Republic of Croatia: Selected Issues Paper

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INTERNATIONAL MONETARY FUND

REPUBLIC OF CROATIA

Selected Issues

Prepared by Jesmin Rahman (EUR)

Approved by the European Department

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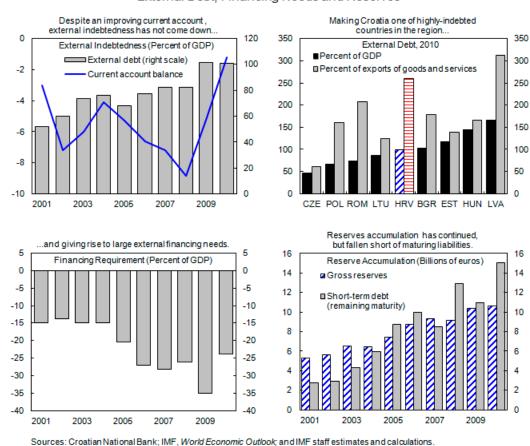
	Contents	Page
I.	Background	2
II.	The Public Sector	
III.	The Central Bank	7
IV.	The Financial Sector	8
V.	Non-Financial Private Sector	9
VI.	Conclusion	10
Tab	les	
1.	International Investment Position, 2001–10	3
2.	Sectoral Net Financial Positions, 2000–10	4
3.	Net Inter-Sectoral Asset and Liability Positions, December 2009	12
4.	Net Inter-Sectoral Asset and Liability Positions, December 2010	14
Refe	erences	16

AN ASSESSMENT OF BALANCE SHEET RISKS IN CROATIA¹

With large external and foreign currency indebtedness and limited reserves, Croatia's economy is highly vulnerable to macroeconomic and financial shocks. While most of these vulnerabilities were built up during the pre-crisis boom years, the crisis has further worsened the situation, exposing Croatian economy's weak fundamentals and a lack of policy space. A sustained recovery hinges on improving competitiveness, maintaining market confidence, and reducing vulnerabilities, which would require a multi-faceted macroeconomic and structural policy response.

I. BACKGROUND

External Debt, Financing Needs and Reserves



1. **Croatia's economy is highly vulnerable**. External debt reached 100 percent of GDP in 2010. In addition to posing risks, such high indebtedness also acts as a drag on growth. Empirical research shows that over one half of defaults on external debt in emerging market countries since 1970 occurred at levels of debt 60 percent of GDP or less. Debt stock above

¹ Prepared by Jesmin Rahman.

this level also slows down a country's growth performance markedly (Reinhart and Rogoff, 2010). Against these benchmarks, Croatia's external indebtedness stands far beyond what is prudent for an emerging market country. High indebtedness has also kept Croatia's debt service payments and external financing requirements large (particularly in light of low export base), exposing Croatia to adverse developments in the international capital market. Similarly, high and rising public debt poses medium-term sustainability concerns.² At the same time, the level of foreign exchange reserves, has fallen behind rising short-term liabilities. These vulnerabilities, which emanate from a high external debt stock, large financing needs and limited reserves, are further accentuated by a highly-euroized domestic financial sector.

Table 1. Croatia: International Investment Position, 2001–10

(Percent of GDP)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Foreign assets	49	45	48	47	45	47	50	48	54	51
Of which:										
Currency and deposits	22	14	17	17	12	12	14	14	13	12
Reserve assets	21	20	22	20	21	22	22	20	23	23
Foreign liabilities	66	71	84	95	101	124	143	123	138	142
Of which:										
Foreign direct investment in Croatia	17	21	23	28	34	53	71	49	55	56
Public and private sector bond issuance	17	15	16	16	14	11	10	9	11	13
Loans	27	26	35	37	41	44	47	52	56	57
General government	5	6	6	7	7	7	6	3	3	4
Banks	7	7	11	13	14	14	10	10	10	9
Other sectors	14	14	16	18	20	24	31	39	42	43
Net international investment position	-17	-26	-36	-48	-56	-77	-93	-75	-84	-91
Memorandum item										
Corporate and banking sector's debt liabilities	26	30	39	45	38	42	45	53	56	57

Sources: Croatian National Bank; and IMF staff calculations.

2. Much of these vulnerabilities were built up during the pre-crisis years of 2002-07 when Croatia experienced a credit boom largely funded by external capital inflows.

Croatia's net International Investment Position (IIP) deteriorated sharply during this period reaching -93 percent of GDP at end-2007 (Table 1). This massive deterioration was caused by a more-than-doubling of gross external liabilities relative to GDP, as gross foreign assets slightly improved. While foreign direct investment (FDI) was a major contributor, about a quarter of FDI inflows were in the form of borrowing from mother companies making debt the largest element in Croatia's external liabilities. Since 2007, increased cross-border

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² Under staff's baseline scenario, public debt is expected to rise above 50 percent of GDP (above 70 percent, including guarantees) in the medium-term and, even with successful implementation of the recently-adopted Fiscal Responsibility Law, would remain close to 50 percent (above 65 percent, including guarantees). Empirical analyses show that once the stock of public debt exceeds 50 percent of GDP in an emerging market country, ensuring debt sustainability via policy action (such as reduction in the primary deficit) becomes weak (IMF, 2003). More recent empirical analysis shows an even lower safe threshold for public debt for emerging market economies (Baldacci and others, 2011).

