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FINANCIAL STABILITY CHALLENGES IN CANDIDATE COUNTRIES

MANAGING THE TRANSITION TO DEEPER AND MORE MARKET-ORIENTED FINANCIAL SYSTEMS

by the IRC expert group on
financial stability challenges
in candidate countries

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LIST OF ABBREVIATIONS

BIS	Bank for International Settlements
bps	Basis points
BRSA	Banking Regulation and Supervisory Agency
CAR	Capital adequacy ratio
CBRT	Central Bank of the Republic of Turkey
CDS	Credit default swap
CNB	Croatian National Bank
CPI	Consumer price index
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EMBIG	Emerging Market Bond Index Global
EU	European Union
FDI	Foreign direct investment
FX	Foreign exchange
GDP	Gross domestic product
HANFA	Hrvatska agencija za nadzor financijskih usluga (Croatian Financial Services Supervisory Agency)
HROK	Hrvatskog registra obveza po kreditima d.o.o. (Croatian Central Credit Register)
IMF	International Monetary Fund
MFI	Monetary financial institution
MSCI	Morgan Stanley Capital International
NBRM	National Bank of the Republic of Macedonia
NPL	Non-performing loan
ROE	Return on equity
SAA	Stabilisation and Association Agreement
SDIF	Savings Deposit Insurance Fund
TURKSTAT	Turkish Statistical Institute

LIST OF COUNTRY ABBREVIATIONS AND COUNTRY GROUPS

CR	Croatia
CZ	Czech Republic
EE	Estonia
HU	Hungary
LT	Lithuania
LV	Latvia
MK	The former Yugoslav Republic of Macedonia
PL	Poland
SI	Slovenia
SK	Slovak Republic
TR	Turkey

EU-8	Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia
EU-10	Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic, Slovenia
EU-15	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom

ABSTRACT

This paper reviews financial stability challenges in the EU candidate countries Croatia, Turkey and the former Yugoslav Republic of Macedonia. It examines the financial sectors in these three economies, which, while at very different stages of development and embedded in quite diverse economic settings, are all in a process of rapid financial deepening. This manifests itself most clearly in the rapid pace of growth in credit to the private sector. This process of financial deepening is largely a natural and welcome catching-up phenomenon, but it has also increased the credit risks borne by the banking sectors in the three economies. These credit risks are compounded by the widespread use of foreign currency-denominated or -indexed loans, leaving unhedged bank customers exposed to potential swings in exchange rates or foreign interest rates. Moreover, these financial risks form part of a broader nexus of vulnerabilities in the economies concerned, in particular the external vulnerabilities arising from increasing private sector external indebtedness. That said, the paper also finds that the authorities in the three countries have taken several policy actions to reduce these financial and external vulnerabilities and to strengthen the resilience of the financial sectors.

Key words: Europe, banking sector, vulnerability indicators, capital inflows, 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.

Since the beginning of the decade, Croatia, the former Yugoslav Republic of Macedonia and Turkey have experienced a significant pace of financial deepening, notwithstanding considerable differences in their level of economic development and the economic circumstances they are confronted with. While the expansion of the financial sector in these countries can per se be regarded as beneficial for their progress towards mature market economies, it also entails a range of risks, requiring adequate responses by policy-makers and supervisory authorities.

Against the background of the financial market turbulence unfolding since mid-2007, negative spillovers from an expected global slowdown may negatively affect the economic prospects of all three EU candidate countries. In particular, sizeable current account deficits in Croatia and Turkey entail a strong dependency on external capital flows. Additionally, recently rising inflationary pressures and potential delays in the implementation of structural reforms may further contribute to a worsening economic outlook.

Turning to specific risks in the financial sector, rapid credit growth in all three countries may have weakened the quality of banks' loan portfolios in the face of competition for new customers and capacity constraints regarding a proper evaluation of credit risk. Moreover, a heavy reliance of the observed credit extension on loans linked to foreign currency might hamper the debt servicing capabilities of unhedged borrowers in case of adverse exchange rate or foreign interest rate movements, thereby indirectly impairing the banking sector's asset quality. Lastly, banks' dependence on foreign debt could prove disadvantageous in case of a significant deterioration of the global financial and economic environment, rendering this source of financing more difficult or impossible to obtain.

Despite these challenges, stress tests and sensitivity analyses conducted by the respective national central banks and the IMF point to a substantial resistance of EU candidate countries' financial systems to adverse shocks, which is also confirmed by standard indicators of asset quality, capital adequacy and profitability. In addition, major difficulties in raising the necessary financing to account for external imbalances, particularly the banking sector's stock of foreign debt, have not materialised so far. Besides, the authorities in the three countries have taken several policy actions, addressing existing financial and external vulnerabilities and strengthening the resilience of the financial sectors.

Nevertheless, in light of the risks currently prevailing, continued analysis and monitoring in order to avoid a disproportionate accumulation of financial and external vulnerabilities, while at the same time guaranteeing a sustained pace of financial deepening, appears to be the key future policy challenge in EU candidate countries.

I INTRODUCTION

This paper reviews financial stability challenges in Croatia, Turkey and the former Yugoslav Republic of Macedonia. 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, which entered their detailed phase in June 2006. By June 2008, 20 of the 35 chapters negotiated in the framework of the *acquis communautaire* had been opened.[1] *The former Yugoslav Republic of Macedonia* officially applied for EU membership on 22 March 2004 and became a candidate country in December 2005, marking the end of the process that began in 2001 with the signing of a Stabilisation and Association Agreement (SAA). The European Commission emphasised that negotiations could be opened once the country has reached a sufficient degree of compliance with the membership criteria, but without mentioning a specific date.[2] *Turkey* started EU accession negotiations on 3 October 2005 and has been recognised as a candidate state for EU membership since 1999. Turkey's formal accession talks began on 12 June 2006, but were suspended on eight out of the *acquis'* 35 chapters due to the failure to open Turkish ports and airports to Cypriot vessels and planes. Nevertheless, screening and opening of other chapters is continuing.

This paper provides an update of ECB (2006) and complements this earlier paper with a more rigorous assessment of certain market segments and topical issues.[3] It starts by identifying potential macroeconomic sources of vulnerability in the respective candidate countries. A first vulnerability relates to potential negative spillovers from the expected global slowdown. The three candidate countries have so far[4] not felt any strong impact of worsening external conditions and the global financial turmoil, but the probability of a negative spillover has increased. A second macroeconomic risk relates to the external imbalances of the candidate countries, with particularly large current account deficits in Croatia (around 8% of GDP in 2007) and Turkey (5.5% of GDP). A third macroeconomic risk stems from increasing inflationary pressures, with CPI inflation in early 2008 reaching multi-year highs in Croatia and the former Yugoslav Republic of Macedonia. A fourth risk relates to potential delays in the implementation of the structural reform agenda across the three countries.

The paper then examines the structure of financial systems in each of the three countries. While the three candidate countries differ widely in their economic significance and the level of development of their financial sector (see Table 1), they are nevertheless characterised by some common trends prevalent in their financial system, including financial deepening (as evidenced by the growing size of the banking sector), continuing consolidation in the banking sector, a continued shift towards privately-owned banking systems, a move towards core banking activities (i.e. lending to the private sector rather than to governments) and deepening integration in international financial markets through increased foreign bank ownership.

This process of financial deepening reflects a natural and welcome catching-up phenomenon, but it is not without risks. The major financial stability challenge relates to the management of credit risk. Growth in credit to the private sector has been relatively brisk in all three countries over the past three years. This could potentially force banks to relax lending standards, weaken asset classification and provisioning, and reach out to new customers that lack a strong credit standing. Shortages of well-trained loan officers, the short credit history of many bank

1 Currently, the Croatian government expects to finalise accession negotiations by the end of 2009 and to become an EU Member State by 2010 or 2011.
2 Inter alia, the determination of a date for opening accession negotiations with the former Yugoslav Republic of Macedonia also rests on the EU's future enlargement strategy and an effective implementation of the SAA.
3 The countries covered in ECB (2006) were Bulgaria, Croatia, Romania and Turkey.
4 The cut-off date for this paper is March 2008.

Table 1 EU candidate countries: economic and financial significance

		(2007)		
		Croatia	FYR Macedonia	Turkey
Population	million	4.4	2.0	71.3
GDP	USD billion	51.4	7.5	663.4
Trade[1)]	USD billion	46.1	7.2	277.4
Banking sector assets	USD billion	68.0	4.8	453.7
Stock market capitalisation[2)]	USD billion	29.0	1.1	162.4
Bond and money market capitalisation[3)]	USD billion	17.0	0.4	260.5

Sources: IMF, Standard & Poor's, BIS and own calculations.
1) Exports and imports of goods and services.
2) 2006.
3) September 2007.

customers, possible gaps in documentation and limited experience so far with credit registers may further aggravate the risks in the banks' loan portfolios.

The paper also examines the extent to which credit risk is compounded by the widespread use of foreign currency-denominated or -indexed loans, which may create currency mismatches for non-banks and indirect credit risks for banks. While currency mismatches tend to be limited in the banks' balance sheets, banks face substantial indirect credit risk through possible strains to the debt servicing capacity of their clients.

Strong credit growth has also been coupled with rising foreign indebtedness of the banking sector. While foreign financing has been a stable source of funding, it could come under strain if the global financial and economic environment were to deteriorate significantly. A particular role is played here by lending within banking groups, often originating from parent banks incorporated in the EU. While the global financial market turmoil observed since mid-2007 has so far not forced parent banks to withdraw capital from the candidate countries, the risk of more adverse developments in the external financing of banks remains relevant.

Taking a forward-looking perspective, the paper reviews the results of stress tests and sensitivity analyses conducted by the IMF and by central banks. These tests, coupled with macro-prudential indicators, suggest that the banking systems have some capacity to withstand adverse shocks. Relatively high profitability and adequate capital provide some cushion against deterioration in loan portfolios. Those stress tests and sensitivity analyses are however to be interpreted with caution as they may not reflect the full spectrum of possible adverse developments, given also the limited historical experience with credit cycle downturns in the candidate countries.

The paper is structured as follows. Sections 2, 3 and 4 are devoted to individual countries and discuss the macroeconomic environment, review structural developments in the financial system, assess the risks and shock-absorbing capacity of the banking system, and provide a concluding assessment. These country sections are complemented with a review of cross-country themes in Section 5, covering: (i) the implications of the global financial market turmoil; (ii) the financial stability implications of the use of foreign currencies; (iii) domestic credit growth and foreign borrowing; (iv) risks from household borrowing and debt; and (v) a comparison of financial stability indicators with the EU Member States in central and eastern Europe. Section 6 concludes.

2 CROATIA

2.1 THE MACROECONOMIC ENVIRONMENT

In 2006 and 2007 the Croatian economy maintained the strong growth momentum seen since the beginning of the decade, with the year 2007 even bringing a substantial acceleration of economic growth (see Table 2). Domestic demand remained the main pillar of growth and private consumption replaced investment as the key driver of growth against the background of brisk credit expansion, a strong pick-up in disposable income and improved labour market conditions.

Booming domestic demand, reaccelerating credit growth in 2005 and 2006 (both in the corporate and retail sectors), increased cross-border borrowing by domestic private non-banks in 2007 and limited room for independent interest rate policy under the tightly managed float created a challenging environment for monetary policy. The Croatian National Bank (CNB) successfully maintained low inflation in 2006 and the first three quarters of 2007, with consumer price inflation falling gradually from a temporary peak in 2005 to below 3% on average in 2007. However, reflecting adverse global food and energy price developments, inflation accelerated in the final quarter of 2007, reaching a seven-year high of nearly 6% in year-on-year terms at the end of the year.

On the back of buoyant real GDP growth, Croatia's headline fiscal balances continued to improve in 2006 and 2007. Fiscal developments were to a large extent underpinned by revenue over-performance, with the bulk of extra revenues being spent in the areas of health care, education and agriculture. In this regard, the CNB's limited room for manoeuvre against the background of the tightly managed float and the country's high external imbalances would warrant a more prudent fiscal course. Public finances are still burdened with subsidies for various industries (e.g. shipping), high health and pension commitments as well as substantial quasi-fiscal expenditures. Ensuring lasting fiscal consolidation through spending restraint therefore remains an important challenge.

The acceleration of domestic demand triggered a further deterioration in Croatia's external position in 2006. The current account deficit reached almost 8% of GDP in 2006 and increased further to over 8.5% of GDP in 2007. However, thanks to sizeable capital injections into the banking sector and progress made in the privatisation of state-owned enterprises, foreign direct investment inflows accelerated substantially and provided full coverage of the current account deficit in both 2006 and 2007. Croatia's gross external indebtedness increased further over the period from 2005 to 2007, although at a somewhat slower pace than before. The composition of debt also changed markedly

Table 2 Croatia: main macroeconomic indicators

		2001	2002	2003	2004	2005	2006	2007
Real GDP growth	%, y-o-y	4.4	5.6	5.3	4.3	4.3	4.8	5.6
CPI inflation	%, y-o-y, period average	3.8	1.7	1.8	2.1	3.4	3.2	2.8
Money market overnight interest rate	%, period average	3.1	1.8	3.0	4.6	2.3	1.6	4.1
Exchange rate	HRK-EUR, period average	7.5	7.4	7.6	7.5	7.4	7.3	7.3
Nominal effective exchange rate	Index (2001 = 100), period average	100.0	102.2	105.3	109.1	110.6	112.0	114.5
Current account balance	% of GDP	-3.7	-8.6	-7.2	-5.0	-6.3	-7.9	-8.6
FDI inflow	% of GDP	6.6	4.7	6.7	3.3	4.7	8.0	9.7
Gross external debt	% of GDP	61.4	61.9	75.8	80.0	82.3	85.6	87.8
General government balance[1)]	% of GDP	-6.8	-3.1	-3.9	-3.9	-2.8	-1.8	0.6
General government debt[2)]	% of GDP	51.1	51.0	51.2	51.6	52.2	49.5	46.8

Sources: Croatian National Bank and Central Bureau of Statistics.
1) Cash basis.
2) Includes general government debt, Croatian Bank for Reconstruction and Development debt and general government guaranteed debt.

over the period, with a notable increase in the external debt of non-bank corporations (see the discussion in Section 5.3).

In accordance with its exchange rate policy objective, the CNB kept the exchange rate of the kuna largely stable against the euro. The CNB withstood substantial appreciation pressure on the kuna in the course of 2006 and 2007, arising from higher tourism receipts, increased privatisation-related capital inflows, capital increases at several foreign banks' subsidiaries, a number of domestic government bond issues and stepped-up foreign borrowing of banks and corporations. The foreign exchange market interventions of the CNB helped to avoid a deterioration of the country's external competitiveness.

2.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

Following major transformations in the late 1990s and early 2000s, the Croatian banking sector saw no further fundamental structural adjustment over the past few years. Merger and acquisition activity slowed and the number of banks has fallen since 2005 by just 1 to 33 at end-2007 (see Table 3), a figure which seems still high in a regional context. The Croatian banking industry continues to be dominated by foreign ownership, which accounts for around 90% of total banking sector assets. Despite the large number of banks, the banking sector is fairly concentrated. The four largest banks claimed a market share of some 64% of total assets as at year-end 2007.

Financial deepening has continued rapidly in recent years. Total banking sector assets increased from 110% of GDP in 2005 to over 120% as at end-2007 (see Table), a level which is among the highest in central, eastern and south-eastern Europe, but still well below the euro area average of almost 300%.

Banking sector assets are dominated by claims on the private sector,[5] which reached 62% of total assets as at end-2007 (see Table 4). These claims grew considerably in 2005 and 2006 on the back of a revival in corporate lending and sustained strong growth of the retail segment. However, partly as a result of restrictive policy measures (described in Box 1), lending to the private sector, in particular to non-bank corporations, slowed significantly in the course of 2007.

The banking sector's liability side continues to be dominated by deposits of domestic non-banks (61% of total liabilities as at end-2007). The solid private sector deposit growth in recent years was underpinned by the benign economic environment, healthy corporate finances, accelerating wage and employment growth, and banks' efforts to mobilise domestic savings as a substitute for relatively expensive and administratively penalised foreign funding.

5 In the data for Croatia, the private sector comprises households and enterprises, including public sector enterprises.

Table 3 Croatia: the structure of the banking sector

		2001	2002	2003	2004	2005	2006	2007
EBRD index of banking sector reform		3.3	3.7	3.7	4.0	4.0	4.0	4.0
Number of banks (foreign-owned)		43 (24)	46 (23)	41 (19)	37 (15)	34 (14)	33 (15)	33 (16)
Number of banks per 100,000 inhabitants[1)]		0.97	1.04	0.92	0.83	0.77	0.74	0.74
Assets of private banks[1)]	% of total assets	95.0	96.0	96.6	96.9	96.6	95.8	93.7
Assets foreign banks[1)]	% of total assets	89.3	90.2	91.0	91.3	91.3	90.8	89.2
Assets of 4 largest banks	% of total assets	60.0	58.6	61.6	64.9	64.9	64.0	63.9
Herfindahl-Hirschmann index[1),2)]		1,315	1,237	1,270	1,363	1,358	1,297	1,270

Sources: Croatian National Bank, EBRD and own calculations.
1) September 2007.
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; 1,800 it is highly concentrated.

Table 4 Croatia: asset structure of the banking sector

		2001	2002	2003	2004	2005	2006	2007
Commercial bank assets	% of GDP	86.1	91.4	98.4	104.9	110.4	119.4	122.3
Total domestic claims	% of total assets	77.0	84.3	81.9	80.7	86.1	86.8	86.2
Claims on domestic MFI	% of total assets	10.6	12.4	13.9	15.2	16.6	16.5	15.4
Claims on domestic non-banks	% of total assets	66.4	71.9	67.9	65.5	69.5	70.2	70.8
of which:								
Claims on general government	% of total assets	15.0	14.1	11.8	10.1	12.0	10.0	9.2
Claims on domestic households and enterprises	% of total assets	51.4	57.8	56.1	55.3	57.5	60.3	61.5
of which:								
Claims on domestic enterprises	% of total assets	30.3	31.8	27.9	26.4	26.7	28.3	28.0
Claims on domestic households	% of total assets	21.1	26.0	28.2	28.9	30.8	32.0	33.6
Money market fund shares	% of total assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
External assets	% of total assets	23.0	15.7	18.1	19.3	13.9	13.2	13.8
Claims on domestic households	% of total claims on households and enterprises	41.1	45.0	50.2	52.3	53.5	53.0	54.6
Loans-to-claims ratio for domestic nonbanks		77.0	81.8	85.6	87.1	87.3	90.3	90.4
of which:								
Loans-to-claims ratio for general government		19.7	29.1	37.6	39.9	42.8	48.9	46.3
Loans-to-claims ratio for domestic households and enterprises		93.7	94.7	95.7	95.7	96.6	97.1	97.0

Sources: Croatian National Bank and own calculations.

Reversing a falling trend that had been observed over five years, the share of domestic non-bank deposits in total liabilities even increased significantly in 2007 (see Table 5). At the same time, the need to finance domestic credit growth also caused banks' external liabilities to grow strongly in absolute terms until 2006, while maintaining a fairly stable share of around 26% in total liabilities between 2003 and 2006. In 2007, however, additional administrative CNB measures to contain credit growth led to a decrease of both the absolute level of foreign liabilities and their share in total liabilities to below 20% as at end-2007 and thus to an improvement of banks' net foreign asset position.

Table 5 Croatia: liability structure of the banking sector

		2001	2002	2003	2004	2005	2006	2007
Deposits of MFIs	% of total liabilities	0.1	0.1	0.6	0.4	2.3	2.6	3.7
Deposits of domestic non-banks	% of total liabilities	73.2	68.7	63.7	60.4	59.2	59.0	61.3
of which:								
Deposits of general government	% of total liabilities	4.9	5.1	4.0	4.2	4.5	4.4	5.0
Deposits of households and enterprises	% of total liabilities	68.3	63.6	59.7	56.2	54.7	54.6	56.3
Money market fund shares	% of total liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	% of total liabilities	0.2	0.1	0.3	0.5	0.4	0.3	0.4
Capital and reserves	% of total liabilities	17.9	15.9	14.0	12.7	12.8	13.6	15.8
External liabilities	% of total liabilities	15.3	21.1	25.6	27.1	26.3	25.4	19.4
Remaining liabilities	% of total liabilities	-6.7	-6.0	-4.3	-1.1	-1.0	-0.9	-0.5
Memorandum items:								
Domestic non-banks' claim-to-deposit ratio		90.7	104.6	106.6	108.4	117.4	119.2	115.5
General government's claim-to-deposit ratio		304.2	273.8	293.5	242.6	266.4	227.2	185.2
Households' and enterprises' claim-to-deposit ratio		75.3	90.9	94.0	98.4	105.1	110.5	109.3

Sources: Croatian National Bank and own calculations.

