign exchange risks.

As mentioned in previous reports on financial stability challenges in the candidate countries (e.g. ECB 2006 and 2008), there is a clear role for financial literacy and moral suasion to make sure that borrowers are aware of currency-related risks. In the interests of consumer protection, the transparency of lending products in foreign currencies can also be enhanced. For example, banks can illustrate the sensitivity of interest payments to potential depreciation scenarios and provide information on the past volatility of the exchange rate over a sufficiently long time period. In addition, banks may sell insurance against excessive exchange rate volatility. Moreover, banks could apply stricter credit criteria (e.g. lower payment-to-income and/or loan-to-value ratios for mortgages) on foreign currency loans, again with the above-mentioned caveats in terms of the timing and scale of such restrictions.

Previous experience shows that discouraging the accumulation of such risks through policy is

Table 28 Measures taken by authorities to discourage foreign currency lending

	Croatia	FYR Macedonia	Turkey
Reserve requirements on bank liabilities in foreign currency	X	X	X
Quantitative restrictions on forex lending			X
Special forex liquidity requirements	X		X
Increasing risk weights	X		
Guidelines/recommendations for banks or customers		X	X

Source: National central banks.

difficult even in benign economic environments (Rosenberg and Tirpák, 2008). On the other hand, increased awareness of the topic at the international level is more and more evident. In this regard, there are ongoing discussions to broaden the scope of the European Bank Coordination (“Vienna”) Initiative, which was launched at the height of the global financial crisis in January 2009 with the participation of the home and host authorities of large cross-border banking groups operating in central, eastern and south-eastern Europe, international financial institutions (e.g. IMF, EBRD, EIB, World Bank) and the banking groups themselves. Alongside maintaining parent bank exposures, the focus of the initiative should also be extended to the remaining challenges, such as the region’s strong reliance on external financing and large foreign exchange exposures. In particular, it should tackle the vulnerabilities arising from weak domestic capital markets, the limited reliance on domestic financing sources and foreign exchange lending to unhedged borrowers.

As fundamentals improve, the emphasis should naturally shift towards enhanced implementation of risk-mitigating policies. Discussion with authorities within and outside the European Union will be necessary to come up with best practices for limiting systemic risk stemming from foreign currency lending.

4.7 MEASURES TAKEN TO TACKLE THE IMPLICATIONS OF THE CRISIS

This section reviews monetary policy, regulatory and administrative measures that have been taken in the candidate countries to mitigate the impact of the crisis on the banking sector. The timeframe covers the period since the intensification of the global financial crisis following the fall of Lehman Brothers. Most measures entailed reversing or abolishing previous measures to slow down credit growth and avoid lending booms, which allowed a timely and countercyclical response to the crisis. Furthermore, it should be emphasised that monetary policy transmission operates

to a large extent via exchange rate policy, especially in Croatia and the former Yugoslav Republic of Macedonia, given their tightly managed exchange rate regimes and the banking sector’s sizeable share of foreign exchange-denominated assets and liabilities. Monetary policy transmission tends to be more effective in Turkey, operating under an inflation-targeting and floating exchange rate policy framework, but exchange rate management also played an important role as testified by several measures taken to stabilise the currency at the end of 2008. In what follows, we only describe the measures that have been implemented in a given country, i.e. if a particular measure is not mentioned for a given country, then that type of measure has not been implemented there (see Table 29).

MONETARY POLICY MEASURES

Change in policy rates and reserve requirements

The paths of policy interest rates between October 2008 and early 2010 differed considerably across the candidate countries. In Croatia, the repo rate was reduced from 7.75% to 6% in December 2008. The CNB also changed some of its operational instruments. Auctions were changed from multiple to fixed-price. This contributed to stabilising the interest rates on the domestic money market, which had been highly volatile in the months following the fall of Lehman Brothers. Several changes in the reserve requirements for banks were introduced in order to free domestic and foreign exchange liquidity. Most of the measures entailed reversing or abolishing previous measures designed to slow down overall bank lending. The marginal reserve requirement, first introduced in July 2004 to curb banks’ foreign indebtedness and then raised several times before the crisis, was abolished in October 2008. In addition, the special reserve requirement on banks’ liabilities arising from issued securities, introduced in February 2006, was abolished in February 2009. The general reserve requirement ratio was reduced from 17% to 14% in December 2008 and the foreign exchange component of the reserve requirement ratio cut