³ In addition, only a quarter of the FDI has flown into the tradable sector. Financial sector, which has received the largest share, accounts for close to 40 percent of the overall stock.

borrowing by corporates has magnified the external debt further. At end-2010, Croatian economy's large negative net external financial balance is mostly due to its corporate sector (Table 2).

Table 2. Croatia: Sectoral Net Financial Positions 2000-10 (Percent of GDP)

,	,			
	2000	2005	2009	2010
All domestic sectors				
Net external position 1/	-22	-39	-54	-57
Central Bank				
Net external financial position	18	24	23	24
Net foreign currency position	14	18	21	21
Net short-term foreign currency position	14	18	21	22
General Government				
Net external financial position	-26	-22	-11	-13
Net foreign currency position	-24	-26	-19	-21
Net short-term foreign currency position	0	0	0	1
Private financial sector				
Net external financial position	1	-14	-9	-11
Net foreign currency position	4	11	20	22
Net short-term foreign currency position	-2	-12	-15	-17
Private non-financial sector				
Net external financial position	-15	-27	-56	-56
Net foreign currency position	-11	-31	-62	-62
Net short-term foreign currency position	19	18	18	18

^{1/} External liabilities do not include equity capital and reinvested earnings. Source: For 2000 and 2005, SM/07/39, and for 2009 and 2010, Tables 3 and 4.

3. Using the Balance Sheet Approach (BSA), this paper analyzes Croatia's overall and sectoral vulnerabilities. We look at the disaggregated balance sheet data from the central bank, public sector, and financial and non-financial private sectors for 2009 and 2010 (Tables 3 and 4). Financial assets and liabilities are disaggregated into domestic and foreign currencies, and into short and long-term maturities. The following analysis fleshes out the key vulnerabilities in each of these four main sectors. The discussion also offers some policy recommendations.

II. THE PUBLIC SECTOR⁵

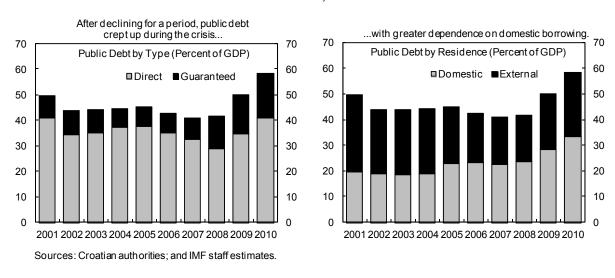
4. Public sector debt, including debt guaranteed by the government, after declining by 10 percentage points of GDP during 2002-07, rose to 58 percent at end-2010. Most of the debt consolidation during 2002-07 was due to lower borrowing needs of the central government, as pro-cyclical revenues from domestic demand boom helped keep the headline

⁴ The balance sheet analysis in this paper builds on the work presented in Hilaire and Ilyina, 2007.

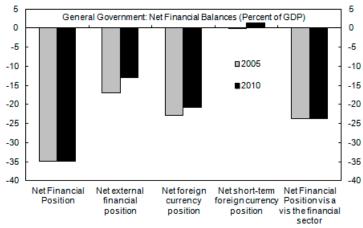
⁵ Public sector includes the central government, extra-budgetary units, and the local and regional self-government units.

deficits low. The guaranteed part of the debt stock also declined as a share of GDP during this period, despite increased borrowing by the state-owned development bank HBOR, as other agencies scaled down their borrowing. Since the onset of the financial crisis, the sharp drop in revenues ratcheted up public sector's borrowing needs despite efforts to curb expenditure, exposing the vulnerabilities inherent in a pro-cyclical fiscal policy stance and lack of comprehensive expenditure reforms.

Public Debt, 2001-10



- 5. The composition of public debt has evolved over time with a greater dependence on domestic and fixed-rate borrowing, which has reduced risks of sudden outflow and interest rate increases. The government's debt management strategy has favored domestic over external financing, and fixed-rate bonds over variable-rate syndicated loans. As a result, the share of external debt in total public debt declined from 63 to 43 percent between end-2001 and end-2010, and the share of fixed-rate bonds in total has increased to 80 percent. Consequently, public debt is now somewhat less vulnerable to sudden capital outflows and interest rate changes than a decade ago.
- dependence on domestic finance has kept some other risks elevated. Reliance on the domestic market for financing has increased the share of short-term debt from 7 percent at end-2001 to 17 percent at end-2010. Roll-over risks are somewhat muted at this time given that all short-term debt is held domestically. Greater dependence on the domestic market



