

**EXTERNAL VULNERABILITIES, FINANCIAL
MARKETS AND POLITICS: CASES OF CROATIA
AND HUNGARY**

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Abstract

This paper looks into the relations between external vulnerabilities, crises and politics and tries to see how they influence financial markets' decisions and investors' risk perceptions.

I will use case studies of Croatia and Hungary, as two countries, which experienced different valuation of the financial markets in a time of the 2008 financial crisis. This paper, however, does not only address economic side of the problem but also tries to look on these issues from the political perspective.

Also, solvency and liquidity testing will be performed, as well as balance sheet approach, to determine the levels of vulnerabilities of Croatia and Hungary.

The major finding is that politics possesses good explanatory power in evaluating the risks connected with external vulnerabilities, sudden stops and capital flight. Despite this, a stable central bank also contributes to the overall macroeconomic stability and credibility of a country.

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Introduction

*"Investors have the memories of elephants, the hearts of lambs,
and the legs of hares".¹*

Luigi Einaudi,

Economic history has shown that capital flows are unpredictable and sensitive to economic and political instability. Nobody could have predicted that countries with positive macroeconomic fundamentals, like East Asian countries, could have suffered such a sudden capital reversals and a big crisis.

The current financial crisis revealed once again that all the economies in the world are fragile to negative changes in the economic environment. Those economies with huge vulnerabilities seem to react most dramatically to negative changes. One of the most affected countries during the crisis was Hungary, who was forced to ask for the IMF assistance in October 2008. The problems originated from the investors' reluctance to acquire or hold risky investments and in this architecture, Hungary was perceived to be a place to avoid². Also, it is important to mention, that the financial crisis in Hungary was not panic-driven.³ The most visible sign of a low trust in the Hungarian financial market were auctions of the new government debt instruments that

¹ Michael Tomz, "Do International Agreements Make Reforms More Credible? The Impact of NAFTA on Mexican Stock Prices", Annual Meeting of the American Political Science Association, Washington 1997. P.2

² Julius Horvath, "2008 Hungarian Financial Crisis", CASE Network E-briefs, (January 2009), p.1

³ Ibid.

completely failed, as well as widely present reluctance for possession of domestic currency bonds.⁴

With the change of economic and social system, Hungary could follow the market economy path, but with certain burdens from the past. Namely, the country inherited the debt from the previous regime, which was 90% of GDP⁵. Since then followed the period of attracting huge amounts of FDI inflows.

Croatia, on the other hand followed slightly different path than Hungary. First of all, Croatian experiences with the socialism (Yugoslav self-management) and transition were different. For example the first wave of FDI inflows to Eastern Europe avoided Croatia because of the war and later due to country's self-isolation. Considering the external debt burden, Croatia left Yugoslavia with relatively modest debt, which was around 2, 8 billion USD.⁶

Of all sectors in the economy, the banking sector attracted a lion's share of FDI in CEE and SEE, and both Croatia and Hungary were no exceptions from this rule. Despite negative experiences with the state-owned banks in the early 1990s and huge amount of money spent to restructure them, eventually they were sold to foreign banking groups, notably from the Western Europe (Italian and German banking groups mostly). This positively affected both the banking system and the overall economy by providing efficiency, lower interest rates, profitability and stability.

⁴ Zsolt Darvas, "The rise and fall of Hungary", *Guardian*, (29 October 2008), available at <http://www.guardian.co.uk/business/blog/2008/oct/29/hungary-imf>, (accessed June 2009)

⁵ Horvath (2009), p.1

⁶ Ankica Kačan, "Analiza inozemnog duga Republike Hrvatske", Croatian National Bank, (October 2000), p. 1

Despite these positive impacts, foreign banks brought some issues connected with rising vulnerabilities. More precisely, with the record low levels of interest rates in the international markets, parent banks were attracted by the interest rate differences between CEE and SEE and Western markets, which provided excellent profit margins. There are lots of vulnerabilities in Hungary, starting with the huge budget deficit, high external debt levels, currency mismatches and the current account deficit, which can also be seen in Croatia. These vulnerabilities accumulated especially during the last years when Croatia and Hungary experienced credit booms, particularly in the households and private companies' sectors.

With similar levels of external vulnerabilities like Hungary, Croatia did not experience any major problem in the last quarter of 2008 and when Croatian government issued bonds, investors were extremely enthusiastic to buy⁷, which is quite puzzling having in mind huge imbalances and exposure to external vulnerabilities that Croatia is confronted with. So the question that arises is why financial markets and investors trusted, in the time of crisis, more in Croatia than in Hungary, having in mind very similar levels of external vulnerabilities?

Sorsa et al. (2007) warned that Croatian level of vulnerabilities (and the SEE in general), is huge and exceeds levels that were registered in East Asia prior to the burst of crisis⁸. For the detailed overview of this data, see appendix and the table A2.

⁷ After five years, Croatia issued Eurobonds in May 2009 totaling 750 million euro with the oversubscription.

⁸ Piritta Sorsa, Bas B. Bakker, Christoph Duenwald, Andrea M. Maechler, and Andrew Tiffin, 2007, "Vulnerabilities in Emerging Southeastern Europe--How Much Cause for Concern?" IMF Working Paper 07/236, (October 2007)

The plan of the paper is as follows. First chapter will diagnose the literature that deals with crises and methods to measure the sustainability of vulnerability indicators. Second chapter will compare levels of vulnerabilities of Croatia and Hungary with the levels of vulnerabilities of some countries affected with crises in the past. Further, it will look into the banking system and levels of loans as an important factor that stays behind the fear in viability of Hungarian financial system as seen by financial markets. This will be compared with the Croatian levels to see if these two countries relate in any way. Third chapter will analyze how political factors and sound policies can explain the puzzle through its influence on credibility. Special attention will be paid on the ruling party and pattern of fiscal governance, internal stability and the capability of governments to perform needed reforms. And finally, the last part will conclude the thesis.

This paper argues that politics can explain the reasons of why investors evaluated Hungary as a risky destination in November 2008, while Croatia remained perceived as stable. However, politics has not been given much of explanatory power in the literature of different crises and therefore will this thesis try to look onto economic issues by paying attention on the political aspect.

CHAPTER 1-LITERATURE REVIEW

Vulnerability indicators have come into the focus of international financial markets since the Asian crisis in 1997. ⁹As Sirtaine and Skamnelos (2007) suggest, when countries come under stress, there is possibility of contagion among different sectors, as it is recognised by the EWS (Early Warning Systems) literature and the literature on vulnerability indicators. ¹⁰

There are three approaches to causes of financial crises, macroeconomic approach that connects macroeconomic imbalances (external position fragilities) to these causes; bank balance sheet approach which finds causes in inadequate bank practices and the whole banking system vulnerabilities; and market approach which sees into debt and equity prices to be the main causes of crises. ¹¹

Further, credit growth literature tries to see if credit developments in emerging markets pose the threat of soft or hard landing and how credit markets influence on stability in total. ¹² Finally, they outline the literature on financial crisis which points out that causes of crises stand in bad fundamentals of sectors of economy and panics¹³

⁹ Sophie Sirtaine and Ilias Skamnelos, "Credit Growth in Emerging Europe. A Cause for Stability Concerns?", World Bank, Policy Research Working Paper 4281, (July 2007), p.3

¹⁰ Sophie Sirtaine and Ilias Skamnelos, "Credit Growth in Emerging Europe. A Cause for Stability Concerns?", World Bank, Policy Research Working Paper 4281, (July 2007), p.4

¹¹ Ibid., p.5

¹² Ibid.