Table 6 Croatia: profitability of the banking sector

		2001	2002	2003	2004	2005	2006	2007
Total operating income	% of total income	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:								
Net interest income	% of total income	78.8	70.8	74.3	69.2	70.1	70.5	67.4
Net non-interest income	% of total income	21.2	29.2	25.7	30.8	29.9	29.5	32.6
General administrative expenses	% of total income	65.5	59.3	56.7	54.3	54.4	54.9	52.1
Loan loss provision expenses	% of total income	13.7	6.6	7.7	6.6	5.3	6.2	7.4
Income tax	% of total income	5.7	6.3	5.9	6.4	7.8	7.7	8.0
After-tax profit/loss	% of total income	15.1	27.8	29.4	32.6	32.5	31.1	32.5
Net interest income	% of average assets	3.6	3.3	3.4	3.0	2.9	2.7	2.6
Net non-interest income	% of average assets	1.0	1.3	1.2	1.3	1.2	1.1	1.3
Interest rate spread (total loans - total deposits)	%	6.6	7.7	8.0	7.6	7.0	6.5	6.0
Return on average assets before tax	%	0.9	1.6	1.6	1.7	1.6	1.5	1.6
Return on average equity	%	6.6	13.7	14.5	16.1	15.1	12.4	11.1
Net interest margin	%	3.6	3.3	3.4	3.0	2.9	2.7	2.6

Sources: Croatian National Bank and own calculations.

Growing operational efficiency allowed the Croatian banking sector to maintain relatively high profitability levels in recent years. Return on average assets (before tax) has sustained high levels above 1.5% for several years now (see Table 6). Return on average equity, however, declined gradually from a peak of 16.1% in 2004 to 11.1% in 2007, mainly on the back of voluminous capital increases. Net interest income has continued to constitute the main source of revenue in the banking sector. Following a pick-up in interest rates in recent years, net interest income increased as a share of total operating income to slightly over 70% by 2006. This trend was reversed in 2007, reflecting declining interest rate spreads,[6] a falling claim-to-deposit ratio owing to new CNB measures to rein in credit growth and the related change in banks' strategies to push for other sources of income.

Croatia's non-bank financial sector has developed very rapidly in recent years. By mid-2007, assets of the non-bank financial sector accounted for well over one-fourth of total financial sector assets and roughly one-third of GDP (see Table 7). The expansion of non-bank financial institutions is remarkable as it occurred in parallel with the brisk expansion of the banking sector.

6 Interest rate spreads, measured as the average interest rate on loans minus the average interest rate on deposits, are higher than in the euro area but have been narrowing gradually since 2003 despite rising interest rate levels, reflecting a decline in inflation, increasing operational efficiency and stronger competition.

Table 7 Croatia: financial sector structure

(percentages)

	2001	2002	2003	2004	2005	2006	2007 [1]
Banks, consolidated assets (gross)	87.3	85.8	83.4	81.5	78.8	76.3	73.5
Open-end investment funds, net assets	0.9	1.3	1.3	1.6	2.7	4.1	6.2
Close-end investment funds, net assets	2.3	0.6	0.4	0.4	1.1	1.4	1.7
Insurance companies	5.9	5.7	5.4	5.2	5.1	5.0	5.1
Housing savings banks, consolidated assets (gross)	0.8	1.1	1.5	1.8	1.8	1.6	1.4
Compulsory pension funds, net assets	0.0	1.1	2.0	2.9	3.6	4.1	4.3
Voluntary pension funds, net assets	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Savings and loan co-operatives	0.6	0.6	0.6	0.5	0.5	0.5	0.5
Leasing companies	2.2	3.8	5.4	6.0	6.3	6.9	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Croatian National Bank, HANFA and Ministry of Finance.
1) June 2007.

2.3 RISKS AND SHOCK-ABSORBING CAPACITY

CREDIT RISK

Credit risk remains the main risk to financial stability in Croatia. On the back of a booming economy and despite central bank actions to rein in bank lending, growth in credit to the private sector accelerated considerably in 2005 and 2006 (see Table 9). A tightening of the central bank measures over the course of 2007, as described in Box 1, led to a deceleration of credit growth towards the end of 2007. This was driven mainly by a marked slowdown in corporate lending, as banks started to redirect corporate clients to direct borrowing from their parent banks abroad, enabling banks to continue to focus on the more profitable retail segment.

A recent study (Backé et al., 2007) showed that non-bank private sector credit levels in Croatia in 2006 were within equilibrium ranges suggested by underlying fundamentals. At the same time, credit levels have inched up in recent years, relative to the estimated equilibrium ranges, and by 2006 had moved above the mid-points of these ranges.

Credit expansion has been particularly brisk in the household sector. Household debt – which predominantly consists of bank loans – exceeded 42% of GDP in June 2007 (see Table 8), which is still well below euro area levels (e.g. 67% in Germany), but clearly above levels in other countries in the region (e.g. 21% in Poland, 29% in Hungary). Household debt levels even surpassed the level of annual gross disposable income by June 2007, which is high in comparison to central, eastern and south-eastern Europe (e.g. 41% in the Czech Republic). Implicit interest payments relative to gross disposable income increased to over 7% by June 2007, driven by both strong volume growth and a pick-up in interest rates. The most dynamic line of business in the household segment is mortgage lending. Given strong demand for property and rising real estate prices since 2003 (mainly in Zagreb and the coastal regions), loans for housing purposes have grown much faster than other types of household loans, with their

Table 8 Croatia: selected macro-prudential indicators – domestic debt

		2001	2002	2003	2004	2005	2006	2007 1)
Households								
Debt	% of GDP	19.0	24.8	28.9	31.8	35.6	40.3	42.2
Debt	% of gross disposable income	37.0	49.3	63.5	68.5	81.7	96.2	103.5
Debt	%, y-o-y	29.7	42.5	27.9	19.2	20.2	22.6	22.4
Implicit interest payments	% of gross disposable income	3.8	4.5	5.7	5.9	6.5	7.0	7.4
Non-financial enterprises								
Debt	% of GDP	42.9	45.2	45.4	47.2	51.4	58.7	62.2
Debt	% of corporate bank deposits	352.0	308.5	290.7	302.4	347.6	340.5	366.9
Debt	%, y-o-y	8.5	15.2	10.0	12.6	17.2	23.5	24.5
Implicit interest payments	% of GDP	3.4	3.2	3.0	2.8	2.9	3.1	3.4
Total non-financial private sector								
Debt	% of GDP	61.9	70.0	74.4	79.1	87.0	98.9	104.4
Debt	%, y-o-y	14.2	23.6	16.4	15.2	18.4	23.2	23.6
General government								
Debt	% of GDP	42.3	42.1	43.3	45.9	46.9	44.0	43.2
Debt	%, y-o-y	11.8	8.5	12.6	15.0	9.9	1.5	3.5
Interest paid	% of GDP	2.0	2.0	2.0	2.0	2.2	2.2	2.0
Total non-financial sector								
Debt	% of GDP	104.2	112.0	117.6	125.0	133.9	142.9	147.6
Debt	%, y-o-y	13.2	17.4	15.0	15.1	15.3	15.6	17.0

Source: Croatian National Bank.
1) June 2007.

share in total household loans increasing from 28% in 2002 to more than 40% as at end-2007.

Robust growth in the indebtedness of non-financial enterprises contributed to increased credit risk also in the corporate sector. As a result of buoyant investment activity in a favourable economic environment, the corporate sector's domestic debt growth (mainly bank loans) has accelerated significantly in recent years, in 2006 not only reaching an all-time high, but also outpacing the growth rate of household debt for the first time since the early 1990s. Consequently, total corporate sector domestic debt reached over 62% of GDP in June 2007, while interest payable gradually rose since 2004, reaching 3.4% of GDP in June 2007.

Box 1

MEASURES BY THE CROATIAN NATIONAL BANK TO AVOID EXCESSIVE CREDIT GROWTH FUNDED BY EXTERNAL BORROWING

On account of concerns about risks associated with the rapid credit growth funded increasingly by bank borrowing from abroad and the related widening of external imbalances, the Croatian National Bank continued to curtail lending growth on several occasions in the last couple of years by introducing and fine-tuning new administrative measures (e.g. credit ceilings) and tightening reserve requirement regulations. In 2004, the CNB introduced an unremunerated marginal reserve requirement (MRR) on banks' new foreign borrowing in addition to the overall reserve requirement. The MRR rate has been increased in several steps from 30% to 55% over the course of 2005 and 2006, and, to counter circumvention practices, the base has been broadened. As the rapid credit expansion continued to be funded to a large extent by external borrowing (mainly from parent banks), in 2006 the CNB extended reserve requirements by also introducing a special reserve requirement of 55% on the liabilities arising from securities issued by banks. In addition, as of the beginning of 2007 the CNB tightened monetary policy by introducing credit ceilings (12% p.a.) and penalising credit above the ceilings by obliging banks to purchase low-yielding CNB bills on all lending in excess of the limits, with the rate of purchase initially set at 50% of the loans granted in excess of the credit ceiling.

However, given signs of ongoing circumvention by banks (e.g. by shifting activities to their non-bank financial subsidiaries), a fine-tuning of the measures became necessary later on in 2007. One set of amendments came into force in June 2007 and included the division of the calculation base for purchasing compulsory CNB bills into two separate parts, i.e. household and corporate credit as well as off-balance-sheet items. In a second step, in July 2007 the CNB reduced banks' maximum allowable credit growth (i.e. without triggering the compulsory purchase of CNB bills) to a monthly 0.5% for the second half of the year. As of October 2007 the calculation base for the subscription of compulsory CNB bills was broadened by including also lending by legal persons that are controlled by Croatian banks. Finally, the rate of purchase of compulsory CNB bills was raised to 75% of the loans granted in excess of the limit as of January 2008.

All measures combined finally led to a deceleration of growth in credit to the private sector towards the end of 2007. However, at the same time there has been a rapid expansion of external foreign borrowing by non-financial corporations, partly due to domestic banks encouraging their clients to borrow directly from their parent banks, and by non-bank financial enterprises (see Section 5.3).

Croatia: overview of selected CNB measures to rein in lending growth

Monetary policy instrument		Date	Measure
Interest rates		April 2000	Cutting the discount rate by 200 bps to 5.9%.
		October 2002	Cutting the discount rate by 140 bps to 4.5%.
		January 2008	Increasing the discount rate by 450 bps to 9.0%
Reserve requirements	General reserve requirement	December 2000	Foreign currency reserve requirement lowered from 55% and unified with the kuna reserve requirement at 23.5%.
		July 2001	Reduction of the reserve requirement to 22%. Introduction of a unified calculation base for kuna and foreign currency reserve requirements.
		September 2001	10% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		October 2001	20% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		November 2001	Reduction of the reserve requirement to 19%. 25% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		August 2003	35% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		November 2003	40% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		December 2003	60% of the accrued foreign currency reserve requirement have to be allocated in kuna.
		October 2004	Reduction of the reserve requirement to 18%.
		January 2006	Reduction of the reserve requirement to 17%.
	Marginal reserve requirement	August 2004	MRR introduced at 24% on borrowing larger than the base of June 2004.
		February 2005	MRR increased to 30%.
		May 2005	MRR increased to 40%.
		January 2006	MRR increased to 55%. 40% of any increase in foreign debt compared to initial debt balance in June 2004 and 15% of increase after November 2005. Broader base including bank guarantees for corporate external borrowing and bank borrowing from domestic leasing companies. 55% with a view to off-balance sheet items (reference period November 2005).
		July 2006	Additional widening of the scope of marginal reserve requirement on any increase in funds received from non-residents and legal persons in a special relationship with a bank which are used for financing domestic legal and natural persons in the form of syndicated loans or for domestic banks' placements to domestic legal and natural persons in the name and for the account of the mandator (mandated operations).
	Special reserve requirement	March 2006	Introduction of a special reserve requirement (55%) to be allocated by banks on their liabilities arising from issued securities (calculation period January 2006). Separate calculation of the base is made for securities issued in kuna and those issued in foreign currency.
Administrative measures		January 2003	Banks that showed loan growth above 16% (or 4% in a given quarter) in 2003, relative to the balance of loans registered on 31 December 2002, were required to subscribe low-yield CNB bills in the amount equal to 200% of the exceeded growth. Only in place in 2003.
		December 2006	The CNB issued a decision towards the end of 2006 on the purchase of compulsory CNB bills, restricting the annual growth of bank placements in 2007 to 12%.
		February 2007	Amendments to the Decision on the Purchase of Compulsory CNB Bills made it easier for banks to distribute the permissible rate throughout the financial year: it will depend on a bank's business and credit policy to determine in which part of the year the permissible 12 percent growth rate of placements will be utilised.
		June 2007	Splitting up of the calculation base for purchasing compulsory CNB bills into two separate parts, i.e. household and corporate placements as well as off-balance sheet items, while keeping the annual 12% growth ceiling for both components.

Croatia: overview of selected CNB measures to rein in lending growth (Cont'd)

Monetary policy instrument	Date	Measure
	July 2007	Reduction of banks' placement growth to a monthly 0.5% for the second half of the year (reference period end-June 2006).
	October 2007	Broadening of the calculation base for the subscription of compulsory CNB bills by also including lending done by legal persons, controlled by a bank or an owner of a qualifying holding (who is a financial institution) - reference period September 30, 2007.
	January 2008	While keeping the annual 12% credit growth ceiling the rate of purchase of compulsory CNB bills has been increased from 50% to 75% of the loans granted in excess of the credit ceiling. At the same time, the remuneration rate has been decreased from 0.75% p.a. to 0.25% p.a.
Loan loss classification/ provisioning/risk weights	January 2004	Tightening of loan classification and provisioning requirements. Until 2004 three loan classification categories (fully recoverable placements (A, B), partly recoverable placements (C, D), irrecoverable placements (E)). From 2004 on following categories are in place: recoverable (A), partly recoverable (B1, B2, B3) and irrecoverable (C).
	December 2005	Increase of capital adequacy risk weights by 25 bps on foreign currency or foreign currency-indexed loans to unhedged borrowers in the non-government sector.
	June 2006	According to amendments to the Decision on the Classification of Placements and Contingent Liabilities of Banks tighter specific reserve rates have to be applied.
	January 2008	Introduction of higher capital requirements on banks whose growth rate of placements exceeds the maximum permissible growth rate of placements and the introduction of increased risk weights (100%) to placements with a currency clause extended to clients with no own foreign currency income.
Liquidity ratios	February 2003	Minimum ratio of foreign currency liquid assets to foreign currency liabilities of 35%.
	February 2005	Liquid asset ratio cut to 32%.
	March 2006	From 1 March to 31 October 2006, banks shall include in their liquid assets their participation in a EUR 400 million loan to the government.
	October 2006	32% of foreign exchange liabilities must be covered by short-term foreign exchange assets with a maturity of less than 3 months. Forex liabilities were expanded in order to include liabilities in kuna with a currency clause.
	March 2008	In the period from 10 March 2008 to 31 May 2008, the banks shall include in their foreign currency claims as defined by this Decision, the amount with which they participate in the short-term foreign currency loan granted in March 2008 to the Ministry of Finance of the Republic of Croatia totalling EUR 200 million.

Sources: Croatian National Bank, IMF and own compilation.

The Croatian banking sector continued to be highly exposed to indirect credit risk stemming from foreign currency operations. The large share of bank loans denominated in or indexed to foreign currency (mainly the euro) exposes households and enterprises to exchange rate and foreign interest rate fluctuations, producing credit risk for the banks (see Section 5.2).

Loan quality, measured by the share of non-performing placements[7] in total placements, continued to improve. In fact, the non-performing placement ratio declined further in recent years,

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

reaching 3.2% as at end-2006, although this was primarily due to strong credit growth. The deceleration of credit growth in 2007 seems to have stopped this strong downward trend, with the non-performing placement ratio falling only marginally to 3.1% by the end of 2007.

With a view to improving credit risk management, a Central Credit Register (HROK) was established in Croatia in 2005. It was founded by 20 Croatian banks under the auspices of the Croatian Bank Association, became fully operational in May 2007 (when banks started to use reports issued by HROK) and covers around 90% of the total retail market in Croatia. It collects, processes and exchanges data and information on the credit record of potential borrowers.

MARKET AND LIQUIDITY RISKS

Interest rate risk seems to be moderate. The assets of the banking sector have a limited exposure to interest rate fluctuations as loan contracts, including fixed interest rate loans, mostly carry a restrictive clause according to which the interest rate can be customised. At the same time, on the liability side, deposits are predominantly of a short-term nature. In this context, 60% of time deposits (accounting for some 70% of total deposits) have a maturity of less than one year, allowing for some flexibility in times of high interest rate volatility. Consequently, most of the interest rate risk has been shifted to bank clients, and will thus materialise through the credit channel in the event of adverse developments.

Table 9 Croatia: selected banking sector stability indicators

		2001	2002	2003	2004	2005	2006	2007
Credit risk								
Credit growth	%, y-o-y	23.2	33.6	16.8	13.1	20.3	22.7	13.3
Credit growth to the private sector	%, y-o-y	24.7	31.6	15.9	13.6	18.5	23.7	14.5
Real credit growth to the private sector	%, y-o-y	21.8	29.1	14.0	10.6	14.4	20.3	10.2
Credit growth to households	%, y-o-y	29.3	43.0	27.7	18.7	20.3	21.8	18.0
Mortgage credit (housing loans)	%, y-o-y	14.4	30.8	36.7	26.6	28.8	33.9	22.5
Non-performing placements	% of total placements	7.3	5.9	5.1	4.6	4.0	3.2	3.1
Foreign currency credit	% of total credit	84.7	79.8	74.2	75.7	77.4	70.9	61.0
Foreign currency deposits[1]	% of total deposits	89.8	88.4	87.5	87.3	86.4	76.3	66.8
Market risk								
Forex risk								
Open foreign exchange position[3]	% of total assets	1.1	1.2	1.3	1.1	0.7	0.5	0.7
Stock market risk								
Ratio of shares and participations to total assets (equity holdings)		2.6	1.8	1.4	0.9	0.8	0.7	0.7
Liquidity risk								
Ratio of liquid assets[2] to total assets		37.3	29.4	32.8	31.2	28.0	27.5	27.6
Ratio of total loans to total deposits		63.2	74.2	76.7	80.7	88.5	92.5	92.8
Ratio of liquid assets[2] to short-term liabilities		126.7	97.0	117.2	120.4	103.1	102.6	107.6
Shock-absorbing factors								
Loan loss provisions[4]	% of non-performing placements	71.9	68.1	60.6	60.1	58.2	54.8	51.8
Capital adequacy ratio		18.5	17.2	16.2	15.3	14.7	14.0	15.4
Memorandum items:								
Number of banks (foreign-owned)		43 (24)	46 (23)	41 (19)	37 (15)	34 (14)	33 (15)	33 (16)
Assets of foreign-owned banks[4]	% of total assets	89.3	90.2	91.0	91.3	91.3	90.8	89.2

Sources: Croatian National Bank and own calculations.
1) Time deposits.
2) Liquid assets = cash in vaults + deposits with the Croatian National Bank + deposits with other banks + treasury bills.
3) June 2007.
4) September 2007.

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

Direct foreign exchange risk appears to be manageable. According to CNB regulations, total open foreign currency positions may not exceed 20% of banks' regulatory capital. The ratio of the average long foreign exchange position to regulatory capital stood at 6.7% in June 2007 (2006: 5.2%), while the ratio for the short position was 2.8% (2006: 1.8%). These figures indicate a relatively low direct foreign exchange risk.

Liquidity risks have increased somewhat in recent years, as reflected in slightly worsening liquidity indicators. Over the past few years the ratio of liquid assets to total assets declined gradually to 27.6% by end-2007, while at the same time the loan-to-deposit ratio rose to over 90%. Nevertheless, liquidity levels can still be considered high, inter alia given the large amounts of free reserves held with the CNB (denominated mainly in foreign currency). However, the concentration of liquid assets within a few asset classes (e.g. Treasury bills) seems to indicate some risk in case of liquidity shocks. At the same time, given the high share of liabilities towards non-residents, risks associated with international financing have been growing in recent years. Despite the fact that parent banks appear to be the main external financing source for foreign bank subsidiaries in Croatia[8] and that the year 2007 seems to have heralded a declining trend in foreign liabilities, the still high share of foreign liabilities requires cautious monitoring.

SHOCK-ABSORBING FACTORS

Banking sector profitability is relatively high, as mirrored by a fairly stable return on average assets of around 1.6% in recent years. This should provide banks with a comfortable buffer to weather unexpected and short-lived regional or sectoral shocks. Moreover, although return on average equity fell in recent years (see Table 6), this can be mainly attributed to the strengthening of banks' capital bases, which should likewise underpin the shock resistance of the Croatian banking market.

Croatia's banking sector is well capitalised according to standard capital ratios. Notwithstanding substantial capital increases, the capital adequacy ratio has fallen considerably since 2001 as a result of tighter capital adequacy regulations, reaching 14% of risk-weighted assets as at end-2006, which is however still well above the 10% required by Croatian law. Following large-scale capital increases, the capital adequacy ratio increased again to 15.4% in 2007. Thus, as banks' capital ratios are far in excess of regulatory requirements, the banking sector has a substantial buffer in the event of shocks stemming from operational and market risks. However, according to the latest IMF sensitivity analysis,[9] adverse economic developments (mirrored by slowing real GDP growth and a pick-up in the unemployment rate) could have a large and negative impact on the capital of Croatian banks through the need for higher loan loss reserves.