Sources: Croatian authorities; and IMF staff estimates.

has however failed to substantially reduce currency risks as close to 60 percent of domestic public debt is denominated in or linked to foreign currency (mostly in euros). ⁶ Public sector's net foreign currency indebtedness is larger than its net external indebtedness, and at 19 percent of GDP, it is sizable and makes public sector's balance sheet vulnerable to exchange rate pressures. Public sector's substantive and increasing net negative exposures to the domestic banking sector also raises potential crowding out concerns. The share of credit to the government, at 20 percent of total banks' outstanding credit, is non-negligible and warrants monitoring, particularly if fiscal deficits are increasingly financed through the domestic banking sector.

- 7. **A rising guaranteed debt stock creates another source of vulnerability.** About 60 percent of the guaranteed debt is owed to external creditors, mostly by the state-owned development bank HBOR. As experience from the recent restructuring of the shipyards shows, there is a risk that some of the guarantees may become actual liabilities due to privatization or financial difficulties in enterprises receiving these guarantees. Given that Croatia's public debt management strategy does not cover guarantees and aims to stabilize only the direct debt, there is currently no mechanism to prevent a continued rise in the guaranteed stock, which are mostly in foreign currency, and associated vulnerabilities.
- 8. Going forward, an expenditure-based fiscal consolidation and a sound debt management strategy remain crucial to reducing vulnerabilities in the public sector. The recently-adopted Fiscal Responsibility Law (FRL), which intends to reduce expenditure by one percent of GDP annually until a primary balance is reached, is a move in the right direction. However, to ensure debt sustainability, fiscal consolidation should aim to achieve a cyclically-adjusted balanced budget in the medium term. The authorities' current debt management strategy, which aims to reduce the share of external and flexible rate debt, remains appropriate but should be strengthened to take account of the guaranteed debt. In addition, policies to increase domestic currency finance of public debt would be important to reduce exchange rate related risks.⁷

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⁶ There are currently four outstanding domestic currency bonds with maturities between 7-10 years representing 40 percent of total domestic medium- and long-term debt.

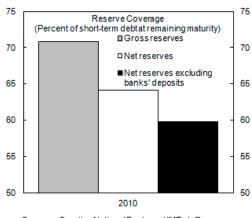
⁷ Experience in Latin American countries, that have successfully increased the share of domestic currency component of public debt, shows that replacing foreign-currency denominated and linked public bonds with inflation indexed bonds helped establish credibility in the interim for an eventual move to domestic currency financing of public sector.

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III. THE CENTRAL BANK

9. Reserves accumulation continued during the crisis, but has not kept pace with maturing liabilities. Facilitated by public sector borrowing and tourism receipts, accumulation of foreign exchange reserves continued during the financial crisis despite

prudential easing to release a portion of banks' foreign exchange reserves built up during the boom years. While reserve coverage with respect to imports and broad money remains adequate, the coverage of short-term liabilities, which carry a greater weight for economies with an open capital account like Croatia, is relatively limited. As of end-2010, gross and net reserves cover less than 75 and 65 percent of short-term liabilities (at remaining maturity), respectively. Also, a portion (6 percent) of the foreign exchange reserves correspond to commercial



Sources: Croatian National Bank; and IMF staff

banks' deposits at the CNB, which may not be fully available for use as buffers at all times. If we exclude these deposits from the net international reserves, the coverage of short-term debt (at remaining maturity) further reduces to below 60 percent. On the other hand, lower reserves coverage is somewhat mitigated by the fact that half of all short-term maturing liabilities are due to FDI-related inter-company debt and banks' debt to parent institutions, which carry lower roll-over risks.⁸

10. In light of the authorities' preference for a stable exchange rate policy, maintaining adequate level of reserves is critical to ensure financial stability and increase shock absorption capacity. This will need to depend on a combination of continued reserve accumulation, but more importantly on the reduction of stock vulnerabilities. Given that capital inflows are likely to settle at levels much lower than their pre-crisis levels, going forward reserve accumulation will have to depend more on exports proceeds than in the past. Achieving higher exports will require a sleuth of policy actions to enhance the performance of the tradable sector. A combination of structural reforms that

⁸ Croatia's reserves also fall short of a composite metric consisting of a weighted sum of exports, broad money, short-term debt and medium- and long-term non-FDI liabilities. According to this metric, which captures all possible sources of foreign currency pressures, Croatia's reserves at end-2010 are about 20 percent below the recommended minimum. See IMF, 2011 for details on the rationale for and the construction of the reserve metric.