¹³ Ibid.

This literature review will diagnose the main findings in the literature of macroeconomic vulnerabilities. So, in order to explain the puzzle of this paper, it has to be analyzed to what extent do rising vulnerabilities (measured with various indicators that will be explained in the later stage of this paper) in economies affect the decisions of financial markets to invest in certain countries or to exit the market.

As already discussed in some papers¹⁴, without any doubt have the economic fundamentals of Hungary and Croatia reached the levels that are unsustainable and that were present in East Asia before the occurrence of the crises.¹⁵ For this reason, the purpose of the following literature review is to find the link between these vulnerabilities and the motivation of financial markets to trust in some economies, while being reserved to other. Therefore, the leitmotif of this section will be the vulnerability associated with the external debt. The literature is abundant and provides many different views, accordingly.

According to Kruger and Messmacher (2004), there is a vast literature that links financial crises with sovereign debt defaults¹⁶. The main point of this literature is to explain the reasons of occurrence of “sudden stops in capital flows, a run on reserves of the central bank, or a run on the deposits of a commercial bank”¹⁷ when they

¹⁴ See, for example, Sorsa, Piritta, Bas B. Bakker, Christoph Duenwald, Andrea M. Maechler, and Andrew Tiffin, , “Vulnerabilities in Emerging Southeastern Europe--How Much Cause for Concern? ”, IMF Working Paper 07/236, (October 2007)

¹⁵ Sorsa, Piritta, Bas B. Bakker, Christoph Duenwald, Andrea M. Maechler, and Andrew Tiffin, , “Vulnerabilities in Emerging Southeastern Europe--How Much Cause for Concern? ”, IMF Working Paper 07/236, (October 2007), p.15

¹⁶ There is still a huge debate on finding a proper definition. However, this thesis will use the definition from Paladino and Stein (2001), which defines **default** as “a situation where the firms or government of a country reschedule the interest/principal payments on the external debt”, p.1

¹⁷ Mark Kruger and Miguel Messmacher “Sovereign Debt Defaults and Financing Needs”, IMF Working Paper, WP/04/53, (March 2004), p. 4

become vulnerable and their level of credibility deteriorates.¹⁸ Although, lots of papers agree upon the importance of expectations in the probability of a crisis, they disagree on “source of the shocks driving a crisis and whether it is avoidable in the absence of major policy adjustments.”¹⁹

Krugman (1979) suggests in his seminal paper on financial crises, apart from analyzing the behaviour of exchange rate regimes in countries with external vulnerabilities and facing the crisis, that level of uncertainty and government policies are the main drivers of currency crises and recovery of confidence at the later stage.²⁰ In other words, the balance of payment difficulties, that are strengthened by the loss of confidence in government policy triggered by some external shocks and the decline in reserves, cause speculative attacks and herd behaviour which is then the final stage of the crisis. Once the credibility is regained, investors tend to stop selling domestic assets and consolidate their positions in the domestic market.²¹

Paladino and Stein (2001) recognize the importance of having benchmarks or threshold values in measuring external debt, which is necessary, because the solvency-sustainability literature of the external debt evaluation claims the debt burden to be an adequate measurement of vulnerability. So, by knowing the debt burden, one knows much about the vulnerability of a country.²² The notion vulnerability is, however, “difficult to pin down”, as suggested by Corbett and Vines

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Paul Krugman, “A Model of Balance-of-Payments Crises”, *Journal of Money, Credit and Banking*, Vol. 11, No. 3 (August 1979), p. 322, 323 and 324

²² Jerome L. Stein and Giovanna Paladino, “Country Default Risk: An Empirical Assessment”, CESifo Working paper No. 469, (April 2001), p.6

(1999).²³ They confirm that scrutinizing only current data on debt and trade deficit neglects the oscillatory nature of debt. In other words, a country can in a short time change the levels of debt upwards or downwards due to high investments periods, trade surplus or deficit periods, which leaves a reduced space for prediction in solvency-sustainability approach.²⁴

The International Monetary Fund Report (2002) demonstrates the difficulties in estimating the debt sustainability²⁵ levels in the future because some variables cannot be controlled neither predicted like increase or decrease in asset prices, or costs of financing.²⁶ For example, Asian crisis is a good example of showing how the guarantees of bank deposits can provoke the crisis and also how depreciation, following the break of peg, resulted in hardships of suddenly increased value of debt burden to households and companies.²⁷

Catão and Sutton (2002) criticize the inability of the models of sovereign risks that try to predict debt crises, which comes from the negligence of non-economic factors. They suggest that volatility matters for credit risk, which is widely acknowledged in financial literature, but not that much in macroeconomic literature. For them, history matters when analyzing the problems of default and they demonstrate that “countries exposed to higher terms of trade and policy volatility seem to have a higher

²³ Jenny Corbett and David Vines, “The Asian Crisis: lessons from the collapse of financial systems, exchange rates and macroeconomic policy” p.70 , in *The Asian financial crisis* by Pierre-Richard Agénor and Marcus Miller (1999), Cambridge University Press

²⁴ Jerome L. Stein and Giovanna Paladino, “Country Default Risk: An Empirical Assessment”, CESifo Working paper No. 469, (April 2001), p.6

²⁵ The International Monetary Fund Report (2002) defines the debt sustainability as “as a situation in which a borrower is expected to be able to continue servicing its debts without an unrealistically large future correction to the balance of income and expenditure”, p.4

²⁶ International Monetary Fund, “Assessing Sustainability”, (May 2002), p.6

²⁷ Ibid.

propensity to default”²⁸, which²⁹ is in contrast with Eaton and Gersovitz’s³⁰ claim³¹. This paper concludes that “less pro-cyclical fiscal policies and less volatile monetary and foreign exchange control policies should improve a country's credit standing”.³² Further, they propose the solution to keep the sovereign risk low by replacing politics with economic policy, granting independence to monetary authorities and efficiently controlling international liquidity.³³ Finally, this paper is one of the few that mentions the importance of politics when the sovereign has a reduced access to liquidity. If this situation is combined with large debt, there is a higher chance of default.³⁴

Reinhart, Rogoff and Savastano (2003) come with the concept of ‘debt intolerance’, which is the situation of threat to stability of emerging countries caused by certain levels of indebtedness. There is a difference in the levels of indebtedness among groups of countries, measured by some threshold values. As they demonstrated, the threshold levels of debt that seem to be excessive for emerging economies, are acceptable for advanced economies, which proves their claim that history of repayment matters, as well as the quality of fiscal structures and financial systems.³⁵ For example, the debt crisis in Mexico happened at the debt/GDP ratio of 47%, while

²⁸ Luis Catão, and Bennett Sutton, “Sovereign Defaults: the Role of Volatility”, IMF Working Paper, WP/02/149, (September 2002), p.19

²⁹ Despite increasing default risk, volatility causes decline in borrowing as noticed by Luis Catão, and Sandeep Kapur, “Volatility and the Debt-Intolerance Paradox”, IMF Staff Papers, Vol. 53, No.2, (2006), p. 202

³⁰ Jonathan Eaton and Mark Gersovitz, “Debt with Potential Repudiation: Theoretical and Empirical Analysis”, *The Review of Economic Studies*, Vol. 48, No. 2 (April 1981), p.298

³¹ According to Eaton and Gersovitz (1981), if a country experiences huge volatilities, it will suffer from possible discontinuity of capital inflows in form of credits. In that case, the punishment of default is higher and therefore capital markets can allow more credits to a country that is eager to escape those discontinuities.