Finally, widespread foreign ownership also bolsters banking system stability. Foreign bank presence in Croatia not only increases banks' operational efficiency by transferring capital, know-how and modern technologies, but also mitigates the likelihood of distress and sudden stops of capital flows given foreign banks' strategic, long-term objective towards Croatia. Given reputational risks, foreign bank subsidiaries in Croatia may be able to draw on the backing of their parent banks in the event of unexpected shocks.[10]

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

9 See Mitra (2007).

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

3 THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

3.1 THE MACROECONOMIC ENVIRONMENT

Real GDP growth has strengthened over the past few years, but remained below that of regional peers despite a marked acceleration in 2007. Real GDP growth reached 5% in 2007, higher than in the preceding years but still below the government's medium-term forecasts in the range of 6%-6.5% (see Table 10). Structural unemployment remains significant, with the official unemployment rate at 35% at the end of 2007.

Since the mid-1990s, the former Yugoslav Republic of Macedonia has anchored its exchange rate to the euro in the form of a soft peg. This policy is largely motivated by the significant degree of openness (98% of GDP in 2006), close trade links with the EU (56% of total trade) and the high degree of unofficial euroisation. Reflecting strong capital inflows, the National Bank of the Republic of Macedonia (NBRM) has been operating in an environment of a liquidity surplus in the banking system and has used its monetary policy instruments mainly for sterilisation purposes. Strong capital inflows have been associated with a substantial decline in the interest rate on central bank bills, the main monetary policy instrument of the NBRM. Since the summer of 2007, this interest rate has hovered around 5%, down from 8.5% at the end of 2005. This trend reversed in 2008 when interest rates were raised and reached 6% in March due to increasing inflationary pressures.

Monetary policy has managed to contain inflation in past years, but pressures have surged over the most recent months. Inflation has accelerated constantly since July 2007, reaching a multi-year high of 9.6% in year-on-year terms in February 2008, on the back of rising energy and food prices, the latter also due to the severe drought in the summer. Nevertheless, average inflation dropped to 2.3% in 2007, reflecting the subdued price increases in the first half of the year.

Fiscal policy has been generally prudent and has contributed to the sterilisation of liquidity by increasing government deposits held at the NBRM. For 2007 the government targeted a deficit of 1%, but according to preliminary results actually registered a surplus of 0.6% of GDP, whereas for the medium term it committed itself to a deficit of 1.5% in its agreement with the IMF. A major change in the fiscal setting was the introduction of a flat tax on incomes and profits in 2007 at a rate of 12%, which was reduced to 10% in 2008. The adoption of a flat tax regime is seen as a key measure to reduce the size of the informal sector, increase foreign direct investment and stimulate job creation. The stock of government debt is relatively low and has been declining in recent years, to about 25% of GDP in 2007. In 2007 gross external debt increased to about €2.7 billion by the end of the year.[11]

11 The NBRM substantially revised its external debt statistics at the end of 2007 due to a change in the compilation methodology.

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

		2002	2003	2004	2005	2006	2007 1)
Real GDP growth	%, y-o-y	0.9	2.8	4.1	4.1	3.7	5.1
Inflation	%, y-o-y, period average	1.8	1.2	-0.4	0.5	3.2	2.3
Central bank bills rate 2)	%, end of period	15.2	6.2	10.0	8.5	5.7	4.8
Nominal effective exchange rate	Index (Q4 2001 = 100), end of period	103.7	107.5	110.9	111.4	110.7	110.9
Current account balance	% of GDP	-10.0	-3.6	-8.4	-2.7	-0.9	-2.3
FDI	% of GDP	2.8	2.2	6.0	1.6	6.4	4.0
Gross external debt	% of GDP	…	…	47.9	53.9	49.4	49.1
Central government balance	% of GDP	-5.7	-1.1	0.1	0.2	-0.6	0.6
Central government gross debt	% of GDP	43.0	39.0	36.6	40.9	32.7	25.3

Sources: Haver Analytics, IMF, national sources and own calculations.
1) Mostly preliminary data.
2) Weighted average 28 day interest rate.

Although the current account balance has improved considerably, the trade deficit remains structurally large. The trade deficit has been around 20% of GDP over the past years and widened even further in 2006 and 2007. By contrast, the current account position has improved considerably, recording a deficit of about 0.9% of GDP in 2006, on the back of improvements in the transfer, services and income balances. For 2007 a higher current account deficit is estimated, but it is still well below regional averages. Foreign direct investment inflows were generally low, at around 2% to 3% of GDP. However, these inflows surged in 2006, owing to the foreign involvement in the privatisation of a large power distribution company, and remained quite strong in 2007 according to preliminary data.

3.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

BANKING SYSTEM

The banking sector of the former Yugoslav Republic of Macedonia is highly concentrated, predominantly private, with private banks having an asset share above 98%, and largely in the hands of foreign owners. The banking sector has experienced some consolidation, with the number of banks declining from 23 in 1999 to 19 in 2007 (see Table 11). In 2007 ten banks were under dominant foreign ownership. In terms of asset shares, foreign penetration increased substantially in 2007 to 83% of total assets, while in earlier years it was much lower than in the region as a whole. The concentration in the banking sector has experienced a significant decline since 2003, but appears still quite high. The three largest banks owned almost two-thirds of total assets in 2007.

Institutional reforms in the banking system lag behind other countries in the region. The EBRD index of banking sector reform has remained unchanged in recent years at a relatively low level of 2.7, reflecting the lack of progress in this area. However, the regulatory framework changed in June 2007 with the adoption of a new banking law, which is to a large extent compliant with the relevant EU directives. The most important changes in the new legislation are the strengthening of the banks' corporate governance and of the eligibility criteria of shareholders, as well as a tightening of risk management and internal control requirements.

Financial intermediation in the former Yugoslav Republic of Macedonia has trended upwards since 2002, but remains at low levels. Measured by the share of total assets of the banking system in GDP, financial intermediation stood at about 61% in 2007, up from 38% in 2002 (see Table 12). Compared with the EU countries, only Romania has a lower level of financial intermediation. Therefore, there is significant potential for further financial deepening via the banking system.

Banks' assets are dominated by claims on households and enterprises. Among domestic

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007 [1]
EBRD index of banking sector reform		2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Number of banks (foreign-owned)		23 (5)	22 (7)	21 (8)	20 (7)	21 (8)	21 (8)	20 (8)	19 (8)	19 (10)
Number of banks per 100000 inhabitants		1.16	0.96	0.97	1.04	0.92	0.83	0.77	0.83	0.92
Assets of private banks	% of total assets	98.7	98.9	98.7	98.0	98.2	98.1	98.4	98.4	98.5
Assets of foreign banks	% of total assets	12.8	53.4	51.1	44.0	47.0	47.3	51.3	53.2	82.9
Assets of 3 largest banks	% of total assets	62.1	64.0	63.3	64.0	66.9	66.8	66.1	66.1	65.0
Herfindahl-Hirschmann index [2]		1,863	1,865	1,738	1,667	1,842	1,685	1,607	1,595	1,527

Sources: EBRD and National Bank of the Republic of Macedonia.
1) September 2007.
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.

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007 1)
Commercial bank (net) assets	% of GDP	34.6	34.7	45.2	38.2	41.7	44.5	49.4	56.4	61.2
Total domestic claims	% of total assets	62.6	59.7	51.8	56.4	57.1	59.1	63.2	67.5	73.2
Claims on domestic MFI	% of total assets	7.8	10.2	11.0	6.3	9.0	7.6	11.1	10.7	12.6
Claims on domestic non-banks	% of total assets	54.8	49.6	40.8	50.1	48.1	51.4	52.1	56.8	60.6
of which:										
Claims on general government	% of total assets	10.7	8.0	6.9	8.6	6.0	5.9	5.0	7.4	6.7
Claims on domestic households and enterprises	% of total assets	44.1	41.6	33.9	41.5	42.1	45.5	47.1	49.4	54.0
of which:										
Claims on domestic enterprises	% of total assets	40.8	37.4	30.3	35.6	33.7	33.5	32.7	32.6	34.1
Claims on domestic households	% of total assets	3.3	4.2	3.6	5.9	8.4	12.0	14.4	16.8	19.8
Money market fund shares	% of total assets									
External assets	% of total assets	25.3	27.9	19.9	31.4	28.2	28.1	24.2	20.6	17.1
Claims on domestic households	% of total claims on households and enterprises	7.5	10.1	10.6	14.3	19.9	26.5	30.6	34.0	36.8
Loans-to-claims ratio for domestic nonbanks		71.2	77.6	78.6	79.8	81.8	86.1	86.8	85.1	86.9
of which:										
Loans-to-claims ratio for general government		10.8	4.6	3.2	18.6	0.7	7.9	2.6	3.0	2.4
Loans-to-claims ratio for domestic households and enterprises		85.8	91.5	93.9	92.4	93.2	96.3	95.8	97.4	97.3

Sources: National Bank of the Republic of Macedonia and State Statistical Office.
1) September 2007.

assets, claims on households and the non-bank corporate sector have been increasing, and accounted for 54% of total assets in 2007. Claims on enterprises are almost twice the size of claims on households, though this ratio has been declining due to the strong growth of credit to households since 2002. The share of external assets has declined constantly since 2002 and reached 17% in 2007 (see Table 12).

The banking sector's liabilities are dominated by domestic non-bank deposits, primarily from the household and corporate sectors. Domestic non-bank deposits increased to almost 70% of overall liabilities in 2007 (see Table 13). The bulk of this represents deposits of households and enterprises. The importance of capital and reserves declined to around 13% of total liabilities in 2007, while external liabilities have been playing a limited role in recent years, standing at 3% in 2007.

The favourable macroeconomic environment and intensifying banking activities contributed to an improvement in banking sector profitability. In 2006 and 2007 banks recorded the highest profits since the country's independence, with profits increasing by around 70% and 30% in 2006 and 2007 respectively. The uptrend in both the return on average assets and the return on average equity since 2001, when both of them were negative, continued in 2007, when they reached 1.8% and 15.2% respectively at the end of the year (see Table 14).[12]

Banking profits primarily stem from regular operating income, while the share of extraordinary items registered a substantial decline. Net interest income played a dominant role in total income,

12 The tables contain information only up to the third quarter of 2007, as not all reported data were available for the full year by the cut-off date. However, where data are available for the full year, these figures are reported in the text.

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007 1)
Deposits of MFIs	% of total liabilities	4.3	6.1	2.3	3.1	2.1	1.3	1.9	2.2	2.2
Deposits of domestic non-banks	% of total liabilities	45.3	49.3	62.5	59.6	64.4	67.7	67.1	68.4	69.5
of which:										
Deposits of general government	% of total liabilities	4.5	6.1	3.4	2.6	2.1	1.4	1.2	1.0	0.8
Deposits of households and enterprises	% of total liabilities	40.8	43.2	59.1	57.0	62.3	66.3	65.8	67.4	68.7
Money market fund shares	% of total liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Debt securities issued	% of total liabilities	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0	1.1
Capital and reserves	% of total liabilities	20.7	23.3	18.1	20.7	19.1	17.0	15.9	13.3	12.6
External liabilities	% of total liabilities	11.1	7.5	3.8	2.5	2.5	2.0	2.7	3.5	3.0
Remaining liabilities (other liabilities and provisions for off-balance sheet liabilities)	% of total liabilities	5.3	4.2	3.6	3.0	3.5	3.8	3.1	3.5	3.3
Remaining liabilities (short-term borrowings up to 1 year and issued debt securities)	% of total liabilities	6.2	2.9	4.5	3.1	1.8	0.7	0.2	0.1	1.2
Remaining liabilities (long-term borrowings over 1 year)	% of total liabilities	7.1	6.7	5.3	7.4	6.6	7.5	9.2	7.9	7.0
Memorandum items:										
Domestic non-banks' claim-to-deposit ratio		138.2	113.9	70.7	91.6	81.3	83.1	83.8	88.3	92.4
General government's claim-to-deposit ratio		270.7	146.7	221.1	364.5	307.1	457.5	433.2	777.9	920.0
Households' and enterprises' claim-to-deposit ratio		123.5	109.2	62.1	79.3	73.6	75.0	77.2	78.0	83.2

Source: National Bank of the Republic of Macedonia.
1) September 2007.

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007 1)
Total operating income	% of total income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:										
Net interest income	% of total income	44.1	49.1	37.0	47.0	48.7	52.0	56.3	59.6	59.5
Net non-interest income	% of total income	55.9	50.9	63.0	53.0	51.3	48.0	43.7	40.4	40.5
General administrative expenses	% of total income	70.2	72.5	85.8	90.9	87.0	74.5	66.6	62.0	55.5
Loan loss provision expenses	% of total income	87.6	58.8	48.6	30.9	39.8	34.7	28.6	15.5	19.9
Income tax	% of total income	3.1	3.0	2.0	1.3	1.4	2.5	2.8	2.8	...
After-tax profit/loss	% of total income	11.6	6.0	-13.2	6.4	7.6	8.1	17.9	26.7	...
Net interest income	% of average assets	3.5	3.5	2.1	2.8	2.9	3.5	3.9	4.0	3.9
Net non-interest income	% of average assets	4.4	3.6	3.7	3.2	3.0	3.2	3.0	2.7	2.7
Interest rate spread (total loans - total deposits)	%									
Denar spread 2)	%	...	...	...	...	...	...	6.9	6.5	4.9
Foreign exchange spread 2)	%	...	...	...	...	...	...	6.5	6.7	6.6
Denar with foreign exchange clause spread 2)	%	...	...	...	...	...	...	6.8	7.0	6.3
Return on average assets before tax	%	-0.9	0.4	-0.7	0.4	0.5	0.6	1.2	1.8	2.0
Return on average equity	%	-4.0	3.5	-3.2	2.0	2.3	3.1	7.5	12.3	15.8

Source: National Bank of the Republic of Macedonia.
1) September 2007.
2) 1999-2004 figures are not comparable due to a change in methodology.

with a share remaining at about 60% in 2007 following an increasing path in the last five years. Both interest income and interest expenditure rose markedly in 2006, owing to the increase in the volume of lending activity and to the growth of the deposit base and the government securities portfolio. On the expenditure side, staff expenses represented a stable and major expense item of non-interest expenditures. Net loan loss provisions increased to about 20% in 2007, following a significant decline in recent years due to the credit expansion, accompanied by an improvement in the risk profile of loan portfolios.

The positive trends in the basic income and expense categories of the income statement led to an improvement in banks' profitability and efficiency indicators. Expenditure efficiency improved, and the ratio of total regular income to non-interest expenditures increased markedly in 2006, recording its highest level in the past several years. In a European context, some indicators, such as the ratio of net interest income to total assets or the return on assets, are relatively high in the former Yugoslav Republic of Macedonia. This is mainly due to the lower level of assets, reflecting lower financial intermediation. The relatively low operating efficiency of banks is however evident from the still large share of administrative expenditures in total operating income.

NON-BANK FINANCIAL SECTOR

While the financial sector of the former Yugoslav Republic of Macedonia continues to be dominated by the banking sector, accounting for 89% of total financial sector assets in 2006,[13] the non-bank financial sector has also registered strong growth in the past years. Insurance companies were the second most significant segment in 2006 with an asset share of 7.5%, followed by leasing companies (1.4%) and savings houses (1.2%), while pension funds, pension fund management companies and brokerage houses combined accounted for only 1% of total financial sector assets. Pension funds were launched only in 2006,[14] but their relevance is growing rapidly.

Like the banking sector, the non-bank financial system is highly concentrated and largely foreign-owned. However, concentration decreased in most segments of the financial sector in 2006. This downward trend is expected to continue with the further increase in foreign capital and gradual liberalisation of capital flows, which should intensify competition. Except for brokerage houses, all segments are dominantly under foreign ownership. In 2007 several new foreign strategic investors entered the financial market, leading to an increase in foreign ownership. Cross-sectoral ownership is at a relatively low level.

3.3 RISKS AND SHOCK-ABSORBING CAPACITY

CREDIT RISK

Credit risk is the dominant risk to financial stability, given that the banks' total credit exposure is increasing. Credit growth has accelerated markedly since 2003, reaching over 40% in 2007 (see Table 15). This stems mostly from growth in credit to the private sector. Although households have a relatively low share in total credits (at around 35% in 2006), this share has been rising fast, as growth in credit to households exceeded the growth rate of other segments of private sector credit over the last seven years, standing at over 56% in 2007. Over the period 2000-2006, household borrowing increased almost eight-fold, dominated by consumer credits. In 2007 mortgage loans rose by around 60%, exceeding the rate of growth of total household credits, reflecting inter alia improvements in the cadastre. Taking into account the low level of financial intermediation and especially the low starting point for household lending, these developments are expected to continue.

13 Data on the overall financial sector are currently available up to 2006 only.

14 The pension reform started in 2002, establishing the legislative basis of pension funds. The first pension fund management companies were launched in 2005. Pension funds of the fully funded second pillar of the pension system started operating in January 2006.

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007 1)
Credit risk										
Credit growth	%, y-o-y	8.3	8.6	6.2	9.0	8.4	23.7	20.1	30.9	41.3
Credit growth to the private sector	%, y-o-y	22.0	20.1	7.6	10.4	15.6	26.8	23.4	31.0	42.1
Real credit growth to the private sector	%, y-o-y	22.9	13.5	2.0	8.4	14.2	27.3	22.8	26.9	40.1
Credit growth to households	%, y-o-y	14.7	42.6	7.5	47.5	59.5	63.2	40.8	42.9	56.4
Mortgage credit (housing loans)	%, y-o-y	...	...	...	...	...	60.4	37.0	52.2	60.4
Non-performing loans	% of total loans	20.1	26.9	24.7	13.6	23.4	19.3	16.1	11.8	9.5
Foreign currency credit	% of total private sector credit	26.3	20.1	21.3	16.8	19.7	20.0	25.4	26.3	25.2
Foreign currency deposits	% of total deposits	40.9	42.9	62.4	52.3	52.7	54.4	55.7	52.6	47.4
Market risk										
Forex risk										
Open foreign exchange position	% of total assets	...	...	10.7	11.2	10.2	8.6	7.5	5.9	5.9
Stock market risk										
Ratio of shares and participations to total assets (equity holdings)		2.1	1.7	1.2	1.7	1.3	1.1	1.1	0.8	0.7
Liquidity risk										
Ratio of liquid assets 2) to total assets		20.5	16.7	31.9	14.1	12.9	12.1	14.9	17.7	18.5
Ratio of total loans to total deposits		83.7	78.8	54.7	67.0	64.4	69.7	70.3	71.7	77.1
Ratio of liquid assets 2) to short-term liabilities		36.4	28.8	48.2	23.2	19.8	17.8	22.0	25.6	26.4
Shock-absorbing factors										
Loan loss provisions	% of non-performing loans	142.9	112.7	95.4	90.4	91.4	102.7	110.8	113.6	121.1
Capital adequacy ratio		28.7	36.7	34.3	28.1	25.8	23.0	21.3	18.3	17.2
Memorandum items:										
Number of banks (foreign-owned)		23 (5)	22 (7)	21 (8)	20 (7)	21 (8)	21 (8)	20 (8)	19 (8)	19 (10)
Assets of foreign-owned banks	% of total assets	12.8	53.4	51.1	44.0	47.0	47.3	51.3	53.2	82.9

Source: National Bank of the Republic of Macedonia.
1) September 2007.
2) Liquid assets = cash in vaults + deposits with the National Bank of the Republic of Macedonia + central bank bills + treasury bills.

Credit risk increased not only due to the rising credit exposure, but also owing to the fact that most borrowers are new and do not have a credit history. In particular, most of the new borrowers of banks are households and small and medium-sized enterprises, making a risk assessment more difficult. Households' debt to banks and savings houses has risen at or above 40% annually since 2002 (see Table 16). This pace of expansion led to rapidly increasing ratios of household debt to GDP and to gross disposable income, which warrant further careful monitoring. For non-financial enterprises, developments have been more mixed, as their debt has been rising relative to GDP since 2002, but the debt-to-corporate bank deposits ratio started to rise only in 2007 after having fallen for about five years. In an international comparison, these ratios do not seem to be extraordinarily high.