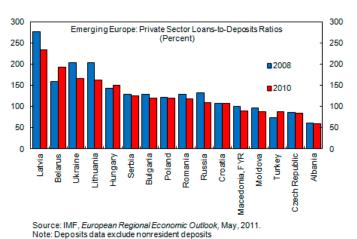
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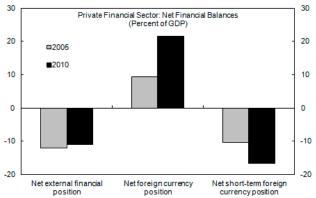
⁹ Large balance sheet exposures to foreign currency risks reinforce authorities' preference for exchange rate stability. For example, 10 percent depreciation would increase net indebtedness of the public and non-financial private sector by 8 percent of GDP, with substantial negative impact on the banking sector both through rising non-performing loans (NPLs) and possible currency shifts or withdrawal of deposits.

enhance the business environment and labor force participation, and a competitive wage policy is likely to bring more FDI into tradable sectors, lower Croatia's dependence on debt financing, and facilitate reserves accumulation through higher exports.

IV. THE FINANCIAL SECTOR¹⁰

11. Croatia's financial sector balance sheet is exposed to liquidity, contagion, and currency risks. While the loan-to-deposit ratio at 107 percent is low relative to the region, liquidity risks arise from dependence on foreign banks for funding. As domestic lending exceeds domestic deposits, the gap is filled by banks' borrowing from abroad. The financial sector's net external debt stood at 10 percent of GDP at end-2010, mostly owed to foreign parent banks. Given that parent banks had kept their exposure throughout the crisis, the liquidity risks are somewhat mitigated. However, the level and degree of support from parent banks would depend on general market conditions and the health of parent banks themselves, exposing Croatia to contagion risks. Potential problems in a parent bank or a fundamental reassessment of Croatia's growth potential could translate into reduced support or higher financing costs. While the banking sector's net foreign currency position remains positive and has strengthened in recent years, net short-term foreign currency position, at -15 percent of GDP, exposes the sector to currency risks in the short run.





12. The large degree of euroized lending to mostly un-hedged borrowers also exposes banks to risks of rising NPLs from depreciation. The share of foreign-currency linked or denominated loans at close to 75 percent, for both corporates and households, is very high. Exchange rate related

Sources: Croatian authorities; and IMF staff estimates.

100

Deposit Banks: Share of FX and FX-linked Loans in Total Portfolio (Percent), end-2010

75

Benterprises
Households

50

ST

LT

Total

Sources: Croatian authorities; and IMF staff estimates.

¹⁰ Financial sector includes deposit banks and non-bank financial institutions.

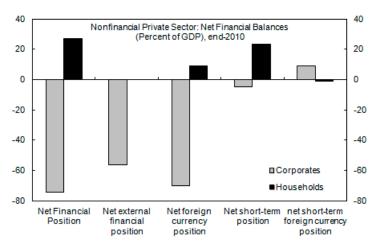
shocks are relevant for both the corporate sector, where half of short-term loans are denominated in or linked to foreign currency, and households which rely on kuna income. Recent estimates by the CNB show that one percent depreciation in the exchange rate could result in a 7 percent increase in NPLs (CNB, 2010b). The banking sector's current level of capitalization and profitability however suggests that recapitalization needs from a moderate downward movement in the exchange rate would be manageable without the need to raise additional capital.

13. **CNB's pro-active prudential policies have contributed to the stability of the financial system.** The CNB adopted a number of measures during the boom years to reduce banks' borrowing abroad and build capital and liquidity buffers which were useful during the crisis. In the current environment, the risks of a capital-inflow-driven credit boom remain low. Nevertheless, maintaining strong buffers in the financial system is important to counter risks from a high degree of euroization.

V. NON-FINANCIAL PRIVATE SECTOR

14. **Croatia's private corporate sector is highly leveraged.** Overall net indebtedness has continued to increase during the crisis and reached over 70 percent of GDP by end-2010.

While roll-over pressures remain low given the mostly long-term nature of the debt, the high level of net foreign currency indebtedness exposes this sector to exchange rate risks. Corporate exposure to currency risk has grown in recent times as new currency-indexed loans have largely been granted to corporates in the non-tradable sector. Certain sectors (real estate and construction, transport,



Sources: Croatian authorities; and IMF staff estimates.

communication, hotel and restaurants), where the share of foreign currency denominated or linked debt is as high as 90 percent, currency risks are particularly high. In addition, around 95 percent of total lending to corporates carries an interest rate that is variable within a year posing risks from interest rate fluctuations.

15. While households on aggregate have a net positive financial position on account of large deposits, gross household indebtedness is one of the highest in the region

¹¹ These measures included marginal reserve requirements, special reserve requirements, credit ceilings, and FX liquidity requirements. For an analysis of their usefulness during the crisis, see Galac (2010).