³² Luis Catão, and Bennett Sutton, “Sovereign Defaults: the Role of Volatility”, IMF Working Paper, WP/02/149, (September 2002), p.23

³³ Ibid.

³⁴ Ibid, p.5

³⁵ Carmen Reinhart, Kenneth Rogoff and Miguel Savastano, “Debt Intolerance”, *Brookings Papers on Economic Activity*, No.1, (June 2003), p.1

in the crisis in Argentina this level was around 50%.³⁶ They point out that vulnerabilities to debt intolerance are affected by the level of external debt, dollarization, indexation to inflation or short-term interest rates, as well as debt maturity structure, which all reflect institutional flaws. Apart from history, the authors recognize the importance of debt ratios as a significant prerequisite to having uninterrupted access to financial markets.³⁷

The paper makes point that a combination of structural reforms and decrease to lower levels of government public and external debt might help countries succeed in avoiding the debt intolerance burden.³⁸ Interestingly, “policymakers who face tremendous short-term pressure will still choose to engage in high-risk borrowing, and at the right price, markets will let them”.³⁹ The problem of this paper is that it does not give more elaboration on the impact of politics and political membership in reducing the level of debt intolerance. Reinhart, Rogoff and Savastano only recognize the factors of being the member of some regional associations like NAFTA (North American Free Trade Agreement) or the European Union⁴⁰. However, they do not elaborate on that.

There is also literature that constructs early warning systems for debt crises in poor, middle-income and advanced countries. Since this paper analyzes the cases of middle-income countries that Hungary and Croatia belong to, it is the most appropriate to focus on authors who wrote about such types of countries and leave aside the

³⁶ Ibid, p.10

³⁷ Ibid., p.2 and p.3

³⁸ Ibid. P.50

³⁹ Ibid.

⁴⁰ Debt Intolerance: P.48

literature covering the countries in HIPC⁴¹ initiative because of completely different structure of problems.

In this manner, the most applicable paper is the one from Manasse, Roubini and Schimmelpfennig (2003) that provides variables with which one can evaluate the possible occurrence of debt crises. According to authors, these variables “include external debt ratios measuring solvency, and debt sustainability, measures of illiquidity or refinancing risk, measures of external imbalance and debt-servicing pressures, other macro variables that affect investors' confidence and the country's ability to service debt, macroeconomic (especially monetary) instability, and some political-economy⁴² factors leading to policy uncertainty.”⁴³

They observe that the literature still lacks the explanations in linking macroeconomic disruptions with the appearance of debt crises which is due to the focus in explaining banking and currency crises.⁴⁴

The result of their research demonstrates a high default risk being the values of external debt and inflation exceeding the level of 49.7% of GDP and 10.5%, respectively. However, low external debt levels can cause problems when combined with liquidity problems, political uncertainty and pegged exchange rate.⁴⁵ With the high level of external debt, the way to avoid the crisis is to keep inflation from exceeding 10.5% and hold adequate external financial requirements/debt ratio and

⁴¹ Heavily Indebted Poor Countries

⁴² They put presidential elections and the freedom index in order to measure this

⁴³ Paolo Manasse, Nouriel Roubini and Axel Schimmelpfennig, “Predicting Sovereign Debt Crises”, IMF Working Paper, WP/03/221, (November 2003), p.33 and 34

⁴⁴ Ibid, p.3

⁴⁵ Ibid, p.31

public revenue/debt ratio of not more than 1.5 and 3, respectively.⁴⁶ The problem is that these scholars missed to elaborate more precisely on the two former ratios. Equally important, they did not pay more attention on the political variable that they included in the model. However, they showed that both politics and economics matter.

IMF (2003) proved that debt crisis, connected with the external debt, is related to inadequate external debt ratio, short-term-debt/reserves ratio, as well as the level of trade openness (their model predictability is 88%), while for public debt it is related to the “public debt ratio, primary balance, and the revenue ratio” (100% predictability)⁴⁷

However, this assessment recognizes other sustainability determinants in line with the private financial institutions behaviour which is affected by “the ability of the government to generate the requisite primary surplus to stabilize the debt ratio(given market expectations of growth and costs of financing. This depends to a large degree on political will and social cohesion”⁴⁸ They also acknowledge the importance of surpluses as a way to lower the debt levels, macroeconomic management, currency and maturity structure of debt and to whom it is owed⁴⁹

Further, they explain the relation between expectations and debt sustainability. Namely, if expectations are less positive, they will cause depreciation due to decrease in capital to a country which makes country vulnerable to debt burden.⁵⁰ Finally, they

⁴⁶ Ibid, p.32

⁴⁷ International Monetary Fund, “Sustainability Assessments-Review of Application and Methodological Refinements”, (June 2003), p. 40

⁴⁸ Ibid., p.41

⁴⁹ Ibid. p.41 and p.43

⁵⁰ Ibid., p.44

recognize the importance of determining how debt burden impacts the banking sector of a country, availability of financing and exchange rate.⁵¹

To sum up, this literature review has revealed several important points. First, it demonstrated the abundance of the literature on how investors evaluate the risks of sovereigns by looking into vulnerabilities of countries, as well as macroeconomic fundamentals. Second, there is no consensus among scholars if history matters or not when assessing the debt sustainability problem. Third, theory still does not have threshold levels that can signify the occurrence of crises. So, following this logic, the whole macroeconomic framework needs to be taken into account. Finally, in the financial crisis models, a political component is usually included as a side explanation, but not as a variable that is that on the equal levels as external vulnerabilities. So, by answering the puzzle of this paper, I will also try to fill the gap in the literature of crises and prove that politics and policy matter. Therefore, this thesis will contribute in understanding the world of financial markets both from economic and political perspective.

⁵¹ Ibid.

CHAPTER 2: ANALYZING EXTERNAL VULNERABILITIES-HOW FINANCIAL MARKETS REACT TO THEM?

The debt crisis in Latin America in the 1980s provoked, among others, immense capital outflows which directly caused problems for solvency, economic and banking sector stability.⁵² Almost a decade later, economic and financial crises of the second part of 1990s (Mexico, East Asia, Russia and Brazil) caused big capital outflows either.⁵³ It is clear that the capital flight is associated with the investors, who control their risks, and whose decisions are based on the evaluation of macroeconomic and political instability, rate of returns and capital inflows.⁵⁴

This chapter will therefore analyze to what extent have macroeconomic vulnerabilities and fundamentals influenced the investors' perception of Hungary as extremely risky in the last quarter of 2008, and why they trusted more in Croatia. In other words, were capital outflows (reversals) motivated by unsustainable level of vulnerabilities in Hungary?

In order to see this, I will contrast Hungarian vulnerability indicators with those of Croatia, which by the end of 2008 did not cause market turmoil. Besides, some countries that experienced crises in the past will also be given in order to see if there are universally accepted thresholds which signify possibility of capital reversals,

⁵² Niels Hermes, Robert Lensink and Victor Murinde, "Capital flight: the key issues" in Handbook of International Banking, ed. Andrew W. Mullineux and Victor Murinde, (Edward Elgar Publishing, 2003), p.516

⁵³ Ibid.

⁵⁴ Ibid., p.524

financial and debt crises or even default. Namely, after the financial crisis in East Asia, financial markets have been paying huge attention to vulnerability indicators.⁵⁵

2.1. External vulnerabilities as causes of financial and debt crises

According to Montiel (2003) capital reversals happen in situations in which investors think their investments could be negatively affected. So, reversals occur in the cases “when country’s fiscal solvency comes into question, exchange rate is perceived to be overvalued, domestic financial system is perceived to be fragile [and] the economy’s public sector is highly illiquid”.⁵⁶

It is believed that behind the debt crises in the 1980s was the insolvent public sector, which borrowed mostly from commercial banks abroad or that fragile and overvalued exchange rates are to blame for the crisis in Chile (1982), Mexico (1994) and Asia (1997).⁵⁷ Therefore, it can be seen that different sets of vulnerabilities manifest themselves in different ways, sometimes as a debt crisis, currency or a banking crisis, which is all related to levels of investors’ expectations and confidence in a country.