Indirect credit risks gain relevance as the credit exposure with a foreign currency component rises. Foreign currency-indexed lending accelerated and registered the fastest growth in 2006 (about 55%), while despite some acceleration, the growth rate of denar credits remained the lowest (21%) (see Section 5.2). The quality of banks' credit exposure has shown no signs of deterioration so far. The share of non-performing loans has declined since 2003 and was around 9% of total loans in 2007 (see Table 15). However, it has to be noted that a substantial amount of credit was written off by banks in 2006, whereby one bank was particularly involved as it wrote off 78% of the total amount, although these loans stem from years prior to the acceleration in credit growth. Banks' off-balance-sheet exposure rose strongly in 2006, primarily owing to approved credit limits on payment cards, permitted negative

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

		1999	2000	2001	2002	2003	2004	2005	2006	2007[1]
Households										
to banks and savings houses										
Debt	% of GDP	1.4	1.8	1.9	2.7	4.1	6.2	8.1	10.6	13.5
Debt	% of gross disposable income	2.5	3.2	3.7	5.7	9.4	13.6	17.5	23.4	...
Debt	%, y-o-y	9.1	43.6	7.9	44.6	58.1	59.8	39.6	41.5	39.0
Implicit interest payments	% of gross disposable income	0.5	0.5	0.7	0.8	1.1	1.5	2.1	2.5	...
+ to leasing companies										
Debt	% of GDP	...	...	...	...	...	6.7	8.8	11.6	...
Debt	% of gross disposable income	...	...	...	...	...	14.6	18.8	...	...
Debt	%, y-o-y	...	...	...	...	...	...	40.7	41.3	...
Non-financial enterprises										
to banks and savings houses										
Debt	% of GDP	14.6	13.9	14.1	13.2	14.3	15.7	16.5	19.1	21.5
Debt	% of corporate bank deposits	126.0	134.3	182.0	173.8	143.9	135.3	137.7	129.3	140.5
Debt	%, y-o-y	-1.2	7.6	0.6	-2.2	11.2	16.0	13.8	24.8	23.1
Implicit interest payments	% of GDP	2.6	1.8	1.6	1.4	1.2	1.1	1.2	1.3	1.1
+ to leasing companies										
Debt	% of GDP	...	...	...	...	...	16.1	17.2	20.2	...
Debt	% of corporate bank deposits	...	...	...	...	...	138.6	142.4	134.2	...
Debt	%, y-o-y	...	...	...	...	...	...	14.9	25.3	...
Total non-financial private sector										
to banks and savings houses										
Debt	% of GDP	16.0	15.6	16.0	15.9	18.4	21.9	24.6	29.7	35.0
Debt	%, y-o-y	-0.3	10.7	1.4	3.5	19.1	25.8	21.1	30.3	28.8
+ to leasing companies										
Debt	% of GDP	...	...	...	...	...	22.7	26.0	31.8	...
Debt	%, y-o-y	...	...	...	...	...	...	22.5	30.7	...
Central government[2]										
Debt	% of GDP	2.3	18.3	17.8	15.7	14.5	13.6	13.0	12.8	10.0
Debt	%, y-o-y	...	793.2	-4.0	-7.8	-5.0	-0.6	2.1	7.4	-14.7
Interest paid	% of GDP	0.2	0.1	0.4	0.5	0.4	0.4	0.4	0.4	
Total non-financial sector										
Debt	% of GDP	18.3	33.9	33.8	31.6	32.9	35.6	37.5	42.6	45.0
Debt	%, y-o-y	...	109.9	-1.5	-2.5	7.2	14.2	13.8	22.4	15.6
Memorandum items:										
Total external debt	% of GDP	...	...	...	...	...	47.9	53.9	49.4	43.6
Total private external debt	% of GDP	...	...	...	...	...	20.1	22.2	24.4	24.8

Sources: National Bank of the Republic of Macedonia, Ministry of Finance and State Statistical Office.
1) September 2007.
2) Total domestic public debt of the central government.

balances on current accounts and uncovered letters of guarantee and letters of credit.

While the substantial credit expansion necessarily leads to enhanced credit risks, stress tests conducted by the NBRM suggest that there is still scope for a further significant rise in lending. These tests indicate that gross credits could increase by about 60% without jeopardising banks' solvency as measured by the capital adequacy ratio. At the same time, certain measures of the credit portfolio quality, such as non-performing loan ratios, are a lagging indicator of emerging risks and may be biased downwards in credit booms, since non-performing loans generally appear and increase as the credit portfolio matures. Similarly, a slowdown in lending activity may lead to a rise in non-performing loan ratios.

MARKET AND LIQUIDITY RISKS

Market risk is more limited than credit risk, but still requires careful monitoring. Given that most bank loans are extended with de facto variable interest rates, interest rate risk is limited in the banks' balance sheets. That said, as exposure

to interest rate fluctuations is largely passed on to the borrowers, this represents an additional source of indirect credit risk.

Banks are exposed to foreign exchange risk due to the relatively large open foreign exchange position in the banks' balance sheets. Although the open foreign exchange position of banks has declined since 2002, it was still positive and relatively high at almost 6% of total assets in 2007 (see Table 15). This might be related to the peg of the denar, which may lead to a sub-optimal perception of potential exchange rate risk also on the part of banks. Both foreign currency assets and liabilities rose by over 20% in 2006 due to the increase in foreign currency-indexed credits and deposits. The share of foreign currency assets in total exceeded that of foreign currency liabilities, while both shares were above 50%. Therefore, while clients would be adversely affected by a denar depreciation, banks' balance sheets would be hit by an appreciation, partly balancing the foreign exchange risk borne by borrowers.

Banks' exposure to equity price risk is limited, as the ratio of shares and participations to total assets has declined since 2002 to well below 1% in 2007. These small positions are not likely to result in substantial vulnerabilities for banks.

Liquidity risk has been on the decline in recent years. The ratio of liquid assets to total assets and to short-term liabilities has been rising in the last three years, pointing to an improved liquidity situation (see Table 15). At the same time, the ratio of total loans to total deposits increased. While this could prima facie point to greater liquidity risks in the banking sector, it actually reflects an acceleration of lending activity in an environment where the system as a whole has been relatively liquid. Moreover, the maturity of the banks' deposit base rose, primarily due to the faster growth of time deposits than of sight deposits.

SHOCK-ABSORBING FACTORS

The increase in banks' profitability is encouraging and provides a natural buffer against shocks. In this respect, the last two years were very successful as bank profits reached record highs (see Table 14). However, there is still further scope for improving efficiency and reducing overhead costs. The coverage of non-performing loans by loan loss provisions has increased steadily since 2002 and is at a relatively high level (see Table 15).

In recent years the banks' capital adequacy ratio has trended steadily downwards, particularly owing to the banks' increased level of activity and changing structure. Although the level of guarantee capital rose, risk-weighted assets registered a much faster growth rate. This is due to increased activities and also to the change in their structure. Lending activity (with a 100% weight) and off-balance-sheet activities increased relative to e.g. accounts with other banks (with a weight of 20%). In addition, items with a 100% weight have a larger share among off-balance-sheet risk-weighted assets, given the acceleration of banks' activity related to issuing credit cards.

At the end of 2007, the capital adequacy ratio of the banking system (17%) was still comfortably above the required level (8%). Furthermore, none of the banks had a capital adequacy ratio below the minimum. Nevertheless, the ratio dropped by about four percentage points compared with 2005, rising only in the group of small banks, which reflects their continuing marginalisation in financial intermediation. Banks mainly rely on capital injections by their parent entities or on internal sources, such as retained earnings. Financing through equity issuance is of very limited relevance.

According to the results of regular stress tests based on different shock scenarios, the banking system of the former Yugoslav Republic of Macedonia is adequately solvent. The NBRM started to conduct regular quarterly stress tests in 2004. Recently, there has been a tendency towards continuous improvement in the results. Overall, the quarterly tests suggest that the banking system is more resilient to liquidity risk than to credit risk. Therefore, banks' solvency is most negatively affected – although still maintained – if certain scenarios for credit risk are simulated.

The banking sector was found to be relatively stable also when considering scenarios featuring two or more shocks. In the most extreme of the reported scenarios, including a combination of all shocks of credit, interest rate and exchange rate risks (50% increase in the credit exposure in the C, D and E risk categories,[15] 5 percentage points increase in domestic interest rates and a 20% depreciation of the denar relative to the euro and the dollar), the capital adequacy ratio – ceteris paribus – would drop to about 16%, still double the minimum required level.

The NBRM strengthened several regulatory requirements and aimed at improving its supervisory practices. In early 2006, the NBRM adopted a Supervision Development Plan in order to facilitate the transition to risk-based supervision, which was officially introduced in early 2008. In early 2008, the NBRM also strengthened prudential regulations with the aim of containing credit expansion, in response to concerns about rapid growth of consumer loans to households (about three-quarters of which related to overdrafts on credit cards) and lending indexed to foreign currency. While the latter is generally collateralised, credit card loans are typically not secured. Therefore, the NBRM decided to increase the risk weight of such assets in the capital adequacy computation.[16] The NBRM is also working on improving its credit register.

A major achievement was the establishment of an inter-institutional financial stability authority at the end of 2006, which consists of all supervisory and regulatory bodies in the country, with the aim of monitoring developments in each segment of the financial system on an informal and expert basis. As for the cooperation with foreign supervisory authorities, memoranda of understanding were signed with two additional countries (Greece and Montenegro) at the beginning of 2007, thus increasing the number of signed memoranda to six (previous memoranda have been signed with Albania, Bulgaria, Russia and Slovenia).

15 These categories represent the highest credit risk.

16 In addition, banks have to maintain an internal information system on the indirect credit risk related to the open foreign exchange position of clients and carry out stress tests annually.

4 TURKEY

4.1 THE MACROECONOMIC ENVIRONMENT

The Turkish economy recorded strong but decelerating growth in 2006 and 2007. Real GDP growth declined to less than 5% in 2007, after having posted a robust average annual rate of more than 7% in the previous five years. The rate of growth of private investment sharply decelerated during 2007 as a result of monetary policy tightening in the aftermath of the spring 2006 financial turbulence and on the back of political uncertainty surrounding the parliamentary and presidential elections in 2007. The pace of economic expansion was mainly supported by pre-electoral government spending and private consumption. Net export growth provided a negative contribution to growth due to an acceleration in the growth of imports.

The disinflationary process resumed in the course of 2007 after a setback in the previous year due to financial turbulence and the depreciation of the Turkish lira. The average inflation rate declined to 8.8% in 2007 from 9.6% in 2006. The central bank maintained a tightening bias until the uncertainty surrounding the presidential elections eventually dissipated and started to ease the monetary policy from September 2007 onwards. The downward trend in the average inflation rate masks, however, a number of external and domestic shocks that contributed to a moderate acceleration in the rate of growth of the CPI towards the end of 2007. In particular, high energy prices and global food prices contributed to bringing the end-year headline inflation to 8.4%, more than two percentage points above the upper limit set by the central bank (6%).[17] These external shocks were compounded by domestic factors, namely the drought that led to a decline in 2007 agricultural output, supporting food price inflation and the increase in the administered prices of water and tobacco. In spite of these shocks, the central bank maintained a medium-term inflation target of 4% for 2008.

The external accounts remain a source of macroeconomic vulnerability for the Turkish economy. The trade and current account deficits stayed large in 2007, at around 7% of GDP and 5.5% of GDP respectively, marginally improving compared with the previous year. Indeed, in US dollar terms, exports growth outpaced imports growth, leading to a narrowing of the trade deficit as a share of GDP in spite of high energy prices and the appreciation of the Turkish lira. As in the previous two years, the net inflow of foreign direct investment was robust – around 3% of GDP – financing about half of the current account deficit. Other private capital flows, to a large extent medium to long-term loans, contributed to a smooth financing of the current account deficit and a continued accumulation of net international

17 In 2006 the Central Bank of the Republic of Turkey introduced an inflation-targeting regime. The inflation target for end-2007 was set at 4%, with an uncertainty band of +/-2%.

Table 17 Turkey: main macroeconomic indicators

		2002	2003	2004	2005	2006	2007
Real GDP growth	%	6.2	5.3	9.4	8.4	6.9	4.8 1)
CPI Inflation (period average)	%	45.1	25.3	8.6	8.2	9.6	8.8
Interbank Overnight rate (eop)	%	44.0	26.0	18.0	13.5	17.5	15.8
Sovereign spread	bps	696.0	309.0	264.0	223.0	207.0	239.0
Nominal effective exchange rate	(2001 =100)	133.7	151.2	154.7	147.5	158.1	153.9
Current account balance	% of GDP	-0.7	-2.6	-4.0	-4.7	-6.0	-5.5 1)
FDI	% of GDP	0.5	0.6	0.7	2.0	3.8	3.8 1)
Gross external debt (eop)	% of GDP	56.0	47.0	41.0	34.9	39.0	34.2 1)
General government balance	% of GDP	-14.7	-6.9	-3.1	0.6	0.2	-0.6 1)
General government gross debt	% of GDP	73.3	65.3	59.3	53.7	47.9	41.8 1)

Sources: Haver Analytics, IMF, national sources and ECB staff calculations.
1) Estimates.

reserves, which reached USD 71 billion – almost five months of imports of goods and services – by the end of 2007. The gross external debt declined by five percentage points to 34% of GDP in 2007.

The fiscal position deteriorated in the course of 2007, as public spending rose in the run-up to the round of elections during the summer and as tax collection weakened. The general government budget is estimated to have returned to a deficit of around 0.6% of GDP at the end of 2007, as a consequence of the worsening in the primary balance, in turn due to low revenue collection and rising expenditures. Notwithstanding the worsening public deficit, the gross government debt continued to decline as a share of GDP to around 42% in 2007. In addition, the Turkish Treasury has been successful in increasing the average maturity of domestic debt: by November 2007, the weighted average maturity of domestic borrowing had increased to 35 months for the period from January to November, up from 28 months for 2006 as a whole. Still more than half of the public debt is sensitive to exchange rate or interest rate risk.

4.2 THE FINANCIAL SYSTEM: STRUCTURE AND DEVELOPMENTS

The Turkish banking sector has gone through a major transformation process in the aftermath of the financial crises of 2000 and 2001. Liquidations and mergers and acquisitions substantially reduced the number of banks from 81 at the end of 1999 to 46 at the end of 2007.[18] The transformation process has led to an increasing concentration in the banking sector, as the five largest banks accounted for 61% of total banking sector assets in 2006, up from 48% in 2000. State-owned banks continue to play a significant but declining role, accounting for around 30% of total banking sector assets as at end-2006.

The total size of the banking sector, measured by banks' assets, stood at 87% of GDP at the end of 2006, slightly up from 84% at the end of 2005. This remains very low in comparison with the euro area, where banking sector assets represent almost 300% of GDP. Transaction taxes, including the

18 This partly reflects the actions of the Savings Deposit Insurance Fund (SDIF), which took over 21 banks that had become a risk for banking system stability. Of these 21 banks, 20 have been merged, sold or liquidated.

Table 18 Turkey: the structure of the banking sector

	2002	2003	2004	2005	2006	2007 1)	2002	2003	2004	2005	2006	2007 1)
	Number of institutions						Share of total loans (percentages)					
State-owned commercial banks	3	3	3	3	3	3	16.6	18.2	20.9	20.6	21.6	22.1
Privately-owned commercial banks	20	18	18	17	14	12	65.3	67.1	67.4	67.5	58.6	57.9
Foreign-owned commercial banks	15	13	13	13	15	17	4.0	4.0	4.6	6.8	15.3	15.7
SDIF banks	2	2	1	1	1	1	3.4	1.3	0.0	0.0	0.0	0.0
Non-depository banks	14	14	13	13	13	13	10.8	9.4	7.0	5.0	4.5	4.3
Total	54	50	48	47	46	46	100.0	100.0	100.0	100.0	100.0	100.0
	Share of total assets (percentages)						Share of total deposits (percentages)					
State-owned commercial banks	31.9	33.3	34.9	31.4	29.6	29.5	34.3	37.5	41.8	37.7	35.7	36.6
Privately-owned commercial banks	56.2	57.0	57.4	59.7	54.8	54.3	58.5	57.3	55.0	57.4	52.3	51.8
Foreign-owned commercial banks	3.1	2.8	3.4	5.2	12.2	12.6	2.4	2.2	3.1	4.8	12.0	11.6
SDIF banks	4.4	2.9	0.6	0.5	0.3	0.0	4.8	3.0	0.1	0.0	0.0	0.0
Non-depository banks	4.4	4.1	3.7	3.2	3.2	3.6	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Banks Association of Turkey.
1) September 2007.

Table 19 Turkey: asset structure of the banking sector

(percentage of total assets)

	Turkish banking sector						State-owned banks						Privately-owned banks					
	2002	2003	2004	2005	2006	2007 1)	2002	2003	2004	2005	2006	2007 1)	2002	2003	2004	2005	2006	2007 1)
Cash and central bank balances	2.1	2.0	2.5	3.8	7.7	6.6	1.7	1.9	2.0	3.7	7.3	6.0	2.7	2.3	3.1	4.3	8.5	7.4
Due from banks	5.6	4.9	5.8	5.9	7.2	5.0	5.1	5.8	5.6	4.6	5.7	3.5	5.5	4.1	5.0	5.5	5.6	4.7
Securities	44.5	46.4	41.8	38.6	35.0	34.4	59.7	62.3	60.6	56.9	51.1	51.0	37.7	38.5	32.7	31.6	31.8	29.6
Loans	26.5	28.0	33.7	38.6	45.0	48.9	13.8	15.3	20.1	25.3	32.8	36.5	30.8	33.0	39.6	43.6	48.1	52.1
Other assets	21.3	18.7	16.2	13.1	5.1	5.1	19.7	14.7	11.7	9.5	3.1	3.0	23.3	22.1	19.6	15.0	6.0	6.2
of which:																		
Property and equipment	4.5	4.1	3.4	2.3	1.7	1.5	2.9	2.6	2.4	2.0	1.5	1.4	5.7	5.2	4.2	2.6	1.9	1.7
Subsidiaries (net)	2.5	2.5	2.4	2.4	1.6	1.7	1.0	0.9	0.7	0.7	0.5	0.6	3.7	3.8	3.7	3.5	2.4	2.4
Investment and associates	1.4	1.0	1.2	0.3	0.2	0.2	0.4	0.2	0.1	0.1	0.1	0.1	1.7	1.5	2.0	0.5	0.3	0.3
Other	12.9	11.1	9.2	8.1	1.6	1.7	15.4	11.0	8.5	6.7	1.0	0.9	12.2	11.6	9.7	8.4	1.4	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Banks Association of Turkey.
1) September 2007.

Banking Transaction and Insurance Tax, continue to hamper domestic intermediation. These transaction taxes, together with foreign currency lending restrictions, explain why a significant portion of lending continues to be channelled through Turkish banks' offshore branches.

The asset structure of the banking sector has changed significantly since the 2000 and 2001 crises. Increased macroeconomic stability, more stable sources of funding and easier access to working capital have contributed to a gradual restructuring of the asset structure. One main element of change has been a shift towards core banking activities, resulting in high credit growth between 2003 and 2006. Consequently, the share of loans in total assets increased from 27% at the end of 2001 to 49% by September 2007 (see Table 19). Government securities, which used to dominate the asset side of the banking sector, were overtaken by loans as an asset class in banks' books during 2005.

Table 20 Turkey: liability structure of the banking sector

(percentage of total liabilities)

	Turkish banking sector						State-owned banks						Privately-owned banks					
	2002	2003	2004	2005	2006	2007 1)	2002	2003	2004	2005	2006	2007 1)	2002	2003	2004	2005	2006	2007 1)
Deposits	67.0	64.4	64.4	63.9	64.5	63.6	72.1	72.6	77.1	76.8	77.9	78.8	69.7	64.7	61.7	61.4	61.6	60.6
Due from banks	12.7	13.6	13.1	15.5	17.1	16.0	7.9	5.5	4.8	3.7	6.2	6.0	13.0	15.9	17.0	20.7	21.9	19.7
Shareholders' equity	12.1	14.2	15.0	13.5	12.0	13.2	9.9	11.5	9.4	10.6	10.4	9.9	12.7	14.7	15.6	12.4	10.4	12.4
Other liabilities	8.2	7.8	7.5	7.1	6.4	7.2	10.1	10.4	8.7	8.9	5.5	5.3	4.6	4.7	5.7	5.5	6.1	7.3
of which:																		
Miscellaneous payables	1.1	1.2	1.7	1.5	1.9	2.1	0.5	1.0	0.8	0.8	0.7	0.7	0.8	1.0	1.8	1.5	2.2	2.3
Funds	1.7	1.9	1.6	1.4	0.9	0.8	5.1	5.3	4.3	4.2	2.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Provisons	1.6	1.7	1.6	2.1	1.5	1.5	1.6	2.0	1.7	2.3	1.1	1.2	1.1	1.1	1.4	1.8	1.7	1.7
Other external resources	1.3	1.2	1.2	1.5	0.8	1.0	0.7	0.6	0.6	0.6	0.3	0.4	1.3	1.2	1.2	0.8	0.8	1.2
Other	2.5	1.8	1.4	0.6	1.3	1.8	2.2	1.5	1.3	1.0	0.6	0.5	1.4	1.4	1.3	1.4	1.4	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Banks Association of Turkey.
1) September 2007.