(CNB, 2010a). At 41 percent of GDP and 85 percent of disposable income, household gross indebtedness (mostly to domestic banks) is comparable to that of some core EU economies. Households spend nearly 7 percent of their disposable income on interest payments. High indebtedness and the ensuing deleveraging, together with the sluggish labor market conditions, poses a drag on consumption, and economic recovery. Large foreign-currency debt (about 70 percent of household debt) and variable interest rate structure of loans (96 percent of all household loans are issued with interest rate variable within a year) make households also vulnerable to exchange rate and interest rate risks.

VI. CONCLUSION

- 16. Large balance sheet vulnerabilities across sectors compromise Croatia's ability to counter macroeconomic shocks, and have weighed down its growth prospects. While Croatia has weathered the most recent crisis, thanks to the strong pre-crisis prudential policies and parent banks' willingness to keep or even increase exposures, the economy's capacity to tackle another major macroeconomic or financial shock is limited. Large balance sheet vulnerabilities constrain exchange rate policy options, and, together with pervasive structural rigidities and a lack of fiscal policy space, diminish the economy's ability to withstand shocks. While the worst of the recession is behind, resuming sustainable growth in the medium term remains a challenge. A small export sector is not providing the needed pull for growth. Households are still deleveraging and any downturn in investor sentiment could trigger corporate sector deleveraging, which would only prolong the recovery.
- 17. Orderly unwinding of vulnerabilities and a reversal of Croatia's brittle fundamentals requires a multi-faceted policy response. Given the stable exchange rate policy, a consistent set of structural, fiscal, monetary and prudential policies are needed for sustained growth and reduced vulnerabilities.
- Reducing external indebtedness of the economy requires policies that enhance competitiveness and growth potential, and lower reliance on debt-financed and domestic absorption-driven growth. This, in turn, requires corrective wage and structural policies that would increase tradable sector's contribution to growth, enhance economy-wide productivity, and allow financing of external current account deficits through higher non-debt creating flows (FDI).
- Reducing public sector indebtedness requires reduction of public expenditures to achieve a cyclically-adjusted balanced budget in the medium term. Care should be given to potential crowding out concerns and currency risks as authorities pursue greater reliance on domestic financing. Pursuit of policies to increase the share of domestic currency finance would be appropriate.
- Croatia should also continue to build up reserves to enhance its ability to absorb shocks. Large prudential foreign currency buffers should be maintained to safeguard the stability of the highly-euroized financial sector.

Table 3. Croatia: Net Intersectoral Asset and Liability Positions, December, 2009 (Millions of Croatian kuna)

Issuer of liability (debtor):						Public	Sector					
Holder of liability (creditor):		Central Banl	<	Cent	ral Governr	ment	State and	d Local Gov	vernment		lic Nonfinar Corporation	
	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position
Central bank Domestic currency Short-term Long-term Foreign currency Short-term Long-term				4,218 1,885 1,885 0 2,332 2,332 0	3 3 0 0 0	4,215 1,883 1,883 0 2,332 2,332 0	0 0 0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0	0 0 0 0 0
Central government Domestic currency Short-term Long-term Foreign currency Short-term Long-term	3 3 0 0 0	1,885 1,885 0 2,332 2,332	-4,215 -1,883 -1,883 0 -2,332 -2,332 0				 					
State and local government Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 0 0	0 0 0 0	0 0 0 0 0 0	 		 						
Public nonfinancial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 0 0	0 0 0 0	0 0 0 0 0	 			 					
Other depository corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	14 14 14 0 0 0	37,220 37,220 0 5,042 5,042	-42,248 -37,206 -37,206 0 -5,042 -5,042	18,273 15,173 4 15,169 3,100 0 3,100	44,716 19,192 19,100 92 25,524 1,280 24,244	-26,444 -4,019 -19,095 15,076 -22,424 -1,280 -21,144	1,917 1,595 570 1,025 322 628 -306	2,101 880 61 819 1,221 282 939	-184 714 509 206 -898 346 -1,245	2,007 526 262 264 1,481 1,322 159	804 1,896 6,448 1,841	-7,141 -2,174 -542 -1,631 -4,967 -519 -4,448
Other financial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	1 1 1 0 0 0	0 0 0 0 0	1 1 1 0 0	0 0 0 	29,656 5,931 5,931 0 23,725 0 23,725	-29,656 -5,931 -5,931 0 -23,725 0 -23,725	-300 0 0 0	0 0 	0 0 0	0 0 0	0 0 	0 0 0
Nonfinancial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	18 18 0 18 0 0	0 0 0	18 18 0 18 0 0	 								
Other resident sectors Domestic currency Short-term Long-term Foreign currency Short-term Long-term	10 10 0 10 0 0	0 0 0 0 0 0	10 10 0 10 0 0	 		 	 					
Nonresidents Domestic currency Short-term Long-term Foreign currency Short-term Long-term	75,848 0 0 75,848 73,389 2,459	8 1 1 1 0 8 8	75,840 -1 -1 0 75,841 73,381 2,459	138 138 138	37,738 37,738 0 37,738	-37,600 -37,600 138 -37,738	 					