2.2. Sustainability of External Vulnerabilities and Comparative Analysis

Capital inflows bring along vulnerabilities beside the positive impact to a recipient country. Generally speaking, these inflows can come in the form of foreign direct

⁵⁵ Sophie Sirtaine and Ilias Skamnelos, “Credit Growth in Emerging Europe. A Cause for Stability Concerns?”, World Bank, Policy Research Working Paper 4281, (July 2007), p.3

⁵⁶ Ibid., p.300

⁵⁷ Peter J. Montiel, *Macroeconomics in Emerging Markets*, (Cambridge University Press, 2003), p.300 and p.301

investments (FDI), portfolio equity and loans. When they are put together, FDI generate the least levels of vulnerabilities since they are associated with the know-how and technology transmission.⁵⁸ These private capital flows are channelled through the bank loans, bonds or private placements.⁵⁹

In the CEE region (and also SEE) the bank loans were mainly allocated to the imports consumption, which has endangered stability of countries through the high current account deficit that puts pressure on currency stability and also forces central banks to undertake restrictive measures, in order to keep the system under control.⁶⁰ Praxis has shown that leaning on inflows other than FDI, for financing current account deficits, is not sustainable.⁶¹

Before continuing further, it has to be outlined what the vulnerabilities embrace. An adequate definition was provided by Nouriel Roubini (2008) who says that “the vulnerabilities of the economy include a large current account deficit, a still excessive fiscal deficit, a partially overvalued currency, serious maturity and currency mismatches⁶² in the financial system, the household sector and the corporate sector, low stock of foreign reserve and high level of short term foreign currency debt that is at risk of a roll-off”.⁶³

⁵⁸ Savastano (2003), p.58

⁵⁹ Claudio M. Loser, “External Debt Sustainability: Guidelines for Low- and Middle-income Countries”, G-24 Discussion Paper Series, (March 2004), p.12

⁶⁰ Jasminka Šohinger and Darko Horvatin, “Financial Liberalization in Croatia”, (2006), in *Ekonomski misao i praksa*, Vol. 15, No.2, P.183

⁶¹ Deutsche Bank Research, “Emerging Markets and FX reserve accumulation”, (June 2009), p.2 available at http://www.dbresearch.com/PROD/DBR_INTERNET_EN-PROD/PROD000000000243266.pdf (accessed June 2009)

⁶² The situation in which liabilities that are denominated in foreign currency exceed domestic assets in local currency

⁶³ Nouriel Roubini, “How to Prevent a Financial Crisis in Hungary that would Lead to Serious Financial Contagion in Emerging Europe”, RGE Monitor, (October 2008), accessible at <http://www.rgemonitor.com/roubini->

However, vulnerabilities in emerging economies are high and, consequently, many investors watch the moves of each others, which can provoke herd behaviour in the situation of rising Emerging Market Bond Index, declining currency reserves and already accepted assumption that international financial institutions cannot save every country when facing the probability of default.⁶⁴

Vulnerability to crises manifest through the increased possibility of reversals of capital flows which is motivated by the fears of financial markets that the value of their investments would be affected, if the debtor becomes insolvent or illiquid.⁶⁵ Following this logic, next sections provide analysis of vulnerabilities connected with countries' liquidity and solvency.

2.2.1. Levels of indebtedness: liquidity and solvency tests

This section will use liquidity and solvency measures for Croatia and Hungary and compare them with the countries that experienced crises in the past. This will help in understanding how macroeconomic fundamentals can predict crises.

The literature review showed the problem of vulnerabilities and their impacts on the occurrence of crises. The literature agrees that excessive debt burden is a huge vulnerability problem, but it fails short from explaining what it means excessive more

monitor/254103/how_to_prevent_a_financial_crisis_in_hungary_that_would_lead_to_serious_financial_contagion_in_emerging_europe, (accessed June 2009)

⁶⁴ Claudio M. Loser, "External Debt Sustainability: Guidelines for Low- and Middle-income Countries", G-24 Discussion Paper Series, (March 2004), p.7 and p.8

⁶⁵ Peter J. Montiel, *Macroeconomics in Emerging Markets*, (Cambridge University Press: 2003), p.376 and p..377

precisely. Even though one could claim that debt crises cannot be predicted, at least do the levels of indebtedness, as pointed out by Reinhart, Rogoff and Savastano (2003), influence the market perception when it comes to access to capital markets.⁶⁶

Apart from analyzing the complete macroeconomic variables (economic growth, inflation or budget deficits) to find the dangerous vulnerabilities, the literature on sovereign debt sustainability⁶⁷ uses different ratios. For example, debt/GDP ratio, to see the solvency levels, or reserves/export and short-term debt/reserves to see liquidity levels.⁶⁸ This is useful to help in positioning the countries according to groups of indebtedness and vulnerabilities they belong to.

Despite the lack of theoretically based sustainability levels of debt, the World Bank has produced some threshold values based on empirics⁶⁹, to evaluate sustainability.⁷⁰

These threshold values are given below:

“External debt⁷¹ in percent of GDP or GNP (EDT/GDP), whereby the debt of 80% of GDP (GNP) is defined as the upper sustainable level; External debt in percent of exports (EDT/XGS), whereby the debt of 220% of exports is defined as the upper sustainable level; The ratio of external debt service to exports (TDS/XGS), whereby the debt service of 20% of the value of exports is defined as the upper sustainable level, and The ratio of external debt service to GDP whereby the debt service of 6% of GDP is defined as the upper sustainable level. In addition to these four

⁶⁶ Carmen Reinhart, Kenneth Rogoff and Miguel Savastano, “Debt Intolerance”, Brookings Papers on Economic Activity, No.1, (June 2003), p.2 and p.3

⁶⁷ Loser (2004) observes well the complexity of evaluating the sustainability of public loans because of the fact that countries do not take loans based on rate of return. Therefore, public finance matters, as well as the size of ratios of public debt. p.8

⁶⁸ Paolo Manasse, Nouriel Roubini and Axel Schimmelpfennig, “Predicting Sovereign Debt Crises”, IMF Working Paper, WP/03/221, (November 2003), p.5-7

⁶⁹ Based on standardized data series of World Bank and the IMF

⁷⁰ Nebojsa Savic, “The Yugoslav Economy and SEE at the Beginning of 2000”, Economics Institute Belgrade, (January 2000), p. 13

⁷¹ Reinhart, Rogoff and Savastano (2003) define external debt as “the total liabilities of a country with foreign creditors, both official (public) and private. Creditors often determine all the terms of the debt contracts, which are normally subject to the jurisdiction of the foreign creditors or (for multilateral credits) to international law”, p. 62

*foreign debt indicators, the World Bank uses the following two: the ratio of annual interest payments to exports (INT/XGS) and the ratio of annual interest payments to GDP, i.e. GNP (INT/GDP). The countries in which the indicators of the debt sustainability level exceed the above mentioned levels are regarded as heavily indebted countries and qualify for special concessions in loan repayment”.*⁷²

The Bank asserts that scholars differ according to what set of these thresholds they value to possess the biggest explanatory power and thus the Bank states that these values should be accompanied with other macroeconomic indicators.⁷³