Table 21 Turkey: profitability of the banking sector

(percentages)

	2000	2001	2002	2003	2004	2005	2006	2007 1)
Total operating income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:								
Net interest income	76.9	158.3	64.3	48.1	67.2	64.2	63.5	63.1
Net fees and commissions income	15.1	14.8	11.1	11.5	15.1	17.4	19.3	19.5
Net trading income	-29.4	-90.1	4.5	28.5	8.8	7.4	0.0	2.3
Other operating income	37.4	17.0	20.1	12.0	9.0	11.1	17.2	15.1
Total operating income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:								
Provisions for NPLs and other receivables	25.0	76.7	24.7	14.6	14.0	18.1	11.7	10.0
Personnel expenses	36.5	n.a.	18.0	17.1	17.7	18.6	19.4	19.3
Other operating expenses	80.0	72.1	30.8	28.5	24.2	32.8	25.6	22.8
= Total operating expenses	141.4	148.8	73.5	60.1	55.8	69.5	56.7	52.1
Return on assets	-3.0	-5.7	1.1	2.2	2.1	1.4	2.3	2.2
Return on equity	-62.4	-58.4	9.2	15.8	14.0	10.6	18.9	16.5

Source: Banks Association of Turkey.
1) September 2007.

The liability structure of the banking sector has also undergone significant changes over the past few years. Following the banking restructuring process, increased confidence in the banking sector has led to an overall rise in the volume of deposits in absolute terms. In relative terms, between 2004 and September 2007, the share of deposits in total liabilities of the state-owned banks increased to 79%, while that of the privately-owned banks remained relatively stable at 61% (see Table 20).

Following the 2000 and 2001 crises, the banking sector has become profitable again since 2002, with return on equity and return on assets standing at 16.5% and 2.2% for the banking sector as a whole in September 2007 (see Table 21). Profitability has been helped by the maturity structure of the banking sector's assets and liabilities. As short-term deposits (0-3 months) are the main source of funding, the average maturity of interest rate-sensitive liabilities is shorter than that of interest rate-sensitive assets. Consequently, any decrease in interest rates has a positive effect on the sector's profitability. In addition, as confidence increased, the average maturity of assets started lengthening. Hence, the gap between the average maturity of interest rate-sensitive liabilities and the average maturity of interest rate-sensitive assets became larger.

The non-bank financial sector is growing rapidly but remains relatively small at around 13% of total financial sector assets. Insurance companies made up 3.2% of total financial sector assets, but are mostly linked to banks in order to create synergies. Other institutions that have experienced rapid growth are the pension companies launched in 2003. Financial markets are largely dominated by government debt securities. Public debt has declined but remains relatively high. Banks are the most important investors in government debt and seem to prefer shorter-duration instruments.

4.3 RISKS AND SHOCK-ABSORBING CAPACITY

CREDIT RISK

In line with the shift to core banking activities, credit risk linked to the private sector has risen. The growing importance of loans has added another dimension to the credit risk borne by the banking sector, which was traditionally overly dependent on government securities for revenue generation. Credit demand stems mainly from large corporations and small and medium-sized enterprises (62% of total loans at the end of 2007) and secondly from consumers (34%). Consumer lending used to be marginal and only since 2003 has it picked up substantially, with year-on-year growth figures of 99% (2003), 111% (2004) and 71% (2005). Despite the fact that retail credit growth has slowed down since June 2006 due to

increasing interest rates (see also the section on market and liquidity risk), it remains relatively rapid (48% in 2006 and 38% in 2007), with banks vying for market share in a highly competitive environment.

The rapid increase in consumer lending raises questions about the quality of the loan portfolio. Credit cards have accounted for a substantial part of retail lending. This is not surprising given the aggressive marketing of credit cards over the past few years. However, since 2005, the credit card segment seems to have started to become saturated, resulting in slowing growth rates from 109% during 2004 to 25% in 2006 and 2007.

New areas of lending, such as mortgages, are seeing fast growth, with growth rates of around 203% in 2004 and 368% in 2005. Despite a slowdown after June 2006 due to increasing interest rates, year-on-year growth still stood at 79% in 2006 and 40% in 2007. With the rapid decline in inflation and decreasing interest rates until June 2006, mortgage lending had become increasingly attractive. Indeed, the Turkish mortgage market is still very small, and represented only 3.8% of GDP in 2006 (up from 0.2% in 2003) and 4.2% by June 2007, which is very low by European standards and indicates considerable scope for growth. The share of mortgage loans in total retail loans increased further to 33% by the end of 2007 from 7% at the end of 2002. In response to these developments, a new law on mortgage lending has been introduced, allowing banks to apply floating rates to mortgages, charge prepayment penalties and securitise loans.

High credit growth rates as such may not represent a problem, as they can reflect – as is the case in Turkey – a "natural" development due to a changing environment. Since, for example, consumer lending and mortgage lending were virtually non-existent at the start of the decade, there has been considerable catching up as a result of declining interest rates, increased macroeconomic stability and new legislation. Relatively high rates of credit growth must be assessed in conjunction with other factors. These include the initial level of credit as a share of GDP, the level of market penetration and saturation in the segment, and the quality of the risk analysis by the individual banks extending the loans, which is in turn limited by a relatively short credit history and the adequacy of supervision of the banks' risk analysis.

Historically, non-performing loans have been a key problem for the Turkish banking sector. In the past, problems have arisen in terms of related party lending and non-performing loans in the books of state-owned and privately-owned banks due to the economic downturn in the wake of the 2000 and 2001 financial crises. The ensuing restructuring programme has helped to address these issues. Related party lending was restricted by a new regulation and state-owned banks were recapitalised to improve the provisioning of non-performing loans. The non-performing loans of privately-owned banks were addressed as part of the "Istanbul Approach", a voluntary framework aimed at facilitating the debt restructuring of mainly large corporate borrowers. Nowadays, "Istanbul Approach" loans represent only a small fraction of banks' loan portfolios. More recently, the so-called "Anatolian Approach" aims to do the same for small and medium-sized enterprises. As a result, the overall ratio of non-performing loans decreased substantially to less than 4% of total loans at the end of 2007 from around 25% in 2001. At the same time, loan loss provisions increased over the same period from 49% to 88% of non-performing loans.

The non-performing loan ratio for corporate loans declined gradually from 19% at the end of 2002 to 4% at the end of 2007. The ratio for all consumer loans declined slightly to 2.9% at the end of 2007, from 3.2% at the end of 2005. However, the non-performing loan ratio for credit cards increased rapidly in early 2005 and has remained between 6% and 7% since then. While the overall picture in terms of non-performing loans does not seem to give rise to an immediate cause for concern, given the relatively low overall levels of non-performing loans and the adequate provision coverage, they could increase again in the future if the indebtedness of the private sector and households becomes unsustainable.

Table 22 Turkey: selected banking sector stability indicators

		2002	2003	2004	2005	2006	2007
Credit risk							
Domestic credit growth [1), 2)]	%, y-o-y	28.3	20.6	21.6	27.9	14.3	23.4 [8)]
Real domestic credit growth [1), 2), 3)]	%, y-o-y	-1.4	2.2	12.3	20.2	4.7	19.2 [8)]
Credit growth to the private sector [1), 2)]	%, y-o-y	11.4	44.6	52.8	67.1	36.1	40.5 [8)]
Real credit growth to the private sector [1), 2), 3)]	%, y-o-y	-18.3	26.2	43.5	59.4	26.5	36.3 [8)]
Credit growth to households	%, y-o-y	33.4	98.5	111.3	70.6	48.0	37.9
Growth of consumer housing loans	%, y-o-y	2.4	90.0	203.0	367.8	79.3	40.1
Non-performing loans [4)]	% of total loans	17.6	11.5	6.0	4.8	3.8	3.5
Past due loans	% of total assets	6.0	4.2	2.8	1.6	1.5	1.5
Foreign currency loans	% of total loans	58.9	45.4	35.2	28.5	26.5	24.9
Foreign currency deposits	% of total deposits	57.3	48.6	44.7	36.4	38.9	34.9
Growth of foreign liabilities	%, y-o-y	11.9	0.4	14.1	15.1	29.0	2.3
Foreign liabilities	% of total liabilities	57.3	50.2	47.1	41.2	42.6	38.1
Market risk							
Interest rate risk							
Interest income	% of total assets	20.9	15.7	13.2	10.7	11.2	12.2
Net non-interest income	% of total assets	-2.4	-0.2	-2.3	-1.8	-0.9	-1.1
Forex risk							
Foreign exchange assets	% of foreign exchange liabilities	85.7	87.8	90.1	88.6	89.3	80.1
Foreign exchange assets	% of total assets	43.2	38.0	36.2	31.7	33.5	24.1
Foreign exchange liabilities	% of total liabilities	50.4	43.3	40.1	35.7	37.6	35.0
Net open foreign exchange position	% of Tier I capital	-3.5	0.3	-0.2	-0.1	0.3	0.1
Liquidity risk							
Liquid assets [5), 6)]	% of total assets	12.1	11.1	10.0	11.6	11.4	26.8
Ratio of loans to deposits		35.5	42.6	52.0	61.7	70.7	79.4
Liquid assets [5), 7)]	% of short-term liabilities	24.9	27.7	23.2	22.5	19.6	112.6
Shock-absorbing factors							
Net interest margin between loans and deposits	% points	7.4	5.6	6.7	6.0	5.2	4.8
Loan loss provisions (specific provisions)	% of gross non-performing loans	64.2	88.5	88.1	89.8	90.8	88.4
Capital adequacy ratio		25.6	31.0	28.8	24.2	22.0	19.0
Memorandum items:							
Number of banks (foreign-owned)		54 (18)	50 (16)	48 (15)	47 (15)	46 (19)	46 (22)
Assets of foreign-owned banks	% of total assets	4.0	3.0	4.0	6.0	13.0	15.0

Source: Central Bank of the Republic of Turkey.
Note: Unless stated otherwise, participation banks whose share in total assets of the banking sector was 3.3% in December 2007 are excluded.
1) Domestic credit growth and credit growth to the private sector figures are taken from the Monetary Sector Analytical Balance Sheet.
2) Participation Banks are included.
3) Deflated using CPI.
4) Non-performing Loan Ratio = Gross non-performing loans / Gross Loans.
5) Liquid assets = cash + due from Central Bank of the Republic of Turkey + due from interbank + due from banks + securities available for sale + securities in trading portfolio.
6) In the current regulation regarding the measurement and assessment of liquidity requirements of banks which became effective in June 2007, securities held in the trading portfolio are included in the total liquid assets with their stock value, regardless of their remaining maturities. For this reason, the numerator of the ratio which is the total liquid assets for the maturity bracket up to one month increased compared to the previous year. Before, such assets were included only according to their remaining maturity.
7) In the current regulation regarding the measurement and assessment of liquidity requirements of banks which became effective in June 2007, securities held in the trading portfolio are included in the total liquid assets with their stock value, regardless of their remaining maturities. For this reason, the numerator of the ratio which is the total liquid assets for the maturity bracket up to one month increased compared to the previous year. Before, such assets were included only according to their remaining maturity. In addition, the total liquid liabilities for the maturity bracket up to one month also decreased compared to the previous year, since with the regulation some of the liabilities are taken into account by using weights based on their demand features.
8) September 2007.

MARKET AND LIQUIDITY RISK

Interest rate risk is the dominant factor in market risk, due to the maturity mismatch between loans and government securities on the one hand and customer deposits on the other, followed by exchange rate risk.

During the emerging market sell-off in May and June 2006, Turkish financial markets were harder hit than most other emerging markets due to high inflation figures. This resulted in a sharp depreciation of the lira and prompted the Central Bank of the Republic of Turkey (CBRT) to raise interest rates in order to save the disinflation programme.

Owing to the continuing decline in interest rates before June 2006, Turkish banks started offering longer-term assets, backed by short-term funding. Deposits, which are traditionally short-term (0-3 months), make up the lion's share of the sector's funding base, while the maturity of loans has increased substantially. At the end of 2002 loans under one year dominated the loan portfolio (56% of total loans). As maturities were extended in the following years, loans over two years made up 43% of total loans by September 2007, compared with 41% for loans under one year, and 16% for loans between one and two years. Consequently, there is an important maturity mismatch that is still growing.

Fixed interest rate loans have also increased in the past few years. These elements leave the Turkish banking sector vulnerable to an adverse interest rate shock, especially if the spread between average lending and funding rates becomes smaller.

Since the losses after the floating of the Turkish lira, banks' exposure to exchange rate risk has been greatly reduced. Prior to the 2000-2001 crises, the banking sector viewed the exchange rate risk as limited, as the lira was pegged and the CBRT intervened to stabilise the exchange rate. Consequently, many banks borrowed in foreign exchange and lent in domestic currency at high rates (including to the Treasury), leading to large open positions. When the lira was floated, the sector incurred significant foreign exchange losses. The subsequent gradual restructuring of the banking sector has led to a decrease in the exchange rate risk borne by the sector and, by the end of 2004, the exchange rate positions in the banking sector were broadly in equilibrium.

Liquidity (see Table 22) is deemed ample and liquidity ratios remained stable in 2005 and 2006 at around 11.4% (at end-2006). Due to new regulation regarding the measurement and assessment of liquidity, liquid assets over total assets increased to 26.8% at the end of 2007. However, given the short-term maturity of the banks' funding base and the fact that all banks still have considerable amounts of government securities on their balance sheets, liquidity could become a problem in times of systemic stress.

SHOCK-ABSORBING FACTORS

The Turkish banking sector has increased its shock-absorption capacity since the 2000 and 2001 crises. Profitability levels are adequate and appear to be more sustainable in the long run, in contrast to the profits of the 1990s that stemmed from the government's unsustainable financing needs. At the same time, the capital adequacy ratio increased from 21% in 2001 to 31% in 2003, after which it declined again to 19% at the end of 2007.

During 2006 the levels of bank capital decreased temporarily, as the banks' government securities portfolios are marked-to-market. This was especially the case for the privately-owned banks, as the state-owned banks still hold non-marketable government securities (paying premium interest rates), which consequently are not marked-to-market. These remaining non-marketable government securities are set to mature though. When the markets recovered, banks' capital levels improved again. The fact that Turkish banks still hold relatively large government securities portfolios explains why the capital adequacy ratio of the banking sector is higher than in the EU. With a transition to Basel II, it is expected that the current capital adequacy ratio of the Turkish banking sector would decrease by around 5.6 percentage points.

Sensitivity analyses by the IMF and the CBRT suggest that the capital of the banking sector would be large enough to absorb the impact of a negative combined interest rate and exchange rate shock. However, were the external shock to be protracted and substantial, generating negative balance sheet effects in the non-financial sector and a severe economic downturn, the ensuing credit portfolio shock would pose a major risk for the stability of the Turkish financial sector (see Box 2).

Box 2

RESILIENCE OF THE TURKISH FINANCIAL SECTOR TO EXTERNAL SHOCKS – A STOCK-TAKING EXERCISE

The current account deficit and its financing remain major macroeconomic vulnerabilities for the Turkish economy. The current account deficit averaged above 7% of GDP between 2005 and 2007 and is projected to approach 8% in the course of 2008 by the IMF. Until 2007, the positive economic performance of Turkey, the resumption of inward foreign direct investment as well as relatively loose global financial conditions contributed to large capital inflows, which permitted a smooth financing of this deficit. Recently, though, the external financial environment has changed and global liquidity conditions have tightened, leading to a reassessment of risks by global investors, which could penalise those emerging markets with still large external deficits. Indeed, in November 2007, the IMF Mission Chief to Turkey defined the external account position as the "Achilles heel" of Turkey (see IMF, 2007a).

Sudden stops in capital flows, as reflected in a decline in these flows by several percentage points of GDP in one year, may be very costly, in particular for emerging market economies. Calvo et al. (2004) find that sudden stops are accompanied by major interest rate upswings, reserve losses and, in particular for emerging markets, large real exchange rate fluctuations. The latter exacerbate the adjustment costs for emerging economies with large liability dollarisation, i.e. a high level of foreign exchange-indexed or -denominated liabilities. Sudden stops in capital flows do not necessarily entail a current account reversal – e.g. a reduction in the current account deficit by several percentage points of GDP in one year – as long as international reserves may be used to smooth the adjustment. However, Edwards (2004), based on a dataset of 157 countries over the period 1970-2001, notes that almost half of the countries experiencing a sudden stop had to face also a sharp adjustment of the current account deficit. This probability tends to increase for emerging and developing countries, which generally face more stringent borrowing constraints in the international markets than industrial countries. Current account reversals are then often associated with a slowdown in economic growth (see Algieri and Bracke, 2007).

To what extent is the Turkish financial sector ready to withstand an external shock transmitted through the portfolio and credit channel, impacting on the level of interest rates and the exchange rate of the lira? We attempt to answer this question by looking at the impact of the relatively recent spring 2006 crisis on the banking sector and by carrying out a stock-taking exercise of the analyses conducted by the IMF and the Turkish central bank of the banking sector's sensitivity to interest rate and exchange rate shocks.

In spring 2006 global financial market instability took a heavy toll on Turkish financial markets. Between the beginning of May and the end of June, the Turkish lira depreciated sharply by around 30% against the US dollar and the euro, interest rates increased by around 5 percentage points, long-term bond spreads widened by 150 basis points and the Istanbul Stock Exchange fell by 25%. However, from a macroeconomic perspective, the crisis was short-lived. The policy reaction of the CBRT – which raised the overnight borrowing rate by 400 basis points and maintained the tightening bias – and the subsiding global financial instability contributed to a sharp decline in domestic financial market volatility in the second half of 2006. Portfolio capital inflows resumed by the end of the summer and Turkish financial markets recovered most of the lost ground, even though they underperformed relative to the emerging markets' asset class in 2006.

The Turkish banking sector weathered the spell of financial market turmoil quite well, thanks to a high capital adequacy ratio (CAR) and a balanced foreign exchange position. The capital adequacy ratio fell sharply during the period of turbulence, from 24% of risk-weighted assets in 2005 to a trough of 19% in June 2006, to a large extent driven down by valuation losses on the holding of government securities. However, by the end of 2006, the ratio had already rebounded to 22% on the back of rising asset prices and, in some cases, capital injections. The turmoil had also virtually no impact on credit quality, with non-performing loans continuing to decline as a share of total loans.

This recent episode reveals an improvement in the ability of the banking sector to cope with a major shock that does not affect negatively credit quality on a sustained basis. Indeed, the short-lived nature of the episode and the absence of major negative feedback effects on the real economy have – fortunately – lessened the impact and the importance of this shock. This positive assessment is corroborated by the sensitivity analyses of the IMF and the CBRT, which both confirm that the Turkish banking sector is well positioned to face a major combined shock on interest rates and the Turkish lira exchange rate.

The sensitivity analysis of the IMF (2007b) shows that even under the assumption of a strong depreciation of the Turkish lira by 45% combined with a domestic currency interest rate increase from 4% to 15% along the yield curve (3% to 10% for rates on FX positions), the capital adequacy ratio would decline by up to five percentage points in the worst-case scenario, but would remain above the regulatory 12% threshold. The impact of the exchange rate depreciation would be relatively muted due to the balanced foreign exchange position of the banking sector, whereas most of the losses would come from shifts in the yield curve (see Table A).

Table A Sensitivity analysis of the IMF financial stability assessment - selected results

	Top-down		Bottom-up	
Exchange rate depreciation (%)	45	45	45	45
Impact on yield curve	Positive tilt (short/long)	Negative tilt (short/long)	Positive tilt (short/long)	Negative tilt (short/long)
Interest rate increase -YTL (%)	4 to 15	15 to 4	4 to 15	15 to 4
Interest rate increase - FX (%)	3 to 10	10 to 3	3 to 10	10 to 3
End-2005 CAR before shock	22.9	22.9	21.9	21.9
Post-shock CAR	**21.1**	**17.6**	**16.5**	**18.2**
Notes	System wide CAR		Average CAR of 9 participating banks accounting for 80% of banking assets	

Source: IMF (2007b).

Table B Sensitivity analysis of the Central Bank of the Republic of Turkey - selected results

	Scenario A		Scenario B	
Exchange rate depreciation (%)	30		30	
Impact on yield curve	Parallel shift over maturities to 3 months		U-shaped over maturities to 6 months	
Interest rate increase -YTL (%)	6		9 to 8 to 11	
Interest rate increase - FX (%)	5		1.1 to 0.7 to 1.1	
	2006	Sep. 2007	2006	Sep. 2007
Current CAR before shock	19.8	17.8	19.8	17.8
Post-shock CAR	**18.8**	**16.7**	**18.6**	**16.6**
Notes	Interest rate increase lasting 3 months. Market value of Eurobond trading portfolio decreases by 5%		Interest rate increase lasting 6 months. Interest rate changes twice as large as in Spring 2006. Market value of Eurobond trading portfolio decreases by 5%	

Source: Central Bank of the Republic of Turkey (2007).

The Turkish central bank also runs a sensitivity analysis on the impact of a combined exchange rate and interest rate shock on the domestic banking sector (see CBRT, 2007). In the central bank's exercise, the exchange rate of the Turkish lira is assumed to depreciate by 30%, whereas Turkish lira interest rates increase from 6% to 11% under different scenarios. Interest rates on foreign currency positions increase as well. Notably, the exchange rate shock brings some extra profits to the banking sector as a whole owing to its long foreign exchange position. These foreign exchange-related profits are however much smaller than the losses stemming from a decline in interest income and a reduction in the market value of securities following the increase in interest rates. Eventually, losses range from 5% to 7% of banks' equity, leading to a decline in the capital adequacy ratio by more than one percentage point (see Table B). The negative impact, nevertheless, is not so severe and the capital adequacy ratio remains well above the legal threshold after the shock. Overall, the results of the central bank's exercise are qualitatively similar to those of the IMF, even though they differ in terms of magnitude.