Table 3. Croatia: Net Intersectoral Asset and Liability Positions, December, 2009 (continued) (Millions of Croatian kuna)

			Financia	I Sector				N	Ionfinancial F	Private Sect	or		Res	st of the Wo	orld
	Other De	pository Co	rporations	Other Fir	nancial Cor	porations	Nonfina	ancial Corp	orations	Other	Resident S	ectors	1	Nonresident	.s
	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position
Central bank Domestic currency Short-term	42,261 37,220 37,220	14 14 14	42,248 37,206 37,206	0 0	1 1 1	-1 -1 -1	0 0	18	-18	0 0	10 10 0	-10	8 1 1	75,848 0 0	1
Long-term Foreign currency Short-term Long-term	5,042 5,042 0		5,042 5,042	0 0 0	0 0 0	0	0 0 0	0 0	0	0 0 0	10 0 0	0	0 8 8	75,848 75,848 0	-75,841
Central government Domestic currency Short-term Long-term Foreign currency Short-term	44,716 19,192 19,100 92 25,524 1,280	18,273 15,173 -18,818	26,444 4,019 37,917 -33,898 22,424 1,280	29,656 5,931 5,931 0 23,725	0 0 0	29,656 5,931 5,931 0		 					37,738 37,738 0	138 138 138	37,600 37,600
Long-term State and local government	24,244 2,101	3,100 1,917	21,144 184	23,725		23,725							37,738 	0	
Domestic currency Short-term Long-term Foreign currency Short-term	880 61 819 1,221 282	1,595 570 1,025 322 628	-714 -509 -206 898 -346	0 0 	0 0		 					 	 		
Long-term Public nonfinancial corporations Domestic currency Short-term	939 9,147 2,700 804	2,007	1,245 7,141 2,174 542	0 0	0 0										
Long-term Foreign currency Short-term Long-term	1,896 6,448 1,841 4,607	264 1,481 1,322 159	1,000 4,967 519 4,448	 0 	 0 	 0 			 	 		 			
Other depository corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term				16,803 9,916 6,841 3,076 6,887 6,488 399	1,818 1,220 654 566 598 598	8,696 6,187 2,509 6,289	45,860 26,407 7,887 18,519 19,453 11,240 8,214	96,978 31,726 14,219 17,506 65,252 18,545 46,707	-5,319 -6,332 1,013 -45,799	146,412 31,900 11,809 20,091 114,512 63,762 50,751	78,970 -7,506 11,154 -18,660 86,476 2,010 84,466	39,406 655 38,751 28,036 61,752	81,225 19,228 3,400 15,828 61,997 17,864 44,133	49,770 17 195 -178 49,753 17,320 32,433	31,455 19,211 3,205 16,006 12,244 544 11,700
Other financial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	1,818 1,220 654 566 598 598	9,916 6,841 3,076 6,887 6,488	-14,985 -8,696 -6,187 -2,509 -6,289 -5,890 -399				0 0 0 	0 0 0 		53,466 53,466 10,693 42,773 0	0 0 0 0 0	53,466 10,693 42,773	0 0 0 0	0 0 0 0	0 0 0 0
Nonfinancial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	96,978 31,726 14,219 17,506 65,252 18,545 46,707	26,407 7,887 18,519 19,453	51,118 5,319 6,332 -1,013 45,799 7,306 38,494	0 0 0	0 0 0	0 				 			208,704 208,704 5,545 203,159	20,657 20,657 9,432 11,225	188,047 188,047 -3,887 191,934
Other resident sectors Domestic currency Short-term Long-term Foreign currency Short-term Long-term	78,970 -7,506 11,154 -18,660 86,476 2,010 84,466	146,412 31,900 11,809 20,091 114,512 63,762	-67,442 -39,406 -655 -38,751 -28,036 -61,752 33,716	0 0 0 0 0	53,466 53,466 10,693 42,773 0	-53,466 -53,466 -10,693 -42,773	 		 						
Nonresidents Domestic currency Short-term Long-term Foreign currency Short-term Long-term	49,770 17 195 -178 49,753 17,320 32,433	19,228 3,400 15,828 61,997 17,864	-31,455 -19,211 -3,205 -16,006 -12,244 -544 -11,700	0 0 0	0 0 0	0 	20,657 20,657 9,432 11,225	5,545	 -188,047 3,887			 			

Sources: Croatian National Bank; Ministry of Finance; and IMF staff estimates.

^{1/} Includes trade credit/advances, settlement accounts, new equity of households in life insurance and pension funds (if applicable).
2/ Claims of ODCs do not include 2.2 billion kuna of currency holdings and 5.4 billion kuna of non-financial assets; Liabilities of ODCs do not include 23.8 billion kuna of equity contributions by owners and 8.8 billion kuna of loss provisions.