On the other hand, considering public debt levels, IMF researches have found out that this level, for emerging markets to be sustainable, should be around 25% of GDP, while everything more than 50% raises serious concerns of sovereign debt crises.⁷⁴

⁷² Ibid., p.13 and p.14

⁷³ World Bank, Global Development Finance 1999, Analysis and Summary Tables, Vol.1., (April 1999), P.183

⁷⁴ International Monetary Fund, “Debt-Related Vulnerabilities and Financial Crises—An Application of the Balance Sheet Approach to Emerging Market Countries”, (July 2004), p.6
Approach to Emerging Market Countries

2.2.2. Solvency testing

Table 1: Economic indicators of Argentina (2001) and Brazil (1999) before the outbreak of crises compared with Croatia and Hungary in the end of 2008

<i>Economic Indicators</i>	<i>Argentina 2001</i>	<i>Brazil 1999</i>	<i>Croatia 2008</i>	<i>Hungary 2008</i>
BDP per capita (in USD)	7200	3195	15628	15760
External Debt (% of GDP)	61,2	46,2	82,6	113,2
Public Debt (% of GDP)	53,7	79,2	47,8	73,0
External Debt of the State % of GDP)	32,8	19,1	17	32,6
External Debt in % of Exports in Goods and Services	400	340,5	197,3	133,1
Debt Repayment in % of Exports of Goods and Services	50,1	121	28,3	15,0
Current Account in % of GDP	-1,2	-4,8	-9,4	-7,8
Budget Deficit	-5,5	-9,9	-2,7	-3,4

Source: Ines Kersan-Škabić and Gorana Mihovilović, “Comparative analysis of indebtedness of Croatia and Central and East European Countries” and author’s calculations based on the International Monetary Fund (IMF) and Croatian National Bank (CNB).

Having in mind empirical debt thresholds used by the World Bank and the IMF, one has to put them in comparison with other countries, to see if they have power to predict, based on solvency testing, the occurrence of crises and if these levels of indicators are sustainable.

This table aims at evaluating main indicators of the economies of Argentina and Brazil, some time before they faced crises, which will be of great help in determining if Croatia and Hungary have already reached the indicators that are critical and unsustainable. For the time being, only solvency testing will be done, but in the following sections, I will look into Argentinean and Brazilian cases to find vulnerabilities that cannot be captured with this aggregate data.

If we analyze this table, we can observe many variations in indicators and there is no certain set of indicators than can signal the crisis. In other words, Brazil had much higher public debt burden in comparison with Argentina, while the later had much higher level of external debt. Interestingly, none of these two Latin American countries exceeded the level of 80% as signified to be problematic, according to the World Bank ratios. Nevertheless, the ratio of external debt to exports exceeded the 220% threshold in both countries which is an adequate indicator to show the problems of debt servicing capacity in Argentina and Brazil.

On the other hand, when we look on the cases of Croatia and Hungary, there is much higher standard of living comparing to the other two. One could claim that standard of living matters and that it could explain the reasons why some countries experience debt crisis and some never do. As it was shown in Reinhart, Rogoff and Savastano's (2003) paper, Western countries with very high GDP per capita, and also extremely high levels of external and public debt (e.g. Belgium or Italy, for example), never experience debt crises. Namely, they belong to the 'A club' in the eyes of investors despite some dangerous thresholds.⁷⁵ Following this logic, it is obvious that Croatia and Hungary do not belong to this club and surely they go into the group of emerging market economies that are highly volatile in terms of capital flows and possible speculations.

Since both Hungary and Croatia do not have history of default, like Argentina and Brazil, who have been experiencing debt problems and defaults in the past⁷⁶, one can

⁷⁵ Savastano (2003) p.26

⁷⁶ Ibid, p.51

assume that the tolerance of investors should be a bit higher than in Latin America. According to the indicators, this seems to hold.

Hungary has accumulated extremely high levels of both external and public debt, which exceeds the sustainability thresholds a lot. In many indicators, as it can be seen, Hungary has the worst data in comparison with others (public, external debt and external debt of state). Croatia accumulated huge level of external debt while having moderate level of public debt. Not only Hungary, but Croatian indicators also seem unsustainable in comparison with Argentina and Brazil.

To sum up the table, apparently these thresholds cannot give us the chance to predict the outbreak of crises related with the huge debt levels. They can only help us as a starting point in the analysis. Despite Croatian much higher debt servicing burden than Hungary, it seems that investors did not perceive Croatia to be as risky as Hungary, when they started re-assessing risks towards CEE and SEE countries, because of the current global financial crisis. This is puzzling, so the next section will do the liquidity testing in search for the better understanding.

2.2.3. Liquidity testing

Table 2: Level of eurization and reserves

	<i>DEBT*</i> <i>(\$bln)</i>	<i>RESERVES</i> <i>(\$bln)</i>	<i>DEBT/RESERVES</i> <i>(pct)</i>
1. Bulgaria	11,78	16,06	73,7
2. Croatia	18,08	11,88	152,18
3. Czech Republic	19,886	36,854	54
4. Estonia	6,499	3,55	183,1
5. Hungary	32,974	37,74***	87,74
6. Latvia	10,99	4,52	243,1
7. Lithuania	6,069	4,99	121,6
8. Poland	35,202	61,79	57
9. Romania	38,827	32,96	117,8
10. Russia	101,395	380,6	26,6
11. Serbia	7,246	10,7	67,7
12. Ukraine	20,052	25,4	78,9
* Latest available data (Q3, 2008) data taken from Joint External Debt Hub database jointly developed by the Bank for International Settlements, the International Monetary Fund, the Organization for Economic Cooperation and Development, and the World Bank. They include short-term international debt securities, and short term liabilities to BIS banks.			
** Reserves data taken from national banks' latest figures.			
*** Reserves increased from \$22.69 in October, 2008, after government converted IMF-led bailout package through the central bank, boosting reserves.			

Source: Joint External Debt Hub and Reuters⁷⁷

The importance of short-term debt follows the logic that it is usually sustainable during the time of economic growth, but too much of dependence on the short-term

⁷⁷ Factbox, "Short term debt exposure in Central and Eastern Europe", *Reuters*, 6 May 2009, available at <http://www.reuters.com/article/bondsNews/idUSL595234320090506> (accessed June 2009)

debt can be risky due to chances of sudden reversals that depend expectations and perception.⁷⁸

This table demonstrates the ratios of short-term debt to central bank reserves of Croatia and Hungary and some peer countries. It is believed that an adequate level of foreign currency reserves helps in avoiding the short-term vulnerabilities to sudden-stops and guarantees certain level of stability in the economy. Here the amount for Croatia being 183,1% is one of the highest among the countries in comparison. At the same time, Hungarian levels are weak and reach only 87, 74%. This can serve as an argument for explaining why investors fled Hungary thus severely affecting the economy and pushing it to the brink of default.

In appendix, chart A1 compares countries according to reserves/imports ratio. Croatia stands here also among the countries that have the above-average ratio, while Hungary is under-average. This reserves/imports ratio is important in the times of capital reversals and guarantees stability for the system liquidity, especially when it comes to paying for imports. This is of huge importance since Croatia and Hungary are dependent on imports, which can be concluded from the current account deficit. With all things mentioned, it has been demonstrated that Hungarian liquidity levels are less sustainable than Croatian.