Table 29 Measures implemented to tackle the crisis in the candidate countries

	Croatia	FYR Macedonia	Turkey
Monetary policy			
Main interest rate	7.75% to 6%	7% to 9% (March 2009) 9% to 5% (since December 2009)	16.75% to 6.5%
Reserve requirements	17% to 13%; abolition of marginal reserve requirement and special reserve requirement	10% to 13% (forex liabilities) 10% to 20% (forex-indexed liabilities)	6% to 5% (TRY liabilities); 11% to 9% (forex liabilities)
Exchange rate	Net selling of €784 million (October 2008-February 2009); foreign currency swaps with banks; reduction of minimum forex claims ratio	Net selling of €230 million (first half of 2009); allowing forex deposits at the central bank from banks	Intermediation window for banks FX deposits; forex selling auctions (USD 100 million); decreasing the lending rate on central bank forex loans
Collateral	Broadening the eligible collateral to Ministry of Finance T-bills denominated in EUR		
Regulatory measures			
Quantitative limits on lending	Annual credit growth limit of 12% removed	Annual credit growth limit of 11.3% removed	
Open FX position	Open forex position from 20% to 30%		
Deposit insurance	HRK 100,000 to HRK 400,000		Council of Ministers authorised to raise the amount (not used)
Profit distribution			Obligation for banks to get permission for profit distribution for 2008 and 2009
Loan restructuring			Changes in the regulation on provisioning; loan restructuring of credit card loans
Other		Introducing a minimum liquidity ratio	
Administrative measures			
			Extension of the limit of export rediscount credit; guarantee scheme cash loans extended to the SMEs

Source: National central banks.

Notes: The table refers to measures taken since October 2008. Forex = foreign exchange.

in January 2009 to release foreign exchange liquidity for the banking sector. This reserve requirement was further reduced from 14% to 13% in February 2010.

In the former Yugoslav Republic of Macedonia, the interest rate on central bank bills was first increased in March 2009, from 7% to 9%, in the context of increased pressures on the domestic currency. In May the NBRM adopted additional restrictive monetary policy measures by increasing the reserve requirement for foreign exchange liabilities from 10% to 13%, and from 10% to 20% for foreign currency-indexed liabilities (where the change in the former was

implemented in two steps). The alleviation of pressures on the foreign exchange market at the end of 2009 has allowed the NBRM to lower its main interest rate on several occasions since December 2009 – from 9% to 5% by the middle of June 2010.

In Turkey, the central bank responded to the crisis by making sizeable cuts in policy rates in a context of rapidly falling inflation triggered by contracting domestic and external demand. The CBRT has reduced its main policy rate – the overnight borrowing rate – by a cumulative amount of 1,025 basis points since October 2008 – from 16.75% to 6.5% by

November 2009 – and has kept it unchanged since then. In addition, the foreign exchange reserve requirement ratio was reduced from 11% to 9% in December 2008. As a result, the Turkish banking sector was provided with foreign exchange liquidity equivalent to USD 2.5 billion. More recently, since June 2009, with the aim of enhancing the sound functioning of the banks' liquidity management and strengthening the monetary policy transmission mechanism, the CBRT started to use more actively, when necessary, repo transactions with maturities of up to three months (in addition to the one-week maturity repo auctions that is the usual CBRT operating instrument). In October 2009, in order to reduce intermediation costs and inject permanent liquidity into the markets with the aim of supporting the upward trend in Turkish lira loans that became discernible in the last quarter of 2009, the domestic currency reserve requirement ratio was cut from 6% to 5%. With this reduction, an amount of liquidity equivalent to approximately TRY 3.3 billion was pumped into the Turkish banking system.

Exchange rate stabilisation measures

In all three candidate countries, some measures were taken to support the exchange rates at the height of the financial crisis in late 2008 and early 2009. The precise design and extent of the measures differed, however, in view of differences in prevailing exchange rate regimes, the degree of foreign exchange market pressures and the operational framework of central banks.