Table 4. Croatia: Net Intersectoral Asset and Liability Positions, December, 2010 (Millions of Croatian kuna)

Issuer of liability (debtor):						Public	Sector					
Holder of liability (creditor):		Central Ban	k	Cen	tral Governi	ment	State an	d Local Gov	vernment		lic Nonfinar Corporation	
	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position
Central bank Domestic currency Short-term Long-term Foreign currency Short-term Long-term				5,414 2,687 2,687 0 2,726 2,726	0	5,414 2,687 2,687 0 2,726 2,726 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0 0
Central government Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 0 0 0	2,687 2,687 0 2,726 2,726	-5,414 -2,687 -2,687 0 -2,726 -2,726				 		 	 		
State and local government Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 0 0	0 0 0 0	0 0 0 0 0									
Public nonfinancial corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0					 	 			
Other depository corporations Domestic currency Short-term Long-term Foreign currency Short-term Long-term	13 13 13 0 0 0	36,956 36,956 0 4,773 4,773	-41,717 -36,944 -36,944 0 -4,773 -4,773	19,930 16,144 31 16,113 3,786 0 3,786	23,217 21,584 1,634 27,561 246	-30,849 -7,074 -21,553 14,479 -23,775 -246 -23,529	1,683 1,480 712 769 203 1,328 -1,125	2,446 1,322 247 1,075 1,124 50 1,074	-762 158 465 -307 -921 1,278 -2,199	3,004 751 407 344 2,253 1,907 347	9,147 2,699 916 1,783 6,449 1,644 4,804	-6,143 -1,948 -509 -1,439 -4,195 262 -4,458
Other financial corporations Domestic currency Short-term Long-term Foreign currency Short-term	1 1 1 0 0	0 0 0	1 1 1 0 0	0 0 0	41,307 8,261 8,261 0	-41,307 -8,261 -8,261 0 -33,046	0 0 0	0 0 0	0 0 0	0 0 0	0 	
Long-term Nonfinancial corporations Domestic currency Short-term Long-term	0 19 19 0 19 0	0 0 0	0 19 19 0 19	 	33,046	-33,046 						
Foreign currency Short-term Long-term Other resident sectors Domestic currency Short-term	0 0 10 10 0	0 0 0 0	0 0 10 10	 	 	 	 			 		
Long-term Foreign currency Short-term Long-term Nonresidents	10 0 0 0 78,772	0 0	10 0 0 0 78,764	 195		 -43,284	 			 		
Domestic currency Short-term Long-term Foreign currency Short-term Long-term	0 0 0 78,772 76,099 2,673	0 0 0 8 8 8	0 0 0 78,764 76,091 2,673	 195 195 0	 43,479 0	-43,284 195 -43,479						

Table 4. Croatia: Net Intersectoral Asset and Liability Positions, December, 2010 (continued) (Millions of Croatian kuna)