2.3 External Vulnerabilities in the Time of Crises: Evidence from Latin America

⁷⁸ Barry Eichengreen and Ashoka Mody, "Lending Booms, Reserves, and the Sustainability of Short-Term Debt", The World Bank Policy Research Working paper 2155, (August 1999), p. 17

We saw in the table 1 and 2 how solvency and liquidity tests are obviously not enough to reveal what set of indicators can reliably predict the threat of a crisis and threat of capital outflows.

The BSA (Balance Sheet Approach) is a useful approach used by the IMF, in assessing the crises, taking into account vulnerabilities that arise from the debt levels, their structure and sources of repaying, as well as balance sheets of different sectors.

⁷⁹ As already mentioned by Sirtaine and Skamnelos (2007), and bearing in mind that there are many approaches to causes of financial crises, this section will use a more specific type of BSA, a bank balance sheet approach.

Gosh (2006) points out that “a loss of confidence or a re-evaluation of risks in one sector can prompt sudden and large scale portfolio adjustments, such as massive withdrawals of bank deposits, panic sales of securities, or abrupt halts in debt rollovers”⁸⁰ He goes further and points out that the balance sheets weaken if exchange rates and interest rates start changing and thus causing capital outflows until the size of these outflows turns to a complete crisis.⁸¹

The examples of Argentina and Brazil will show weaknesses in balance sheets and their contribution to the crises. The intention of the following cases is to help in better understanding the data in the table 1 and also to see how different economic vulnerabilities and indicators can lead to different manifestations of crises. Special attention will be put in observing if politics and government credibility matter. However, due to the space limitation, these case studies will only look into balance

⁷⁹ International Monetary Fund, “Debt-Related Vulnerabilities and Financial Crises—An Application of the Balance Sheet Approach to Emerging Market Countries”, (July 2004), p. 6

⁸⁰ Atish Ghosh, “Capital Account Crises: Lessons for Crisis Prevention”, International Monetary Fund, (July 2006), p. 5

⁸¹ Ibid.

sheet vulnerabilities and their manifestation thus avoiding explanation⁸² of the overall reasons of crises and events.

According to Gosh (2006), public sector and its debt evolution contributed to capital account crises in Argentina (2001) and Brazil (1999). He further explains that these crises were caused by balance sheet vulnerabilities (currency and maturity mismatches, capital structure and solvency) and triggered by contagion, terms of trade shock, shift in market sentiment or inconsistent macroeconomic policy.⁸³

2.3.1. Argentina 2001/2002

In Argentina, there were several factors of vulnerabilities that caused huge problems in the evolution of the 2001 crisis. Private sector balance sheets triggered the crisis because of their huge currency mismatches. More precisely, domestic banks were extremely fragile to devaluation due to FX-denominated lending and companies in Argentina borrowed directly from abroad which further upset the country's overall position.⁸⁴

Another problem in Argentina came from the public sector, whose vulnerabilities and political instability⁸⁵ provoked citizens' run for their deposits (bank runs)⁸⁶. Namely, the government borrowed from domestic banks to finance its budget needs, because

⁸² For more details see, for example, International Monetary Fund, "Lessons from the Crisis in Argentina", (2003).

⁸³ Ghosh (2006), p. 4

⁸⁴ Christoph Rosenberg et al., "Debt-Related Vulnerabilities and Financial Crises-An Application of the Balance Sheet Approach to Emerging Market Countries", International Monetary Fund, (July 2004), p.24

⁸⁵ Previous negative experiences with deposit withdrawals has influenced the expectations this time and it proves once again their importance.

⁸⁶ Ibid, p.26

of reduced access to foreign financial markets.⁸⁷ This increased banks' claims on government, which directly linked the stability of banks to stability of government.⁸⁸

With further increasing financial appetite of the government for new liquidity, the decline in bank reserves, which happened because of deposit outflows, reduced the banks' possibility to allow credits.⁸⁹ In the end banks were left with illiquid, FX-denominated claims on government and firms, which further destabilized the banking sector.⁹⁰ In other words, financial health of the banking system depended on the government.⁹¹

Ghosh finally observes that in Argentina (2001), private and public sector external and foreign currency denominated vulnerabilities were triggered by the discrepancy between monetary and fiscal policy.⁹²

2.3.2. Brazil 1999

Before the outbreak of the crisis in Brazil, banking and corporate sectors accumulated already currency and maturity mismatches.⁹³ Balance sheet vulnerability was government's short-term external liabilities, while the triggers for crisis were concerns about ability to realize budget savings, the level of current account deficit, as well as contagion from Russia.⁹⁴

⁸⁷ Ibid, p.26

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Ibid, p.26

⁹² Ghosh (2006), p. 4

⁹³ Rosenberg et al. (2004), p.38

⁹⁴ Atish Ghosh, "Capital Account Crises: Lessons for Crisis Prevention", International Monetary Funds, (July 2006), p.4

It was quite interesting that Brazil had positive rates of growth also during the years of crisis (1998 and 1999) mainly because of authorities who got involved in solving vulnerabilities in balance sheets and moving these risks on government's balance sheets, as observed by Rosenberg et. al (2004). They call it "particularly remarkable given the large currency and maturity mismatches within the banking and corporate sectors".⁹⁵

At the time of crisis in Brazil, the characteristic of the private sector was its external debt exposure. Namely, there was a mismatch in the banking sector between foreign assets and liabilities, as well as in the corporate sector.⁹⁶ Also, there were vulnerabilities in the government's short-term external liabilities due to concerns on its capability to cut fiscal spending and to the level current account deficit, including also the fear from Russian contagion.⁹⁷

According to these two examples, government policies played important role in connection with the crisis and adequately addressing balance sheet mismatches. In Argentina, the irresponsible behaviour of government and high public debt, led to weakening of the banking sector, negative perception and expectations by the citizens, what further brought to political instability. As for Brazil, government managed to show some levels of credibility and cushion the crisis by absorbing corporate and banking sector's currency mismatches on itself.

⁹⁵ Rosenberg et al. (2004), p.38

⁹⁶ Ibid., p.39

⁹⁷ Ghosh (2006), p. 4

2.4. Stability of the banks and financial sector vulnerability

Previous sections showed that from solvency and liquidity perspective, Croatia and Hungary already reached all the threshold values that signify the increased vulnerability to crises. But still, next sections need to show the balance sheet of the banking sector and the structure of ownership to see if Hungarian banks were more fragile to external influences than Croatian. With this additional data, it will be easier to see the way of financial markets behaviour vis-à-vis these two countries.

Croatia and Hungary belong to the regions in which financial systems are dominated by banks (bank-centric systems), and where capital markets and other financial institutions play modest roles.⁹⁸ In the last decade, there has been a quick growth in loans to East European countries, characterized with the gradual appearance of macroeconomic imbalances. Namely, loans have induced demand which deteriorated current account and brought it in the negative field. Also, salaries and prices have risen together with asset prices, labour costs and prices in general.⁹⁹ However, these capital inflows were financed with foreign exchange denominated instruments, which contributes to macroeconomic vulnerabilities and brought concerns about mismatches, sudden stops and contagion.¹⁰⁰

Credit growth has been based on the loans that banks allocated to households for current consumption and real-estate loans, while on a smaller basis to companies. In

⁹⁸ Sophie Sirtaine and Ilias Skamnelos, "Credit Growth in Emerging Europe-a Cause for Stability Concerns", World Bank Policy Research Working Paper 4281, (July 2007), p.6

⁹⁹ Sophie Sirtaine and Ilias Skamnelos, "Credit Growth in Emerging Europe-a Cause for Stability Concerns", World Bank Policy Research Working Paper 4281, (July 2007), p.3 and p.4.