The sensitivity analyses that have been presented so far indicate that the Turkish banking sector is resilient to a combined exchange rate and interest rate shock. However, one might wonder whether the sector would be able to cope with a major and long-lasting shock affecting the macroeconomic outlook and the quality of the loan portfolio. As noted, a sustained depreciation of the Turkish lira does not affect the consolidated balance sheet of the banking sector, but it may have a negative impact on the balance sheet of the non-financial firms that have unhedged short foreign exchange positions. Indeed, Kesriyeli et al. (2005) note that the level of the liability dollarisation of the Turkish corporate sector is very high by international standards and that sectors with low export ratios − lacking therefore a natural hedge − are also heavily dollarised. Kesriyeli et al. (2005) find that real exchange rate depreciations in Turkey, eventually, lead to a contraction in investment and profits for the non-financial sector as a whole. In this case, the financial sector would be indirectly hit by the depreciation through a worsening of the loan portfolio over the medium term.

Indeed, IMF (2007b) includes a macro-scenario analysis taking into account the possibility of a sudden stop in capital flows and its impact on GDP growth, unemployment, prices, as well as interest rates and the exchange rate. In this scenario, the impact of an external shock is much worse than in the previous sensitivity analyses as the economy slows down and the quality of banks' credit portfolio deteriorates rapidly. According to IMF estimates, the CAR would decline by nine percentage points with respect to end-2005. More importantly, under this worst-case scenario, up to four small and medium-sized banks would require an injection of fresh capital from shareholders in order to bring the CAR above the Basel threshold of 8%.

In conclusion, the experience of the spring 2006 crisis and the available sensitivity analyses indicate that the financial sector of Turkey would be able to cope with the impact of a negative combined interest rate and exchange rate shock. However, were the external shock to be protracted and substantial, generating negative balance sheet effects in the non-financial sector and a severe economic downturn, the ensuing credit portfolio shock would represent a non-negligible risk for the stability of the Turkish financial sector.

Considerable progress has been made in strengthening the regulatory and supervisory framework, especially following the adoption of a new Banking Law in 2005. The main authority responsible for supervising and regulating the banking sector is the Banking Regulation and Supervision Agency (BRSA). Following the 2000 and 2001 crises, the BRSA overhauled the regulatory and supervisory framework, bringing it more into line with best practices. As a result, supervision has improved considerably, especially after 2005, so that some of the main problems leading to the 2000 and 2001 crises should be able to be avoided in the future.

The blanket deposit guarantee was replaced in 2004 by a limited deposit insurance of up to 50,000 Turkish lira. This deposit insurance is managed by the SDIF, which is also responsible for dealing with failing banks, once they are transferred to the SDIF by the BRSA.

5 HORIZONTAL ISSUES

5.1 POTENTIAL IMPLICATIONS OF THE CURRENT GLOBAL FINANCIAL MARKET TURMOIL

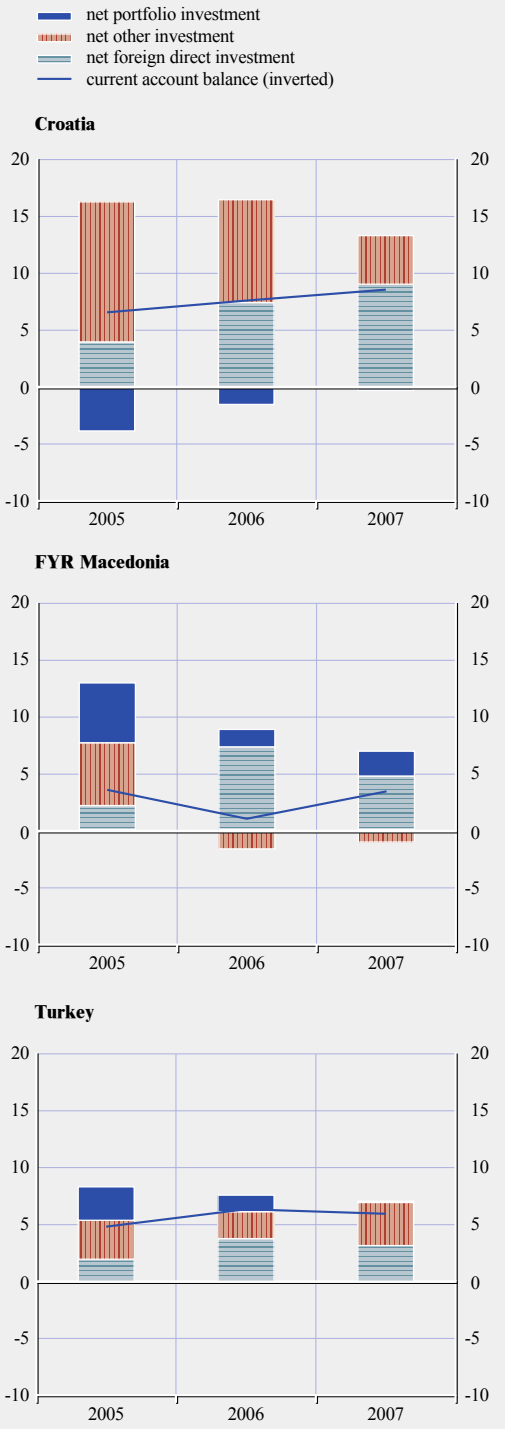
The global financial market turmoil that started in mid-2007 has had comparatively limited consequences for candidate countries so far. Potential spillover effects are the smallest in the former Yugoslav Republic of Macedonia, due to the country's relatively small current account deficit. External vulnerability is more pronounced in Croatia, even though its exposure to international investors remains small and the current account deficit has lately been financed smoothly by capital inflows of longer maturity. External vulnerability is highest in Turkey, making the country the most susceptible among the candidate countries to a sudden deterioration in sentiment towards emerging market assets. The lending behaviour of foreign banks, an important financing channel for all three candidate countries, has not shown signs of significant change so far but warrants close monitoring in the future.

POTENTIAL CHANNELS OF TRANSMISSION OF GLOBAL FINANCIAL SHOCKS

The transmission of global financial shocks depends crucially on (i) the degree of external imbalances and (ii) the degree of foreign involvement in the financial markets of candidate countries. External imbalances are pronounced in Croatia and Turkey, with current account deficits of 8.6% and 5.6% of GDP in 2007, respectively (see Chart 1). The situation in the former Yugoslav Republic of Macedonia is more favourable, as it displayed a comparatively smaller current account deficit of only 3.2% of GDP in 2007. Current account deficits over the period 2005-2007 have been more than covered by corresponding net financial flows, allowing all three countries to accumulate foreign exchange reserves. In Croatia and the former Yugoslav Republic of Macedonia, these inflows were heavily dominated by foreign direct investment. In contrast, Turkey could only partly cover its

Chart 1 Balance of payments of candidate countries

(percentage of GDP)



Sources: National sources, Haver Analytics, IMF and own calculations.

Table 23 Size of financial markets in candidate countries and foreign participation

(percentage of GDP)

	Croatia	FYR Macedonia	Turkey	Euro area	as of
Size of financial markets					
Stock market capitalisation	67.5	17.4	30.7	77.4	Dec. 06
Stock market liquidity [1]	4.2	3.1	43.0	92.0	Dec. 06
Bond and money market size [2]	31.6	5.0	37.2	229.4	June 07
of which:					
Domestic [3] bond and money market	18.6	0.0	33.2	135.9	Sep. 07
International [3] bond market	14.4	5.1	7.1	101.7	Sep. 07
International [3] money market	0.1	0.0	0.0	5.5	Sep. 07
International investment position					
Portfolio investment liabilites, equity securities	4.0	1.5	9.8	37.4	Dec. 07 [4]
Portfolio investment liabilities, debt securities	12.7	3.4	8.6	37.9	Dec. 07 [4]
Other investment liabilites, total	70.3	34.7	31.6	60.4	Dec. 07 [4]
of which:					
Short-term	15.9	8.3	8.5	...	Dec. 07 [4]
of which:					
Loans to the government	8.8	15.4	4.6	0.5	Dec. 07 [4]
Loans to banks	12.2	2.6	5.7	43.6	Dec. 07 [4]
Deposits in banks [5]	11.9	2.0	4.1	...	Dec. 07 [4]
Loans to other sectors	34.2	6.0	13.9	11.3	Dec. 07 [4]

Sources: National sources, Standard & Poor's, Haver Analytics, BIS, ECB, IMF and own calculations.
1) Annual value traded.
2) Outstanding bond and money market issues as a share of GDP.
3) BIS definitions; see BIS (2005).
4) FYR Macedonia: December 2006; euro area: September 2007.
5) Including currency held with banks.

external financing needs by foreign direct investment, making the country dependent on portfolio and other investment flows.

Foreign participation in the financial systems is highest in Turkey. The country's portfolio investment liabilities as a share of GDP reached 9.8% and 8.6% by December 2007 for equity and debt securities, respectively, compared with 4.0% and 12.7% in Croatia and only 1.5% and 3.4% in the former Yugoslav Republic of Macedonia (see Table 23). These differences in foreign portfolio positions are partly the result of different states of domestic financial market development.[19] Apart from portfolio investment, other investment liabilities, to a large extent in the form of foreign loans, are a key channel of foreign financial involvement as well. These inflows dwarf portfolio investment in Croatia and the former Yugoslav Republic of Macedonia and also constitute a large part of cross-border financial transactions in Turkey. A more detailed discussion of the build-up of foreign debt, in particular by the private sector, is provided in Section 5.3.

Overall, Turkey seems to be the most vulnerable to bouts of rising risk aversion towards emerging market assets, since (i) it depends on a constant inflow of portfolio and other investment to finance the current account deficit and (ii) foreign participation in domestic financial markets is relatively pronounced.

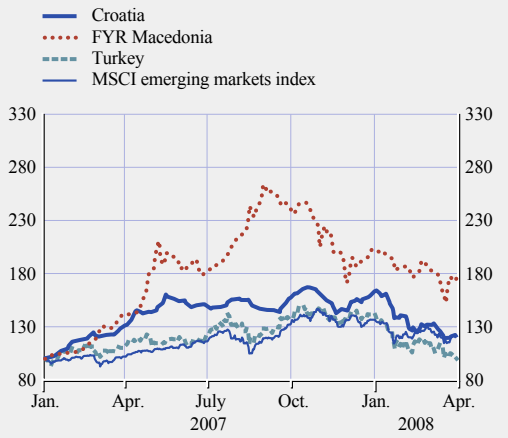
THE EVIDENCE SO FAR

The external vulnerabilities notwithstanding, financial markets in candidate countries have shown some resilience to the global financial market turbulence since mid-2007. Stock markets outperformed the MSCI emerging markets index until the end of 2007 (see Chart 2). Turkey's stock market mirrored the benchmark very closely, as the global episodes of heightened volatility in March 2007, July-August 2007 and January 2008 were reflected in Turkish share

19 Turkey's financial markets are most advanced and therefore offer the largest potential for foreign involvement, with Croatia following in second place. Although Croatia's stock market capitalisation as a share of GDP surpasses that of Turkey, the liquidity of its market is only a fraction of that in Turkey.

Chart 2 Stock market developments in candidate countries

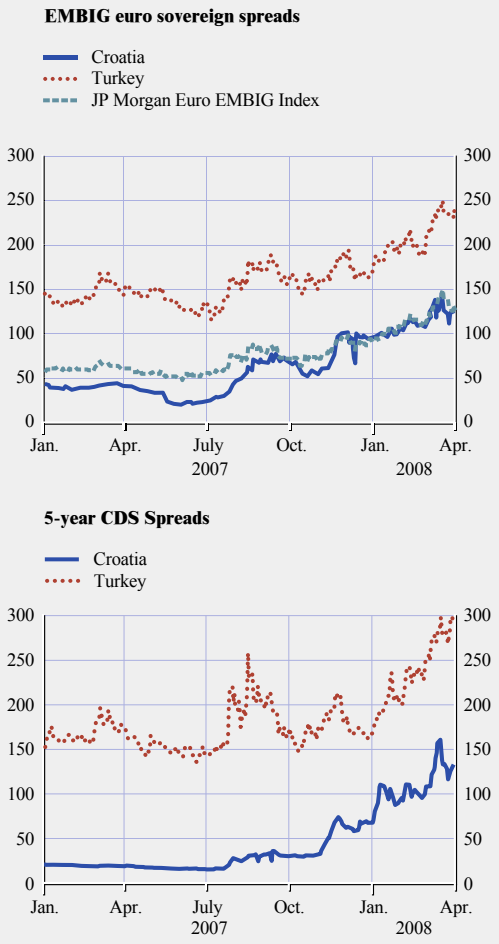
(index; 01 January 2007 = 100)



Sources: Bloomberg, Macedonia Stock Exchange, Haver Analytics and own calculations.

Chart 3 EMBIG euro sovereign spreads and five-year CDS spreads of candidate countries

(basis points)



Sources: Bloomberg and own calculations.
Note: Data for FYR Macedonia are unavailable.

prices. In contrast, the indices of Croatia and especially the former Yugoslav Republic of Macedonia appear to be more detached from global developments, again highlighting their lower level of integration with world financial markets. Nevertheless, both markets have decreased significantly since reaching their respective peaks in September 2007 (the former Yugoslav Republic of Macedonia) and October 2007 (Croatia).

In line with the trends observed in other emerging markets, debt market indicators show a worsening of (external) financing conditions. Sovereign bond spreads and five-year CDS spreads have widened in both Croatia and Turkey, although they appear to have been overly compressed before the onset of the global financial turmoil (see Chart 3).[20]

Turning to credit markets, the impact of the strains visible in some parts of the global financial system on both domestic banks and on foreign banks doing business with candidate countries appeared limited in early 2008. Domestic banks had a very low or non-existent exposure to market segments directly affected by the fallout. As for foreign banking groups active in candidate countries, there was no comprehensive evidence yet of a possible change in lending behaviour. Complete data on cross-border bank lending are currently available as of the second quarter of 2007, i.e. before the onset of the credit crisis in August 2007. Balance of payments data from candidate countries encompass the fourth quarter of 2007 by now, but lack any indication of major reversals in capital flows so far. Almost all

20 For the former Yugoslav Republic of Macedonia, these indicators are not available, underlining the country's shallow (external) debt market.

Table 24 Claims of BIS reporting banks on candidate countries (June 2007)

(percentages, unless indicated otherwise)

	Croatia	FYR Macedonia	Turkey
All claims	100.0	100.0	100.0
of which:			
United States	0.3	0.4	12.6
European Union[1)]	98.8	95.3	77.2
of which:			
Austria	**41.1**	4.6	0.9
Belgium	0.6	0.8	**12.0**
France	**12.6**	0.0	**11.1**
Germany	5.9	3.5	**13.7**
Greece	0.2	**81.1**	**15.7**
Italy	**36.8**	1.4	2.8
United Kingdom	0.6	0.6	**12.4**
Other European Union[1)]	1.1	3.3	8.5
Memorandum items:			
Volume of claims of EU banks (USD billion)	69.9	1.3	93.8
Volume of claims of EU banks (% of all foreign claims)	0.9	0.0	1.2

Sources: BIS and own calculations.
1) EU-15 only; EU-10 countries do not report data to the BIS.

cross-border loans to Croatia and the former Yugoslav Republic of Macedonia originate from banks headquartered in the European Union, with only Turkey displaying a notable share of borrowing from banks in the United States (see Table 24).

In Croatia, banks from Austria, Italy and France are most heavily involved, providing 41%, 37% and 13% of all foreign borrowing. In the former Yugoslav Republic of Macedonia, the origination of non-domestic loans is even more homogenous, with Greek banks accounting for more than four-fifths of these flows, whereas the structure of this market seems more diversified in Turkey. Evidently, any major loss stemming from the credit crisis at a bank also operating in the candidate countries has the potential to dampen the extension of loans to these destinations. However, it appears that most banks active in candidate countries have been largely shielded from these events until now.[21] Additional evidence is offered by the virtual absence of any tensions in money markets, with three-month interest rates closely following the central banks' policies in Turkey and Croatia (see Chart 4).[22] The spike in money market rates in Croatia coinciding with the start of the credit turmoil in the summer of 2007 is exclusively related to domestic reasons, mainly the sizeable initial public offering of HT (Croatian Telecom) around that time which drained liquidity from the money market.

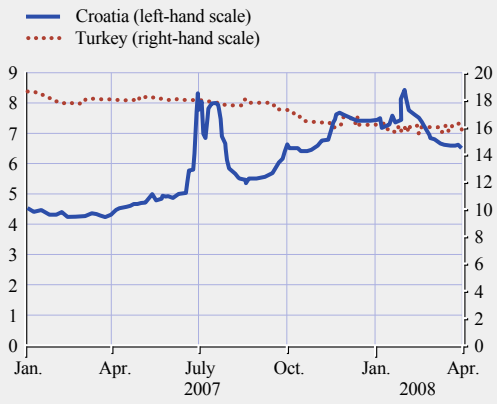
Finally, the development of Croatia's and the former Yugoslav Republic of Macedonia's exchange rates and the continuous rise in their foreign exchange reserves does not currently indicate any substantial capital outflows. The exchange rate of the Macedonian denar and the Croatian kuna versus the euro, against which both currencies are managed by their respective central banks, have remained stable so far, with the kuna even experiencing

21 The most important foreign banks represented either directly, via a foreign subsidiary or by maintaining a cooperation with a local bank are: *Croatia*: UniCredit Group (Italy), Intesa SanPaolo (Italy), ERSTE Group (Austria), Raiffeisen International (Austria) and Société Générale (France); the *former Yugoslav Republic of Macedonia*: UniCredit Group, KBC (Belgium), Société Générale and NBG (Greece); *Turkey*: Citigroup (United States), GE Group (United States), UniCredit Group and NBG.

22 Since the beginning of 2007, the Central Bank of the Republic of Turkey has lowered its policy rate from 17.5% to 15.25%. The Croatian National Bank, although limited in its use of monetary policy instruments by its tightly managed float against the euro, has implemented several administrative measures to limit credit extension in 2007 and 2008 (see Box 1). In addition, it has scaled down the scope and frequency of its repo operations since October 2007, thus effectively tightening monetary conditions.

Chart 4 Three-month money market rates of candidate countries

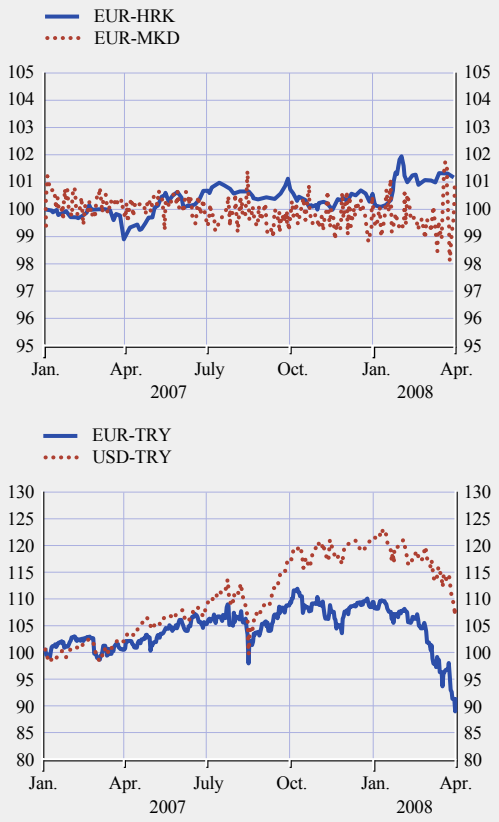
(percentages)



Source: Bloomberg.
Note: High-frequency 3-month money market rates for FYR Macedonia are unavailable. Average 1-day interbank rates, however, decreased smoothly from 4.80% in January 2007 to 3.08% in February 2008.

Chart 5 Exchange rates of candidate countries

(index; 01 January 2007 = 100)



Sources: Bloomberg and own calculations.

some appreciation pressure since early 2008 (see Chart 5, top panel). In contrast, the Turkish lira, while displaying considerable resilience for extended periods of time since the onset of the financial market turmoil, depreciated significantly starting in late February 2008, mainly on the back of a deteriorating inflationary outlook and heightened political uncertainties which put the country's existing external vulnerabilities back in focus (see Chart 5, bottom panel).

5.2 FINANCIAL STABILITY IMPLICATIONS OF THE USE OF FOREIGN CURRENCIES

Financial instruments denominated in or indexed to foreign currencies, in particular the euro, are widely used in the candidate countries. In the balance sheets of banks, currency mismatches tend to be limited as foreign currency assets are broadly covered by foreign currency liabilities (foreign borrowing or foreign currency deposits). At the same time, banks face indirect credit risk as their borrowers are exposed to currency mismatches and may face increasing debt servicing costs following domestic currency depreciation or a rise in foreign interest rates. These risks are mitigated by the steady accumulation of foreign exchange reserves, increasing the ability of central banks to stem exchange rate depreciation pressures. As monetary policy can often play only a limited role in containing foreign currency lending in catching-up economies, other policy tools, including promotion of risk awareness through improvements in financial literacy, moral suasion and prudential measures, can help keep foreign currency lending under control.