In Croatia, the CNB intervened directly on the foreign exchange market by selling €271 million in October 2008, €328 million in January 2009 and €185 million in February 2009. Foreign currency swap contracts with the banks were introduced in January 2009 in order to support government borrowing from the banking sector: in exchange for €261 million of foreign currency pledged as collateral, banks obtained HRK 1.9 billion to lend to the central government. Subsequently, the amount of the swap contract was increased to €288 million and extended until June. In parallel, the ratio of minimum

required liquid foreign currency claims over total foreign liabilities was reduced twice in February 2009 from 28.5% to 25.0%, and additionally to 20.0% (this followed a previous reduction in this ratio from 32.0% to 28.5% in May 2008). This measure resulted in freeing €2.1 billion in foreign exchange liquidity for the banks and provided them with the funds required for financing the central government, thus minimising the risk of crowding out the private sector.

In the former Yugoslav Republic of Macedonia, the NBRM adopted a decision on foreign exchange deposits at the end of 2008, which introduced the possibility for domestic banks to hold foreign exchange deposits with the NBRM. The objective was to retain foreign exchange liquidity at home instead of banks placing their foreign exchange liquidity with foreign banks abroad. This measure also helped to limit the exposure of banks to credit risk when placing assets abroad in the context of the volatile global financial environment. During the first half of 2009, shortages of external financing resulted in a loss of foreign reserves for the NBRM related to interventions on the foreign exchange market worth a net sell of €230 million. During the second half of 2009, however, exchange rate pressures abated owing to a correction of external imbalances and the NBRM intervened by making net purchases of foreign currency. The NBRM's action helped rebuild foreign reserves, which by the end of 2009 had risen by €102.6 million compared with levels at the end of 2008.

In Turkey, the intermediation window for foreign exchange deposits – a facility where the CBRT plays the role of intermediary in the interbank market – was reactivated during October 2008. The objective was to prevent a liquidity squeeze in the foreign exchange interbank market resulting from the confidence shock that hit the world banking industry after the fall of Lehman Brothers. This facility was a last resort facility and was intended to cease once uncertainties arising from the global financial crisis had disappeared. By 24 October 2008 the transaction limit for banks under this facility

had been doubled, reaching USD 10.8 billion in total. However, as Turkish banks did not encounter major foreign exchange liquidity problems, they had used only 4% of this limit by the end of October 2008. In addition, foreign exchange buying auctions were suspended and foreign exchange selling auctions initiated in mid-October 2008. The objective was to strengthen the foreign exchange liquidity position of the Turkish banking sector and to prevent negative pressures on the Turkish lira. The daily amount for foreign exchange selling auctions was set at USD 50 million. Two auctions were held and an amount of USD 100 million was sold in total. However, owing to positive developments in the global financial markets, foreign exchange selling auctions were terminated at the end of October 2008. In November 2008, another direct measure to strengthen the foreign exchange liquidity position of the Turkish banking sector was introduced by increasing the maturity of foreign exchange loans extended to banks by the CBRT from one week to one month. The lending rate on these loans, denominated in euro and US dollars, was reduced from an initial level of 10% for both currencies to 9% for the euro and 7% for the US currency. However, none of the Turkish banks made use of this facility. More recently, in August 2009 foreign exchange buying auctions were initiated once more to absorb foreign exchange liquidity on account of the increasing capital inflows related to improved market sentiment vis-à-vis the Turkish economy.

Eligible collateral

Amendments to the central bank's collateral policy were made only in Croatia, where the CNB broadened the set of eligible collateral in March 2009. As collateral for the central bank's short-term liquidity operations, banks have been allowed to use Ministry of Finance treasury bills denominated in euro with an original maturity of up to one year (initially only treasury bills in kuna were eligible). In addition, the CNB extended the set of eligible collateral further to other instruments in December 2009. Up to March 2010, however, banks had not

shown any reliance on the new set of collateral instruments.

REGULATORY MEASURES

Contrary to many EU countries, neither recapitalisation schemes for banks nor state guarantees for bank liabilities were introduced in the countries under review.