¹⁰⁰ Ibid, p.4

the last couple of years, credits grew in Croatia and Hungary by 25% for households and by 10% for companies.¹⁰¹

2.4.1. The case of Hungary

The two-tier system was constructed in Hungary in 1987, and one year later the banking system consisted of two banks, MKB and AEB, that financed foreign trade and currency operations of citizens, respectively. Besides, there were two retail banks, Postabank and OTP. In the period of the following four years, the Hungarian GDP went down by 15% which caused lots of non-performing loans, and consequently huge problems to most of the banks since majority of them allocated funds, based not on rational approach, but rather to save companies from going bankrupt.

However, the main steps preceding privatization of banks were in consolidation of banking sector prior to selling to all interested parties, but most importantly they were eventually sold to foreign investors who possessed capital and know-how. Hungarian state injected 425 billion forints for this purpose between 1992 and 1995.¹⁰² By the beginning of 1998, the government managed to privatize the majority of banks thus reducing its ownership to less than 10% of total banking assets.¹⁰³ For example, in Hungary by the end of 2008, in the number of 38 banks, it was 83, 5 percent of the total banking assets being owned by the international banking groups.¹⁰⁴

Although the biggest bank in the market is Hungarian OTP (18% of the market share), around 6 foreign-owned banks have the equal market share of around 8% (K&H, CIB

¹⁰¹ Sirtaine and Skamnelos (2007), p.8

¹⁰² Zsolt Kondrat and Gergely Koczan, "The Ownership Structure in the Hungarian Banking Sector and the Effectiveness of Monetary Policy", *Bank i Kredyt*, (2002), p.68

¹⁰³ Ibid.

¹⁰⁴ Irène Andreou, Aleksandra Zdzienicka, "Financial vulnerability in the Central and Eastern European Countries", GATE Working Papers, p.4

Bank, MKB, Raiffeisen and Erste) what makes the market highly competitive.¹⁰⁵ Huge competition of foreign banks initiated the know-how transfer from the established Western markets which caused substantial increase in quality standards and stability of the Hungarian banking sector. All of these events led to lowering of interests rates which was further influenced with the record low interest rates in the world markets.

Similarly to other CEE countries, foreign banks established their branches directly linked with headquarter in the Western Europe. The banks' drive for profitability made huge capital inflows which caused rise in external vulnerabilities due to currency mismatches, because of the trend of households to borrow in foreign currencies (mostly Euros, but not excluding Swiss Francs and Japanese Yen). Further in this paper, I will give the size of the private sector exposures to foreign denominated loans.

2.4.2. The case of Croatia

Similar to Hungarian example, Croatia had a two-tier system at the beginning of transition. After the break-up of Yugoslavia, the situation with banks was different than in Hungary because they were owned by the state companies and once the ownership transformation started to happen, banks changed the owner without a typical "privatization in the narrower sense".¹⁰⁶

¹⁰⁵ Walter Demel and Jovan Sikimic, CEE Banking Sector Report, Raiffeisen Research, (June 2009), p.21

¹⁰⁶ Thomas Reininger and Zoltan Walko, "The Croatian Banking System", Financial Stability Report 9 (2004), p. 110

In the beginning of 1990, there were 26 banks and since then the number started increasing rapidly but only until the banking crisis in Croatia in 1998 which caused 14 banks to go bankrupt and in the 2000, the number of banks was 43. First foreign banks came after the Dayton agreement. However, the last wave of privatization was in 2002 when the two biggest Croatian banks, Zagrebacka and Privredna banka were bought by UniCredito and Intesa, respectively.¹⁰⁷

There is a high bank concentration because the two biggest banks represent 42% of total banking assets in Croatia. If this data is compared with the Hungarian case, it is obvious that Croatian banking system is more concentrated. Nevertheless, it did not impair competition and they also contributed to acquisition of technology and standards, which increased the quality and stability of the Croatian financial market. The presence of foreign capital in Croatia is even higher than in Hungary and equals 92%¹⁰⁸

With the above-average level of reserves and a strict monetary policy, Croatian National Bank has become one of the most stable pillars of the Croatian society. This can be seen, for example, from the level of inflation in the last decade being low and Croatian currency as one of the most stable currencies in the world, with stable exchange rates.¹⁰⁹ The best proof for consistent policy is a recent international prize for governor Rohatinski for the best governor in the world in 2008 due to his leadership to save financial stability in the last years in Croatia. His policies of “marginal reserve requirement on banks’ external liabilities, an increase in the

¹⁰⁷ Stephan Barisitz, “Banking in Central and Eastern Europe since the Turn of the Millenium-An Overview of Structural Modernization in Ten Countries”, Oesterreichische Nationalbank, Focus 2/05, p. 70

¹⁰⁸ Jasminka Šohinger and Darko Horvatin, “Financial Liberalization in Croatia”, (2006), in *Ekonomiska misao i praksa*, Vol. 15, No.2, P.184

¹⁰⁹ For the data, see Appendix

minimum capital adequacy ratio to 12% (compared with the Basel II requirement of 8%) and eventually a 12% cap on lending growth” were especially praised.¹¹⁰

Loans to households over GDP-Graph shows that Croatia has the highest number of loans to households in CEE and SEE (around 36%). Hungary is slightly below 30%.¹¹¹ In order to address this problem, Croatian National Bank (CNB) led an active monetary policy to control these trends.¹¹² Such a huge exposure to external vulnerabilities by the households, pose a great threat for banks in form of a credit risk.

In sum, despite big household exposures in Croatia, the stable central bank, with adequate levels of reserves, might have positively influenced investors by increasing the overall credibility of the country. On the other hand, foreign reserves of Hungary were low, which was probably not well accepted in the financial circles and event deepened concerns about Hungary.

This might have also positively affected the perceptions of investors when they started evaluating their risks in the last quarter of 2008, following the most direct manifestation of the global crisis.

¹¹⁰ The Banker: Central Banker of the Year 2009, (5 January 2009) , available at http://www.thebanker.com/news/fullstory.php/aid/6351/Central_Banker_of_the_Year_2009.html (accessed June 2009)

¹¹¹ Walter Demel and Jovan Sikimic, CEE Banking Sector Report, Raiffeisen Research, (June 2009), p.12

¹¹² Monetary policy included marginal reserve requirement of 55%.

2.4.3. Balance sheet approach to Croatian and Hungarian Banks

Solvency and liquidity testing helped us in comparing Croatian and Hungarian vulnerabilities with those from the countries that were affected with the crises before. However, there are many limitations of these methods and one of them being the inability to see the whole picture. In other words, if we accept that Croatian and Hungarian external vulnerabilities, in the above-mentioned measurement, are mutually similar (with some minor deviations) and far higher in comparison with other countries examined, there is a logical need to perform a balance sheet approach and see sectoral vulnerabilities in Croatian and Hungary.

Because of the fact that banks in Croatia and Hungary have become extremely exposed to external influences, what follows now is an attempt to see if banks in Hungary were more exposed than Croatian, which could have served as a rational explanation of investors' reluctance to buy government debt, if they included this balance sheet data in their expectations.

So, this section brings the balance sheet approach which will look into the aggregate balance sheet of the banks. As already mentioned by Rosenberg et al. (2004), vulnerabilities of banks and their currency mismatches, were one of the reasons of crises and capital outflows (e.g. Argentinean banks and their exposures). For this reason, vulnerabilities of the banks are extremely important since they have huge importance for their economies and stability.