TRENDS IN THE USE OF FOREIGN CURRENCIES

As already pointed out in ECB (2006), currency mismatches may be an important source of vulnerability. In the candidate countries, foreign currencies, in particular the euro, are used very widely in the financial markets and, in Croatia and the former Yugoslav Republic of Macedonia,

Table 25 Foreign currency deposits in candidate countries in 2007

(percentages)

	Croatia [1), 2)]	FYR Macedonia [2)]	Turkey [3)]
Share of foreign currency deposits of households and non-bank corporations	75.2	52.9	34.9
of which:			
Share of foreign currency deposits of households	84.7	54.5	64.0
Share of foreign currency deposits of non-bank corporations	46.3	32.7	...

Source: National sources.
1) September 2007.
2) Time deposits only.
3) Data refer to deposits of all sectors of the economy.

the euro is also used as an exchange rate anchor. These countries are indeed characterised by a high degree of asset substitution in both bank deposits and bank lending (see Backé and Walko, 2006, and ECB, 2007a).

With regard to bank deposits, the use of foreign currencies as a store of value is mainly explained by a lack of confidence in macroeconomic and price stability, fuelled by the negative experience of high inflation and rapid currency depreciation in the past. The phenomenon has proved to be fairly persistent over time, despite increasing success in macroeconomic and financial stabilisation. According to the most recent estimates, the share of bank deposits denominated in or indexed to foreign currency stood at around 35% in Turkey, 53% in the former Yugoslav Republic of Macedonia and 75% in Croatia (Table 25).[23] While there are no foreign currency-indexed deposits in Turkey, such deposits play some limited role in the other two countries.

The combined share of foreign currency-denominated and -indexed deposits has fallen in recent years in all three candidate countries.[24] This decline has been most steady in the former Yugoslav Republic of Macedonia, while the downward trend in the two other countries has been surrounded by a higher degree of volatility. In Croatia, in 2005 and 2006, the decline in foreign currency-denominated deposits was, to some extent, offset by an increase in the share of domestic currency-denominated deposits indexed to foreign currencies. However, in the first nine months of 2007, a significant decline in the share of indexed loans more than compensated for a mild rise in the share of foreign currency-denominated loans. In the former Yugoslav Republic of Macedonia, the decline in foreign currency-denominated deposits was, to some extent, offset by an increase in the share of domestic currency-denominated deposits indexed to foreign currencies in 2006 and 2007. When looking at the available disaggregated figures, it is noteworthy that the shares of foreign currency-denominated deposits are significantly higher in the household sector than for non-financial corporations.

Foreign currencies play a pervasive role also with regard to bank lending. Foreign currency loans have become attractive due to low interest rates on the major international currencies, in the apparent expectation that interest rate differentials would not be wiped out by domestic currency depreciation. Moreover, for some borrowers, foreign currency debt payments may smooth earnings fluctuations arising from export revenues in foreign currency. In some cases, banks have spurred the supply of foreign currency loans as this provided a natural hedge for their foreign currency liabilities (resulting from foreign currency deposits or foreign borrowing). Recent empirical evidence indicates

23 For Turkey, the shares relate to all sectors, while for Croatia and the former Yugoslav Republic of Macedonia the shares relate to non-bank corporations and households.

24 One complication in assessing trends over time is that the share of foreign currency deposits (and loans) tends to be influenced by the statistical effect of exchange rate changes. Such valuation effects can be particularly important in Turkey, which operates a flexible exchange rate regime.

Table 26 Foreign currency loans in candidate countries in 2007

(percentages)

	Croatia [1]	FYR Macedonia	Turkey [2]
Share of foreign currency loans to households and non-bank corporations	63.4	54.6	28.5
of which:			
Share of foreign currency loans to households	69.1	44.3	0.7
Share of foreign currency loans to non-bank corporations	56.0	61.2	...

Source: National sources.
1) September 2007.
2) Data refer to loans to all sectors of the economy.

that the access to foreign funds, which has accompanied the increasing presence of foreign banks, has contributed to the rise in foreign currency lending (see ECB, 2007a).

According to the latest data, bank loans denominated in or indexed to foreign currency accounted for around 63% of all loans to households and enterprises in Croatia, 55% in the former Yugoslav Republic of Macedonia and 29% in Turkey (see Table 26).[25]

The use of foreign currency loans and loans indexed to foreign currency has developed differently over time across the candidate countries. Since 2004, the combined share of foreign currency loans and loans indexed to foreign currency rose noticeably in the former Yugoslav Republic of Macedonia, while it declined in Turkey and in Croatia, in the latter case due to several measures imposed by the CNB to curtail bank lending (see Box 1). In Croatia, both the share of foreign currency loans and the share of loans indexed to foreign currencies diminished somewhat, with the latter however remaining very high, while in Turkey the share of foreign currency loans has fallen alongside a low and broadly constant share of foreign currency-indexed loans in recent years. Thus, the decline in the share of foreign currency-denominated loans in both countries was not due to substitution effects in favour of domestic currency loans indexed to foreign currencies. However, as Section 5.3 suggests, there has been some substitution of direct borrowing from abroad for domestic foreign currency/foreign currency-indexed borrowing by non-bank corporations in both countries. In the former Yugoslav Republic of Macedonia, in contrast, foreign currency-indexed loans have risen particularly fast largely due to the lower interest rates offered for these types of loans compared with loans denominated in local currency. Part of the increase in indexed loans may, however, be due to statistical reasons (change in data collection method as of September 2006).

FINANCIAL STABILITY IMPLICATIONS OF THE USE OF FOREIGN CURRENCIES

The use of financial instruments denominated in or indexed to foreign currencies may result in significant currency mismatches. These mismatches can differ considerably across sectors:

- In the banking sector, currency mismatches are typically limited. Foreign currency assets (essentially foreign currency loans) tend to be broadly balanced by foreign currency liabilities (essentially foreign currency deposits and foreign borrowing). In addition, banks are relatively adept at hedging residual balances. According to published data, banks' net overall foreign currency positions are small in Croatia and Turkey, being broadly comparable to those observed in countries that acceded to the EU in 2004 and 2007. In the former Yugoslav Republic of Macedonia, the banking sector is long in foreign currencies so that depreciation risk is passed on to customers.

25 For Turkey the shares relate to all sectors, while for Croatia and the former Yugoslav Republic of Macedonia the shares relate to non-bank corporations and households.

However, in recent years this open position has been on a falling trend.

- Among households, currency mismatches tend to be large. As households usually do not have substantial foreign currency income, currency mismatch problems at the individual level are likely to be significant, even if there may be no significant currency mismatch at the aggregate level (see also Section 5.4). To assess this risk more thoroughly, an analysis based on micro data (which are not available) would be needed.

- For non-bank corporations, there may be a smaller probability of a currency mismatch than for households, at least in the tradable sector, since export revenues may hedge the residual exchange rate risk. Still, anecdotal evidence suggests that foreign currency borrowing in non-exporting sectors may be an issue in the three countries under review.

This configuration of currency mismatches implies that banks face substantial indirect credit risks as a result of foreign currency- related positions on the asset side, through a possible deterioration in their borrowers' debt servicing capacity following a depreciation of the domestic currency or a rise in foreign interest rates. This situation may be accentuated by the fact that the non-bank corporate sector's foreign indebtedness has increased significantly over the past few years (see Section 5.3), thereby increasing the exposure to exchange rate risk.

Various policy measures may help contain the risks from large foreign currency exposure in the candidate countries. One measure that has mitigated these risks is the steady accumulation of foreign exchange reserves (particularly in the former Yugoslav Republic of Macedonia, but also, to a lesser extent, in the other two countries), which has increased the capacity of central banks to stem exchange rate depreciation pressures at times of tension. Monetary and exchange rate policies can contribute to containing foreign exchange lending, but their role is often limited by exchange rate commitments or considerations. Mandatory reserve regulations, which are at the disposal of policy-makers under any exchange rate regime, may offer some scope to affect the currency composition of bank liabilities, and some of the candidate countries have made use of this instrument. Under fixed or tightly managed exchange rate regimes, it is important to raise awareness of the residual exchange rate risk. In this respect, customer information and education appear of crucial importance in order for this risk to be duly taken into account when clients make their borrowing decisions. Under flexible exchange rate regimes, higher exchange rate volatility can make borrowers more aware of the exchange rate risks connected to foreign currency borrowing, while on the other hand exchange rate flexibility can itself be a source of shocks, with knock-on effects on financial stability. Moral suasion and prudential measures can also help keep foreign currency lending under control. Prudential measures are particularly appropriate if and when foreign currency lending implies financial stability risks. Finally, fiscal restraint – if leading to an increase in the domestic savings ratio – would serve to curtail credit growth in general, including the foreign currency element.

5.3 DOMESTIC CREDIT GROWTH AND FOREIGN BORROWING

Over recent years, the private sector in candidate countries has built up considerable foreign debt positions. Foreign financing has allowed both the financial and non-financial corporate sector to attract additional sources of funding, thereby overcoming macroeconomic constraints (e.g. limits to funding through domestic deposits) and, in some cases, bypassing regulatory restrictions (e.g. policy measures to curb credit growth). The reliance on foreign borrowing exposes financial systems in candidate countries to two types of financial stability risk. First, banks and enterprises run rollover risk in the event of a reversal of capital flows. Although a gradual lengthening of maturity of external debt, especially in the case of the Turkish banking system, has alleviated some of that concern, rollover risk remains relatively high in the

former Yugoslav Republic of Macedonia. Second, the rapid rise in foreign borrowing increasingly exposes the private sector to potentially large increases in debt servicing costs in case of sudden swings in international financing conditions or exchange rates.

TRENDS IN FOREIGN BORROWING

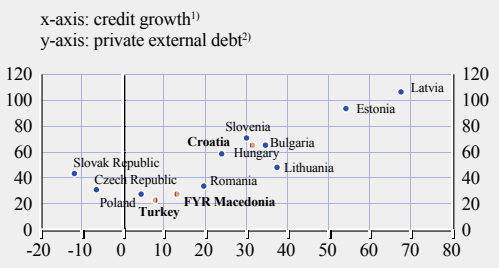
Increasing integration in international financial markets, capital account liberalisation, financial sector reforms and prospective or actual EU accession have spurred large capital inflows in central and south-eastern Europe. The composition of these inflows has changed over time. While foreign direct investment initially made up the bulk of the inflows, debt liabilities have gained importance in recent years. In several countries, rising external debt of the private sector has been associated with rapid domestic credit growth as foreign financing has enabled banks to increase liabilities more rapidly than the expansion of the domestic deposit base would have allowed. As Chart 6 shows, countries with faster private credit expansion have experienced a substantial increase in private sector gross external debt.

Banks typically play a pivotal role in channelling foreign funds in these countries, particularly through branches and subsidiaries of foreign intermediaries. There are several reasons for the substantial borrowing from parent banks. In several countries the deposit base has not kept pace with credit expansion and the cost of funding in domestic markets is usually higher than that of funding that branches and subsidiaries can obtain from their foreign parent banks, especially in the environment of ample global liquidity observed in the last years. Moreover, the maturity of external funds may be more easily tailored to comply with the matching requirements of host country supervisors. In addition, direct external borrowing by non-bank financial intermediaries and non-financial corporations has increased rapidly as well, partly in response to restrictions imposed in the domestic banking system.

Among the three candidate countries, Croatia stands out in terms of banks' and enterprises' foreign debt levels, which reached 66% of GDP at the end of 2006 (see Table 27).

Showing a development similar to that of several new EU Member States in central and eastern Europe, Croatia experienced a substantial rise in private sector external

Chart 6 Credit growth and private foreign borrowing



Sources: National sources, Eurostat and IMF.
1) Overall change in private credit to GDP ratio, 2000-2006.
2) Banks' and enterprises' gross external debt in 2006 as a % of GDP.

Table 27 Gross external debt of banks and enterprises, 2006

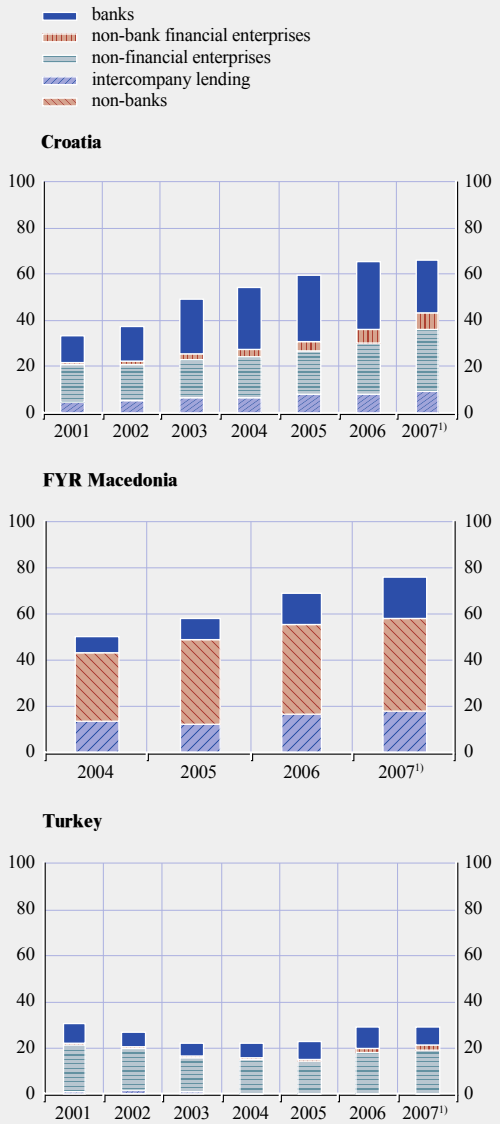
(percentage of GDP)

	Croatia	FYR Macedonia	Turkey	EU-10 1)
Banks	29.9	5.4	8.0	27.2
Other sectors 2)	27.6	15.9	15.2	19.2
Direct investment: intercompany lending	8.3	6.6	0.3	11.6
Gross external debt of banks and enterprises	**65.8**	**28.0**	**23.5**	**58.0**
Memorandum items:				
Total gross external debt	85.3	50.3	39.3	70.9

Sources: National sources, Eurostat, IMF and Haver Analytics.
1) Unweighted average.
2) Non-bank financial enterprises and non-financial enterprises.

Chart 7 Banks' and enterprises' external borrowing

(percentage of GDP)



Sources: Croatian National Bank, Croatian Central Bureau of Statistics, National Bank of the Republic of Macedonia, Turkish Treasury, TURKSTAT and Haver Analytics.
1) September 2007.

liabilities in connection with rapid credit expansion, driven by a strong increase in domestic banks' external borrowing facilitated by easy access to financing from parent banks in EU countries. However, following the adoption by the CNB of a series of prudential measures aimed at curbing domestic credit growth (see Box 1) the upward trend in banks' external debt slowed and eventually reversed in 2007, while there has been a rapid expansion of external foreign borrowing by non-financial corporations, partly due to domestic banks encouraging their clients to borrow directly from their parent banks, and by non-bank financial enterprises (see Chart 7).

In Turkey, the level of external indebtedness is relatively low if compared with central and eastern European countries, notwithstanding buoyant credit expansion in recent years. Following a significant fall in the aftermath of the 2001 crisis, private external debt ratios have rebounded in recent years, as banks rely increasingly on foreign inflows to finance credit expansion and corporations are extensively using external borrowing as their main financing source. Indeed, partly owing to financial transaction taxes and restrictions on foreign currency lending, a significant portion of the domestic corporate sector's external borrowing is from offshore subsidiaries and branches of Turkish banks (see Section 4). The former Yugoslav Republic of Macedonia shows the lowest level of foreign debt in banking and corporate sectors, at 28% of GDP in 2006, even though there has been a strong rise since 2004.[26]

VULNERABILITIES FROM FOREIGN BORROWING

High levels of foreign liabilities lead to rollover and market risk. Rollover risk is particularly large if external debt is predominantly of a short-term nature. The maturity structure of such debt has traditionally been an issue of concern in Turkey, but the situation has improved substantially in recent years owing to the marked lengthening of the maturity of banks' external debt (Table 28).[27] In the former

26 Owing to a revision based on a new methodology, data on external debt in the former Yugoslav Republic of Macedonia before 2004 are not comparable.

27 Data by residual maturity rather than original maturity would be a more appropriate measure in this case but unfortunately are not available.

Table 28 Banks' and enterprises' short-term external debt

(percentage of total outstanding debt)

	2001	2002	2003	2004	2005	2006	2007 1)
				Banks			
Croatia	0.2	0.0	9.9	25.5	27.9	32.9	22.4
FYR Macedonia	...	…	…	54.6	42.4	42.8	48.6
Turkey	63.0	61.3	71.3	69.4	58.5	46.8	31.1
				Enterprises			
Croatia	12.1	11.7	10.4	9.1	9.7	8.2	11.2
FYR Macedonia	…	…	…	61.6	66.0	55.3	55.7
Turkey	22.5	23.4	27.1	29.9	29.7	24.8	23.0

Source: National sources.
Note: Liabilities with an original maturity of one year or less are considered as short-term.
1) September 2007.

Yugoslav Republic of Macedonia, the maturity structure of the private sector's external debt is still biased towards the short term and there are no signs of maturity lengthening, implying relatively high rollover risks for both the banking and the corporate sectors. In Croatia, banks' share of short-term external debt rose steadily until 2006 but has fallen since then, while enterprises' share has remained steadily low.

Market risk relates to the exposure of banks and enterprises to swings in international financing conditions and to exchange rate changes. An assessment of market risks in the banking sector is provided in the country sections. Regarding the corporate sector, the increase in external borrowing may imply a widening of the foreign exchange net open position built up in the domestic credit market (see Section 5.2). Furthermore, at times when the availability of funds on a global scale declines, local enterprises might find themselves resorting to more expensive funding sources.

These increased financial vulnerabilities imply an important role for prudential supervision. Although several steps have been taken in recent years, further emphasis should be placed on banks' risk management relating to the excessive build-up of foreign liabilities, while the foreign currency exposures of the corporate sector should be closely monitored.

5.4 FINANCIAL STABILITY RISKS FROM HOUSEHOLD BORROWING AND DEBT

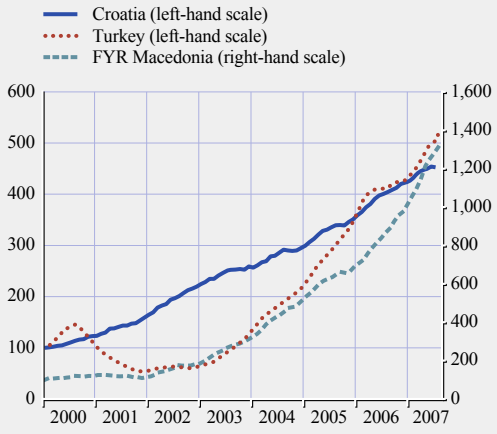
Bank lending to households has expanded rapidly over the past years and has been the most dynamic component of overall growth in credit to the private sector. While these buoyant lending activities reflect weak initial conditions and are spurred by the prospect of future income convergence, they do expose households to a range of vulnerabilities. In the former Yugoslav Republic of Macedonia and Turkey, household debt reached shares of disposable income close to those observed in the central and eastern European EU Member States, and in Croatia this share even surpassed the average level in the euro area. In addition, households are exposed to foreign currency risks, given the popularity of foreign currency-linked debt (especially in Croatia and the former Yugoslav Republic of Macedonia). Heightened sensitivity to asset price fluctuations forms another source of vulnerability. These risks are mitigated by a sizeable build-up of financial assets of the household sector at the aggregate level, but this does not preclude a problematic structure of assets and liabilities of individual households.

DEVELOPMENTS IN HOUSEHOLD BORROWING AND HOUSEHOLD BALANCE SHEETS

Credit to the household sector has expanded briskly over the past years, in line with a trend observed in other countries in the region. Since

Chart 8 Real credit by deposit money banks to the household sector

(index; May 2000 = 100)



Sources: National sources, Haver Analytics and own calculations.

the early 2000s, the outstanding stock of credit to households has increased in real terms almost five-fold in Croatia and Turkey and almost fourteen-fold in the former Yugoslav Republic of Macedonia (see Chart 8). Credit to households has been the most dynamic segment of bank lending and its growth rate has significantly outpaced that of total credit to the private sector (see Table 29).