Removing quantitative limits on lending

In Croatia, the CNB removed the quantitative restrictions on lending introduced in January 2007 (i.e. the obligation for banks to subscribe CNB bills in cases where annual growth in their credit portfolio exceeded 12%). Based on available indicators pointing to a considerable slowdown of bank lending and the fact that banks started to exercise greater caution regarding credit and associated risks, restrictions on credit growth were deemed to be no longer necessary as the CNB initiated measures to spur bank lending.

In the former Yugoslav Republic of Macedonia, the measures implemented during 2008 to limit household lending were abandoned in 2010. At the end of 2009, the annual growth rate of household credits stood at 2.6%, significantly lower than the 11.3% limit determined by the regulation (as in Croatia's case, banks were obliged to subscribe to a compulsory deposit with the NBRM if the growth rate of household credits exceeded the limit set by the NBRM).

Open foreign currency position

In Croatia, the maximum permitted open foreign exchange position for banks was increased from 20% to 30% in February 2009. This move was made in order to ensure consistency with the reduction in the minimum required foreign currency claims ratio (see above). These measures helped to maintain the stability of the kuna by allowing banks to substitute foreign exchange-denominated assets with domestic currency-denominated assets.

Change in the deposit insurance framework

In Croatia, the deposit insurance framework was strengthened in October 2008 by increasing

the limit for the deposit guarantee on individual accounts from HRK 100,000 to HRK 400,000. This move came in an environment of negative perceptions among depositors concerning subsidiary banks, related to fears about the parent banks' losses resulting from the failure of Lehman Brothers. This triggered an outflow of deposits from the Croatian subsidiaries during October 2008, but the quick response of monetary and fiscal authorities proved to be effective as the outflow of household deposits was halted.

In Turkey, the Council of Ministers was authorised to raise the amount of deposit insurance in November 2008. However, there appeared to be no need to change the amount of deposit insurance as banks were not subject to any deposit outflows (the amount of deposit insurance has stood at TRY 50,000 since July 2004).

Limits on profit distribution

In Turkey, in order to strengthen banks' own funds, the Banking Regulation and Supervision Agency required banks to obtain permission for the distribution of profits from the years 2008 and 2009. As a result of this measure, the dividend payout ratio of deposit banks declined from 34.6% at the end of 2007 to 16.6% at the end of 2008.

Loan restructuring measures

In Turkey, an amendment to the Regulation on loans qualification and provisioning introduced new facilities allowing the banks to classify their loans within a group level that would be more advantageous for them in terms of provisioning. Additionally, in order to restructure credit card receivables, a provisional clause was added to the "Law on Bank Cards and Credit Cards", allowing customers whose credit card receivables are classified as non-performing to apply within 60 days for a restructuring of their debt under certain conditions. Some banks voluntarily extended the application period of this clause, due to end on 4 September 2009, until the end of the year. The total amount of restructured credit card receivables as a result of this measure was TRY 1.3 billion, which

represents 36.5% of total non-performing credit card loans as of May 2009.

Other measures

At the end of 2008 the NBRM adopted a Decision on the management of liquidity risk by banks. This imposed the requirement for banks to maintain a minimum level of liquidity equal to 1, defined as a ratio between the assets and liabilities with maturity up to 30 and 180 days for both domestic and foreign currencies. The implementation of this decision started in February 2009, when the banks were required to submit a first report on initial liquidity ratios as of 28 February 2009 to the NBRM. From the end of March, a requirement for increasing the liquidity ratios on a monthly basis was introduced, with a monthly increment of 1/24 of the gap between the minimum level and the initial level of the liquidity ratio for maturities up to 30 days, and 1/60 of the gap between the minimum level and the initial level of the liquidity ratio for maturities up to 180 days. The decision was amended in May 2009, allowing for the possibility of using NBRM instruments in fulfilling the liquidity ratios, either in domestic or in foreign currency. The effect of these measures became apparent as the liquidity of the banking system improved significantly in the third quarter of 2009. The improvement was driven by the obligation for banks to comply with the above-mentioned requirement, but it was also a prudent response by the banking system to the enhanced liquidity risk associated with the global financial crisis.