Issuer of liability (debtor):			Financia	I Sector				N	onfinancial F	Private Sect	or		Res	t of the Wo	orld
Holder of liability (creditor):	Other De	pository Cor	porations	Other Financial Corporations			Nonfina	ncial Corp	orations	Other	Resident S	ectors	Nonresidents		
	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position	Claims	Liabilities	Net position
Central bank	41,730	13	41,717	0	1	-1	0	19	-19	0	10	-10	9	78,772	-78,764
Domestic currency	36,956	13	36,944	0	1	-1	0	19	-19	0	10	-10	0	0	0
Short-term	36,956		36,944	0		-1	0		-19	0		0	0	0	0
Long-term	0	-	0	0		0	0		0	0		-10	0	0	0
Foreign currency	4,773		4,773	0		0	0		0	0		0	8	78,772	
Short-term	4,773		4,773	0		0	0	0	0	0		0	8	78,772	-78,764
Long-term	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central government	50,778		30,849	41,307	0	41,307							43,479	195	43,284
Domestic currency	23,217	16,144	7,074	8,261	0	8,261									
Short-term	21,584	-20,335	41,919	8,261		8,261									
Long-term	1,634		-34,845	0		0									
Foreign currency	27,561	3,786	23,775	33,046		33,046							43,479	195	43,284
Short-term	246		246	0		0		***		***	***	***	0	195	-195
Long-term	27,316		23,529	33,046		33,046							43,479	0	43,479
State and local government	2,446		762	0	0	0									
Domestic currency	1,322		-158	0	0	0									
Short-term	247	712	-465												
Long-term	1,075		307												
Foreign currency	1,124	203	921	0		0				***	***	***		***	
Short-term	50		-1,278	***		***			***			***			
Long-term	1,074	-1,125	2,199												***
Public nonfinancial corporations	9,147	3,004	6,143	0	0	0									
Domestic currency	2,699		1,948	0	0	0									
Short-term	916		509												
Long-term	1,783	344	856												
Foreign currency	6,449		4,195	0	0	0									
Short-term Long-term	1,644 4,804	1,907 347	-262 4,458			***									
•	4,004	347	4,430												
Other depository corporations Domestic currency Short-term				14,348 7,891 5,176	2,237	10,847 5,654 3,722	45,359 24,746 6,551	106,083 35,741 18,644	-60,725 -10,995 -12,093	158,046 33,725 12,202	34,092	29,612 -367 730	83,925 22,273 5,595	47,338 -97 142	36,588 22,370 5,453
Long-term				2,715		1,931	18,195	17,097	1,098	21,523		-1,096	16,678	-239	16,917
Foreign currency				6,457	1,264	5,194	20,613		-49,730	124,321	94,342	29,979	61,652	47,435	14,218
Short-term				4,933		3,669	10,375	18,377	-8,002	67,975		65,511	16,882	14,829	2,053
Long-term				1,524	0	1,524	10,237	51,965	-41,728	56,346	91,878	-35,532	44,770	32,606	12,165
Other financial corporations	3.501	14.348	-10.847				0	0	0	60.859	0	60.859	0	0	0
Domestic currency	2,237	7,891	-5,654				Ō	0	Ö	60,859	Ō	60,859	0	Ō	0
Short-term	1,454	5,176	-3,722							12,172	0	12,172			
Long-term	783	2,715	-1,931							48,687	0	48,687			
Foreign currency	1,264	6,457	-5,194				0	0	0	0	0	0	0	0	0
Short-term	1,264	4,933	-3,669										0	0	0
Long-term	0	1,524	-1,524										0	0	0
Nonfinancial corporations	106,083	45,359	60,725	0	0	0							208,838	20,706	188,131
Domestic currency	35,741	24,746	10,995	0	0	0									
Short-term	18,644	6,551	12,093												
Long-term	17,097	18,195	-1,098												
Foreign currency	70,343		49,730	0	0	0							208,838	20,706	
Short-term	18,377	10,375	8,002										5,397	9,432	-4,035
Long-term	51,965		41,728										203,441	11,274	192,167
Other resident sectors	128,434		-29,612	0		-60,859			***						
Domestic currency Short-term	34,092 11,473		367 -730	0	60,859 12,172	-60,859 -12,172									
Long-term	22,619		1,096	0	48,687	-12,172 -48,687									
Foreign currency	94,342		-29,979	0		-40,007									
Short-term	2,464	67,975	-65,511												
Long-term	91,878		35,532												
Nonresidents	47,338		-36,588	0	0	0	20,706								
Domestic currency	47,338 -97		-36,588	0	0	0		200,038	-188,131						
Short-term	142	, .	-5,453												
Long-term	-239		-16,917												
Foreign currency	47,435		-14,218			0	20.706	208.838	-188.131						
Short-term	14,829		-2,053				9,432	5,397	4,035						
Long-term	32,606		-12,165				11,274		-192,167						

Sources: Croatian National Bank; Ministry of Finance; and IMF staff estimates.

^{1/} Includes trade credit/advances, settlement accounts, new equity of households in life insurance and pension funds (if applicable).
2/ Claims of ODCs do not include 2.2 billion kuna of currency holdings and 5.4 billion kuna of non-financial assets; Liabilities of ODCs do not include 23.8 billion kuna of equity contributions by owners and 8.8 billion kuna of loss provisions.

References

Baldacci, E., I. Petrova, N. Belhocine, G. Dobrescu, and S. Mazraani. "Assessing Fiscal Stress," IMF Working Paper No. 11/100, May 2011.

Berkmen, S. P., and E. Cavallo, 2007. "Exchange Rate Policy and Liability Dollarization: What Do the Data Reveal about Causality?" IMF Working Paper No. 07/33, June 2007

Croatian National Bank, "Financial Stability Report", July 2010.

Croatian National Bank, "Note on Revisions to the Macroeconomic Credit Risk Model Used in Banking Sector Stress Testing", November 2010 (unpublished).

European Bank of Reconstruction and Development, 2010. "Recovery and Reform", Chapter 3, EBRD 2010 Transition Report.

Galac, T. 2010. "The Central Bank as Crisis Manager in Croatia—A Counterfactual Analysis," CNB Working Paper no. 27, December 2010.

Hilaire, A. and A. Ilyina, 2007. "External Debt and Balance-Sheet Vulnerabilities in Croatia," Croatia: Selected Issues Paper, SM/07/39.

Honig, A. 2009. "Dollarization, Exchange Rate Regimes and Government Quality," Journal of International Money and Finance, volume 28.

International Monetary Fund, 2011. "Assessing Reserve Adequacy" SM/11/31, February 2011.

International Monetary Fund, 2003. "Public Debt in Emerging Markets: Is It Too High?" Chapter 3, World Economic Outlook, October 2003.

Reinhart, C. and K. Rogoff, 2010. "Growth in a time of debt," NBER Working Paper No. 15639.