Among the different credit types, housing loans proved to be the most popular form of financing, with real annual growth rates between 26% (Croatia) and 49% (the former Yugoslav Republic of Macedonia). Despite high growth rates in the former Yugoslav Republic of Macedonia, the share of housing loans in total credit to households remains low, at 22% in September 2007, due to the low starting level and the early development phase of the housing market. In the other two countries, housing loans constitute a more important part of credit to households, with a share of 42% in Croatia and 34% in Turkey. The prevalence of housing loans in these countries may be a sign of increasing sophistication of mortgage markets, thereby approaching a level closer to countries displaying a highly developed market for mortgage finance. Moreover, the compression of margins on other forms of lending, especially to the corporate sector, has rendered real estate financing for the household sector more attractive. Lastly, the interplay of rising real estate prices with the parallel provision of financing might have played a role. In fact, the value of residential real estate in Croatia and the former Yugoslav Republic of Macedonia rose at an average annual rate of 9% and 5%

Table 29 Structure and real growth of deposit money banks' credit to the household sector

(percentages)

	% of total			annualised real growth		
	Croatia (Sep. 2007)	FYR Macedonia (Sep. 2007)	Turkey (Sep. 2007)	Croatia (Jan. 2001-Sep. 2007)	FYR Macedonia (Jan. 2004-Sep. 2007) [1]	Turkey (Jan. 2001-Sep. 2007)
Credit to the private sector	100.0	100.0	100.0	17.7	26.6	12.4
of which:						
Credit to the household sector	56.3	35.3	42.9	22.8	42.1	20.8
of which:						
Housing loans	41.8	22.0	33.7	25.7	49.0	46.0
Other loans	58.2	78.0	66.3	21.0	40.4	15.2
of which:						
Domestic currency-denominated	30.9	52.2	96.5	43.4	27.2	21.2
Foreign currency-denominated or -indexed	69.1	47.8	3.5	18.2	77.4	9.1

Sources: National sources, Haver Analytics and own calculations.
1) For FYR Macedonia, the period is limited from January 2004 to September 2007, as a breakdown of household credit before January 2004 is unavailable. Comparable real growth rates of credit to the private sector and the household sector between January 2001 and September 2007 are 16.4% and 42.0% respectively.

between 2001 and 2006, respectively,[28] triggered by traditional fundamentals as well as factors specific to transition economies.[29]

Foreign currency-denominated or -indexed loans were especially widespread in Croatia and the former Yugoslav Republic of Macedonia. In the latter, they continued to significantly outpace credit denominated in domestic currency. In Croatia, in contrast, the popularity of loans linked to foreign currency has been diminished by administrative and prudential measures by the Croatian National Bank. In Turkey, the historically high volatility of the lira's exchange rate and restrictions on lending in foreign currency to the household sector appear to have generally discouraged this form of borrowing.

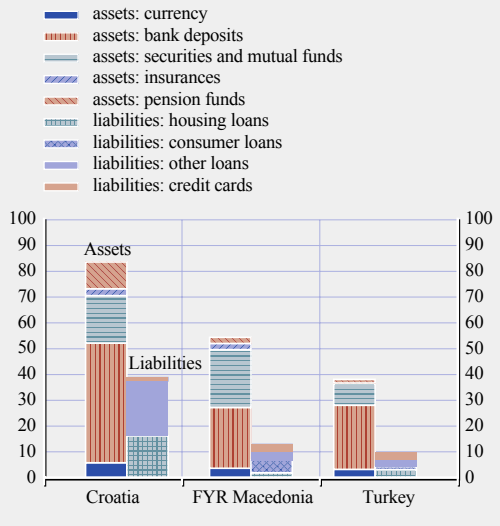
Rapid expansion of bank lending to households, in conjunction with quickly emerging additional forms of financing instruments (e.g. leasing), has translated into rising household indebtedness. Total liabilities of the household sector increased at real annual rates of 25% in Croatia and 21% in Turkey between 2001 and 2006.[30] Despite buoyant growth rates, households' financial liabilities have remained below 20% of GDP in the former Yugoslav Republic of Macedonia and Turkey (see Chart 9). In contrast, this ratio has risen to around 40% in Croatia, well above the EU-8 average of around 25% in 2006.

The rise of household liabilities has led to a pronounced deterioration in debt serviceability indicators. Household debt as a share of disposable income reached 18% in the former Yugoslav Republic of Macedonia and 26% in Turkey, approaching the average level observed across the EU-8 (32%), though still significantly below the average for the euro area (91%). In Croatia, household debt even surpassed the euro

28 An indicator gauging price developments of residential real estate in Turkey is unavailable.
29 Traditional fundamentals influencing real estate prices include rising GDP per capita, falling interest rates and demographic trends, whereas quality improvements in the housing stock and growing external demand are more transition-specific factors.
30 Data for the corresponding period for the former Yugoslav Republic of Macedonia is unavailable, as the country did not report its household balance sheet before 2005.

Chart 9 Financial assets and liabilities of the household sector in 2006

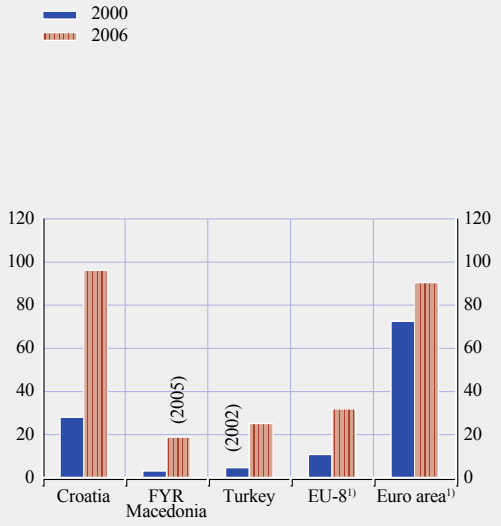
(percentage of GDP)



Sources: National sources, IMF, Haver Analytics and own calculations.

Chart 10 Household debt

(percentage of disposable income)



Sources: National sources and ECB.
1) Weighted averages; EU-8 excludes Slovenia due to lack of data.

area level, amounting to 96% of disposable income in 2006.[31]

VULNERABILITIES AND MITIGATING FACTORS

The rapid growth of household borrowing largely reflects a low initial level of financial development, coupled with the prospect of EU accession and attendant expectations concerning future income convergence and economic progress. That said, the situation is not free from financial stability risks. Rising debt levels expose households to repayment risks in the event of deteriorating economic conditions and rising unemployment. Such a scenario could have significant negative effects for both the financial sector (an impairment of debt service payments would weaken banks' income and capital positions) and the real sector (if households start to repair their wealth positions, it would dent consumption and further depress growth). The observed deterioration in debt serviceability indicators implies that such repayment risks have increased considerably in all three countries.

The rising serviceability risks are partly mitigated by the banking sector reform undertaken over the past years in all three countries and by the build-up of financial or real assets by households. On the latter point, households have in fact expanded their financial assets, though at a slower pace than their liabilities. In 2006, these assets accounted for more than 80% of GDP in Croatia and around 50% and 40% of GDP in the former Yugoslav Republic of Macedonia and Turkey, respectively, far outpacing the corresponding liabilities, and were mainly concentrated in comparatively liquid assets, namely bank deposits, securities and mutual funds (see Chart 9 above).[32] However, debt servicing risks also crucially depend on the dispersion of assets and liabilities among individual households, on which information is scarce. Thus, although the situation for the household sector on aggregate appears favourable, individual households may indeed face considerable difficulties in the case of deteriorating economic conditions.

However, debt-based asset accumulation exposes households to another series of vulnerabilities:

- First, vulnerability to swings in asset prices. Equity prices have been rising in the candidate countries for a number of years, though with partial corrections from late 2007 onwards, and house prices have accelerated too.[33] If sustainable, the higher price levels suggest considerable welfare gains for sizeable parts of the population, but also a risk of a price reversal if economic conditions weaken or interest rates rise.

- Second, vulnerability to currency movements. Currency mismatches are likely to arise if household debt is denominated in foreign currencies, but assets or incomes are in local currency. Available data continue to indicate positive net foreign exchange positions for the household sector as a whole (see Table 30), even though individual households may be exposed to sizeable currency mismatches.[34] In Croatia, the ratio of foreign currency-denominated assets to corresponding liabilities has declined rapidly over the past six years to close to zero.[35]

31 Interest payments as a share of disposable income stood at 2.1% and 4.2% in the former Yugoslav Republic of Macedonia and Turkey respectively, close to the level of 2.7% attained in the euro area. It should be noted, though, that Croatia's figures include loan repayments and are therefore not directly comparable with those of the other candidate countries. The total debt servicing burden of Croatian households as a share of their disposable income stood at 7.0% in 2006 against a ratio of 10.4% in the euro area.

32 It is important to note that financial assets form only part of total household wealth. Indeed, given the major expansion of housing loans in recent years, it appears reasonable to assume that a considerable fraction of household wealth is also concentrated in real estate. However, comprehensive data on the value of these assets is unavailable.

33 In Zagreb, average house prices in 2005 were the same or higher than in Brussels, Vienna or Berlin (see Égert and Mihaljek, 2007).

34 Comprehensive data on the dispersion of foreign currency-denominated assets and liabilities across individual households are unavailable.

35 Croatia's vulnerability may be somewhat smaller than perceived at first sight. Workers' remittances and tourism receipts account for 5% and 20% of GDP respectively. These might represent additional buffers against potential negative foreign exchange shocks, to the extent that some remittances are not completely captured in bank deposits and households receive some tourism receipts directly in foreign currency. See Sorsa et al. (2007).

Table 30 Foreign currency position of household balance sheets in 2006

(EUR billions, unless indicated otherwise)

	Croatia	FYR Macedonia	Turkey
Foreign currency-denominated or -indexed bank deposits	10.9	0.7	40.0
Foreign currency-denominated or -indexed loans	10.2	0.2	0.7
Net foreign currency-denominated or -indexed assets	0.7	0.5	39.3
Net foreign currency-denominated or -indexed assets as a share of net financial assets (%)	*4.4*	*27.3*	*33.6*

Sources: Unicredit New Europe Research Network database, national central banks and own calculations.

Moreover, at end-2006, around 20% of foreign exchange-related loans to the non-financial sector, especially to households, were linked to the more volatile (when measured against the local currency) Swiss franc. By comparison, in the former Yugoslav Republic of Macedonia and Turkey, households are far less exposed to local currency depreciation, given the large share of foreign currency deposits.

- Third, vulnerability due to maturity mismatches. In all countries, maturity risks appear limited in aggregate, as households hold significant amounts of liquid assets (see Table 31). In addition, more stable economic conditions permitted loan maturities to lengthen. In 2007, long-term credit accounted for around 60%, 75% and 90% of Turkey's, the former Yugoslav Republic of Macedonia's and Croatia's household loan stock respectively.

Table 31 Estimates of households' liquid assets and short-term liabilities in 2006

(percentage of total financial assets)

	Croatia	FYR Macedonia	Turkey
Currency	11.4	7.3	8.2
Demand deposits	20.6	7.0	8.6
50% of shares and bonds [1)]	7.2	22.1	5.6
Total liquid assets	**39.2**	**36.5**	**22.4**
Total short term credit [2)]	4.5	3.8	7.3
Net liquid assets	**34.7**	**32.7**	**15.0**

Sources: Unicredit New Europe Research Network database, national central banks and own calculations.
1) The assumption that 50% of these assets are liquid is arbitrary.
2) Less than 32 month maturity.

- Fourth, vulnerability to interest rate movements. Available evidence suggests that lending at floating interest rates is widespread, which could potentially impact households' ability to service their debt, especially in an environment of rising interest rates.[36] However, precise information on fixed and floating components of households' liabilities is hard to obtain.

5.5 A COMPARISON OF FINANCIAL STABILITY INDICATORS WITH THE EU-8

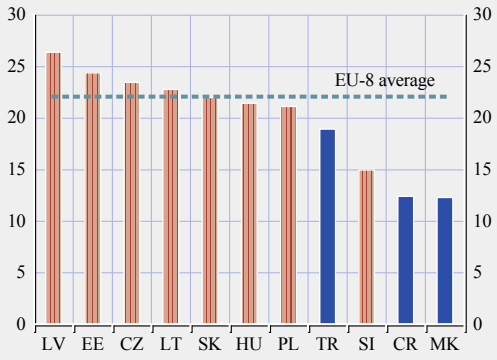
As the candidate countries are experiencing rapid economic and institutional convergence towards the EU, it is useful to compare their financial situation with that in the EU-8. Looking at a list of core financial stability indicators, there are no large systematic differences between the candidate countries and the EU-8, although candidate countries on average score somewhat lower on banks' profitability and asset quality. That said, banks' capital and liquidity levels in candidate countries are relatively high compared with their peers in the EU-8. This in part reflects the different stages of financial sector development across countries and is in line with the broader degree of advancement in terms of economic and institutional convergence.

Banking sector profitability in candidate countries, measured by return on equity (ROE), lagged behind the EU-8 average in 2006, especially for Croatia and the former Yugoslav

36 See ECB (2007b). In Turkey, however, adjustable rate lending was prohibited until recently.

Chart 11 Return on equity of banking sectors in candidate countries and the EU-8 in 2006

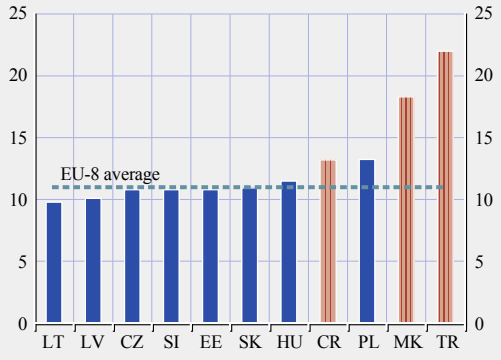
(percentages)



Sources: ECB and national sources.

Chart 12 Capital adequacy ratio of banking sectors in candidate countries and the EU-8 in 2006

(percentages)



Sources: ECB and national sources.

Republic of Macedonia (see Chart 11). However, the lower level of return on equity in candidate countries may partly reflect their higher levels of capital (i.e. lower leverage). In the former Yugoslav Republic of Macedonia, lower profitability may also be explained by the comparatively still high cost of credit risk, although the ratio of provisioning expenses to total income has been continuously decreasing in recent years. In Croatia, the decline in bank profitability in 2006 was due to the fact that operating costs and provisioning costs rose faster than operating income.[37]

Candidate countries also score lower on asset quality, although this is mostly due to the high non-performing loan ratio in the former Yugoslav Republic of Macedonia (11%). In Croatia and Turkey, asset quality indicators are broadly comparable to the average of the EU-8 countries (see Table 32). A slightly different picture emerges, however, if asset quality is measured by the ratio of non-performing loans (net of provisions) to capital. In Turkey and the former Yugoslav Republic of Macedonia, this coverage ratio is significantly lower than the EU-8 average, indicating both adequate provisioning and higher levels of banks' capital in these countries. In contrast, banks in Croatia have the highest non-performing loan to capital ratio among all countries under investigation. As regards indirect credit risk stemming from foreign currency lending, it is notable that both Croatia and the former Yugoslav Republic of Macedonia have relatively high shares of foreign currency (and foreign currency-indexed) loans. The exposure to indirect credit risk via foreign currency lending in Turkey appears to be relatively contained.

37 See CNB (2007).

Table 32 Selected indicators of credit risk for candidate countries and the EU-8 in 2006

		Candidate countries			EU-8		
		Croatia	FYR Macedonia	Turkey	Lowest	Average	Highest
Non-performing loans	% of total loans	3.2	11.8	3.8	0.2	2.1	3.6
Non-performing loans net of provisions	% of capital	12.4	0.7	1.4	1.6	7.4	12.5
Foreign currency loans	% of total loans	70.9	52.7	26.5	10.4	48.4	78.2

Sources: ECB, IMF, World Bank and national sources.
Notes: Foreign currency loans also include foreign currency indexed loans. The ratio of non-performing loans net of provisions to capital is only available for 2005 for the Czech Republic and Latvia.

Table 33 Selected indicators of liquidity risk for candidate countries and the EU-8 in 2006

		Candidate countries			EU-8		
		Croatia	FYR Macedonia	Turkey	Lowest	Average	Highest
Liquid assets	% of total assets	27.5	31.9	48.0	4.5	23.2	36.5
Loan to deposit ratio		92.5	71.7	70.7	69.3	111.1	164.1

Sources: ECB, IMF and national sources.
Note: Liquid assets ratios are based on the IMF FSI methodology and thus may differ from those in the country tables. Nevertheless, liquid assets ratios may still not be fully comparable across countries due to different definitions for liquid assets.

Banks' capital adequacy ratios are significantly higher in the former Yugoslav Republic of Macedonia and Turkey than in the EU-8 (see Chart 12). This mainly reflects the still low level of credit intermediation in the former Yugoslav Republic of Macedonia as well as the high share of risk-free assets in total assets in Turkey. In Croatia, the capital adequacy ratio has been on a downward trend in the past years due to the rapid growth of risk-weighted assets, although its level is well above the average of the EU-8 countries. Generally, persistently high credit growth might put downward pressure on regulatory capital ratios in candidate countries in the future, but current high levels of capital indicate that banks in the candidate countries are relatively well-positioned to absorb potential negative shocks.

The liquidity position of the banking systems of the candidate countries in general appears to be relatively comfortable compared with the EU-8. This is underlined by both high liquid asset ratios and relatively low loan-to-deposit ratios (see Table 33). In particular, banks in the former Yugoslav Republic of Macedonia and Turkey still maintain a significant deposit surplus. Among the candidate countries, Croatia has the highest loan-to-deposit ratio, but it is still below the average of the EU-8 countries. Note however that the EU-8 itself is also rather heterogeneous in this respect, with loan-to-deposit ratios ranging from 69% to 164%. This partly reflects the significant differences in the speed of financial deepening in recent years. In particular, in Baltic countries where credit growth has been very dynamic for a protracted period, bank lending has been increasingly funded from non-deposit sources, mainly through parent bank funding.

6 CONCLUSIONS

Financial systems in Croatia, Turkey and the former Yugoslav Republic of Macedonia are at very different stages of development. However, they are all in a profound transformation process characterised by some common trends, including financial deepening, banking sector consolidation, a continuing decline in the importance of government-owned banks, and a move towards core banking activities, especially in Turkey where banking activity has traditionally been heavily geared towards the government securities markets. Also, the financial landscape in the three countries is changing due to deepening international integration and increasing participation of foreign-owned banks.

This paper argues that this transformation process reflects a natural and welcome catching-up phenomenon. Financial systems are maturing, converging towards EU standards, providing better financial intermediation services and contributing to sustainable economic growth. However, this financial deepening process is also associated with enhanced vulnerability to negative shocks. The paper has identified, in particular, a series of macroeconomic and financial risks.

Macroeconomic vulnerabilities relate, first and foremost, to the uncertain economic outlook and the growing inflationary pressures in each of the three countries. Managing upward risks to prices in an environment of increased macroeconomic uncertainty is a key challenge for monetary policy. A related macroeconomic risk that is specific to the candidate countries is that of a disorderly unwinding of their external imbalances, in particular in Croatia and Turkey, which run large current account deficits. A final macroeconomic risk relates to the structural reform agenda, with risks of policy slippages and delays in particular in the cases of the former Yugoslav Republic of Macedonia and Turkey.

The financial risks to the banking sector mainly relate to the management of credit risk. Credit to the private sector grew at annual real rates above 20% in 2006, although various central bank measures to rein in credit growth have contributed to a slowdown to 14% (year on year) in September 2007. In the former Yugoslav Republic of Macedonia, credit growth has traditionally been more subdued but it has accelerated significantly in recent years, reaching 40% (year on year) in real terms in September 2007. In Turkey, finally, real credit growth has exceeded 20% per annum since 2003 and stood at 36% (year on year) in September 2007.

Rapid credit growth is not a sign of vulnerability in itself, but it may lead to a build-up of risk. Credit growth can reflect catching-up and financial deepening from comparatively low starting levels, especially in market segments that were very small or largely non-existent a few years ago (e.g. mortgage markets in some of the candidate countries). Still, in some increasingly saturated market segments (e.g. credit cards in Croatia and Turkey) competition may force banks to relax lending standards, weaken asset classification and provisioning, and reach out to new customers that lack a strong credit standing. Shortages of well-trained loan officers, the short credit history of many bank customers, possible gaps in documentation and limited experience so far with credit registers may further aggravate the risks in the banks' loan portfolios.

Credit risks seem most pronounced vis-à-vis the household sector. In the former Yugoslav Republic of Macedonia and Turkey household debt as a share of disposable income has come close to levels observed across the countries that joined the EU in 2004, and in Croatia it even surpassed the average level in the euro area. The already elevated debt service burdens could increase further if economic conditions were to worsen, possibly impairing debt service payments and leading to losses for banks. These risks are cushioned at the aggregate level by a sizeable build-up of financial asset holdings of households. However, the broadly favourable net wealth position of the aggregate household sector may mask sizeable differences in the situation of individual households.

Lending to enterprises has grown less buoyantly than lending to households, but still constitutes the largest segment of bank credit in the candidate countries. As a result, corporate sector debt has increased strongly in all three countries and reached relatively elevated levels, in particular in the case of Croatia. Worsening business conditions and a deteriorating macroeconomic environment could put some strain on the corporate sector's debt servicing capacity.

Ensuring healthy financial deepening is therefore one of the main policy challenges ahead in the countries under review. Allowing for the rapid development of fully-fledged credit and deposit markets, without excessive risk-taking and without an excessive build-up of external vulnerabilities, will remain a difficult balancing act for policy-makers, requiring careful judgement, deep analysis and close monitoring.

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