ADMINISTRATIVE MEASURES

In Turkey, at the end of 2008 the limit for export rediscount credits was raised from USD 500 million to USD 1 billion and the utilisation of these credits facilitated with an amendment to the application guidelines and conditions for export rediscount credits. Moreover, the credit limit for individual companies was extended from USD 10 million to USD 20 million.⁸² These arrangements led to

⁸² The limit was raised to USD 40 million for so-called "foreign trade capital companies".

a sharp increase in the volume of export rediscount credits extended via Turkey's Eximbank: total export rediscount credit utilisation was USD 1.7 million for 2008, reaching USD 502.5 million in the period between 1 January and 16 April 2009. Having taken this development into account, in order to make the fullest possible contribution to meeting the financing needs of export companies, the export rediscount credit limit was raised further by USD 1.5 billion to USD 2.5 billion in April 2009.

In addition, a guarantee scheme in Turkey aimed at sustaining lending to SMEs was implemented. The Turkish government (Undersecretariat of Treasury) implicitly introduced guarantees on cash loans extended to SMEs by signing an agreement with the Credit Guarantee Fund in October 2009. The Credit Guarantee Fund was mandated to guarantee SME loans up to a total amount of TRY 10 billion (this amount is equal to almost one-eighth of cash loans extended to SMEs). The protocol between the Credit Guarantee Fund and the banks that provide loans was signed at the end of 2009 and firms started to apply for guarantees in January 2010.

FURTHER CHALLENGES

Although most of the measures listed above have proved to be effective in avoiding a liquidity squeeze in the banking sector and averting disruption in the exchange rate market, lending to the private sector remains at historically low levels. Therefore, the main challenge in the countries under review is to restart lending and avoid a prolonged period of credit crunch. The above review suggests that the bulk of measures implemented in Turkey to support lending to SMEs and export companies proved to be fairly effective as regards recent macroeconomic developments. No similar measures were implemented in the two other candidate countries and the Turkish example could provide a useful benchmark. Furthermore, financial stability could be strengthened via the pursuit of sound and stability-oriented macroeconomic policies and by creating robust domestic funding markets

to encourage lending in domestic currency, although it should be noted that this might prove challenging for small countries in which foreign-owned banks represent a large share of the banking sector. Given the potential financial stability risks associated with the very high shares of foreign currency-denominated loans in Croatia and the former Yugoslav Republic of Macedonia, macro-prudential measures to reduce the underlying vulnerabilities related to foreign currency lending are essential.

5 CONCLUSIONS

This paper has reviewed financial stability developments in the EU candidate countries. On the basis of the analysis, three main conclusions and recommendations emerge:

First, as of early 2010, the key challenge for the financial systems in the three candidate countries relates to the deterioration in credit quality. Given the lag in the transmission of the economic cycle to asset quality, and especially in the event of a renewed deterioration in economic conditions, a further deterioration in asset quality may occur, calling for continued close monitoring by the supervisory authorities of candidate countries. However, although uncertainties remain regarding credit quality, the shock-absorbing capacities of the banking systems are fairly high, as also evidenced by their relative resilience to date.

Second, as the economic recovery sets in, central banks should resume and possibly step up the implementation of measures to avoid a pro-cyclical build-up of credit (asset) boom-bust cycles. While at the moment the immediate challenge is more one of restarting credit growth, lending growth may resume strongly as the recovery gains ground, given the potential for further convergence in the economies of the EU candidate countries. Therefore, monetary authorities should design and communicate clearly their exit strategies from the loose monetary policy conditions applied via various channels at the present juncture.⁸³

Third, given the relevance of foreign-owned banks in most of the countries, a continued strengthening of home-host cooperation in the supervisory area will be crucial to avoid any kind of regulatory arbitrage, to enhance the efficiency of macro-prudential measures and to provide authorities with comprehensive information for planning their actions. Improving home-host cooperation is one of the key objectives of the Eurosystem's crisis response package in

EU candidates and potential candidates, which is aimed at promoting supervisory standards in the target countries through the transfer of expertise and know-how.

⁸³ The Central Bank of the Republic of Turkey had already made an announcement on 14 April 2010, stating that it would "gradually remove the liquidity measures implemented during the crisis".

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