Table 3: Balance Sheet Data for Banks

<i>HUNGARY</i>			<i>CROATIA</i>		
BANKS' BALANCE SHEET DATA			BANKS' BALANCE SHEET DATA		
YEAR	2007	2008	YEAR	2007	2008
Total assets (in % of GDP)	107,6	125,6	Total assets (in % of GDP)	110	108
Total loans (in % of GDP)	52	58,7	Total loans (in % of GDP)	70,7	73,8
Loans to private enterprises (in % of GDP)	28,7	30,5	Loans to private enterprises (in % of GDP)	27,4	28,3
Loans to households (in % of GDP)	23,3	28,1	Loans to households (in % of GDP)	35,8	36,8
Mortgage loans (in % of GDP)	17,2	22,5	Mortgage loans (in % of GDP)	14,4	15,3
Loans in foreign currency (in % of GDP)	28	37,5	Loans in foreign currency (in % of GDP)	42,3	47,1
Loans in foreign currency (% of total loans)	53,7	63,8	Loans in foreign currency (% of total loans)	59,9	63,8
Total deposits (in % of GDP)	40,9	43,2	Total deposits (in % of GDP)	73,3	71,5
Deposits from households (in % of GDP)	24,9	27,2	Deposits from households (in % of GDP)	38,8	39,8
Total loans (% of total deposits)	127,2	136	Total loans (% of total deposits)	96,4	103
PROFITABILITY AND EFFICIENCY			PROFITABILITY AND EFFICIENCY		
ROA ¹¹³	1,5	1,2	ROA	1,6	1,6
ROE ¹¹⁴	20,1	16,1	ROE	10,9	10,1
Capital adequacy	10	11,1	Capital adequacy	16,4	14,2
Non-performing loans (% of total loans)	2,5	2,9	Non-performing loans (% of total loans)	4,8	4,8
Average interest rate spread	2,8	2,4	Average interest rate spread	3,3	3,5

Source: CEE Banking Sector Report (June 2009)

When we consider levels of profitability, they show that Croatian banks do not provide returns as they used to in the beginning of the 2000s and that the profitability today, measured by ROE, is at levels of profitability in the EU-15 which is around

¹¹³ Return on assets

¹¹⁴ Return on equity

10,7.¹¹⁵ This is due to restrictive monetary policy of the Croatian National Bank, which managed to control the lending boom¹¹⁶. At the same time, Hungarian market is a bit more lucrative for international banking groups. As observed by Gardó (2008), these levels of return are good for absorbing the unexpected sectoral shocks.¹¹⁷

According to total assets to GDP, we can observe that both countries have pretty good development of financial intermediation. Further, in Croatia loans to households dominate and then they are followed by loans to companies and mortgage loans. In Hungary, this ranking is a bit better because household loans do not dominate over company loans. However, considering mortgage loans, they are higher in Hungary.

Considering deposits, Hungary is in much negative situation (43, 3% of GDP) than Croatia (71, 5%), which can negatively affects stability. Also, Croatian households (39, 8%) have much higher deposits than Hungarian (27, 2%).

However, the most interesting data are loans in foreign currency which help us to see the exposures of Hungarian and Croatian banking sectors to changes in foreign exchange rates. Interestingly, we can observe the same number of loans in foreign currency as of percentage of total loans in both countries and this is (63, 8%). But, Croatia is in total more exposed to negative changes in exchange rates than Hungary (47, 1% vs. 31, 5%).

¹¹⁵ Peter Breyer, "Central and Eastern Europe-The Growth Market for Austrian Banks", Monetary Policy and the Economy Q3/04, (2004)", p. 63

¹¹⁶ In order to keep the growth of loans under control, Croatian National Bank (CNB) has been applying the marginal obligatory reserve of 55% from 2004. Therefore, CNB influenced through this measure on the profitability levels of every Euro inflows that were to be allocated as loans by daughter banks in Croatia. Interestingly, this measure was abandoned in November 2008, in order to maintain an acceptable level of liquidity in the banking sector.

¹¹⁷Sándor Gardó, "Croatia: Coping With Rapid Financial Deepening", Focus on European Economic Integration, (2008), p.16

This data on foreign currency loans are important because these loans add to vulnerability of financial sector in existence of external shocks and they make borrowers directly exposed to exchange rate risk.¹¹⁸ Also, shocks in interest and exchange rates raise the level of burden of households which leads to decline in consumption.¹¹⁹

In sum, balance sheet analysis of banks in Croatia and Hungary has demonstrated big reliance on foreign currency loans, big importance of household loans and relatively good level of financial intermediation. Interestingly, Croatia is more exposed to foreign currency loans and in this way are Croatian external vulnerabilities much higher. So, by seeing this, one may conclude that Croatia should be also treated as Hungary.

¹¹⁸ Réka Rózsavölgyi and Viktória Kovács, “Housing Subsidies in Hungary; Curse or Blessing?”, ECFIN Country Focus, Vol.2, Issue 18, (November 2005), p.5

¹¹⁹ Ibid.

Eichengreen and Hausmann (1999) found out that the foreign currency loans usually cause financial crises in emerging market economies.¹²⁰ Pellényi and Bilek (2009) argue that Hungary was closely monitored by investors during the crisis because of huge exposure to foreign currency loans, despite Hungarian fundamentals that did not indicate this.¹²¹ If we accept this claim that the foreign exposure of Hungary was a key driver for the crisis, it still remains puzzling why Croatia with even higher exposures to foreign currency was evaluated much positive than Hungary.

In contrast with this, Bordo et. al (2009) observe that only foreign currency debt is not the main reason for crises and that financial development and policy credibility also play an important role.¹²² He explains that big levels of foreign currency debt endanger economy via the risk of currency and debt crisis especially if combined with current account deficits, low reserves and low credibility of policy makers.¹²³

In order to see the impact of politics and policy credibility in explaining the puzzle, the third chapter will bring these elements in focus.

¹²⁰ Gábor Pellényi and Péter Bilek, "Foreign Currency Borrowing: The Case of Hungary", FINISS Working Paper D.5.4, (May 2009), p.3

¹²¹ Ibid, p.3

¹²² Michael D. Bordo, Christopher M. Meisner and David Stuckler, "Foreign Currency Debt, Financial Crises and Economic Growth: A Long Run View", (March 2009), p.1-9

¹²³ Ibid.

2.5. Conclusion of the chapter

Hungarian aggregate vulnerabilities are much higher in connection with Latin American or East Asian (see Appendix) countries. Central banks' possession of reserves is under the average level for CEE. Balance sheet of banks showed big exposure of Hungarian banks to foreign currencies and exchange rate volatilities. The credibility of Hungary in the eyes of financial markets has been lowered due to a big public debt, persistent and huge budget deficits.

Croatia also stands pretty weak in the international comparison of vulnerabilities. We could see that the biggest impact on it comes from deficit in the current account, huge external debt and exposure to foreign currencies.

Considering banks and financial stability, both Croatia and Hungary have stable, well-capitalized and foreign-owned banks that brought stability, technology and know-how. The leading bank groups in the EU, that own subsidiaries in Croatia and Hungary, take care of their subsidiaries and would not let their collapse in the time of serious troubles, mainly because of reputation risk involved. Such a plausible situation for financial system is more present in CEE than in other emerging regions, which can be seen from the example of Argentina, among others.

Next chapter brings in the analysis the political factor and explains to what extent politics (through the policies) has contributed to the credibility of each country.

CHAPTER 3: POLITICS AS A SOURCE OF CREDIBILITY

As it has already been observed by Bordo et al. (2009), the currency crises are especially likely when policy makers have low credibility or low reserve positions. In other words, despite the analysis of economic fundamentals to help in solving the puzzle of this paper, now it is time to turn to see to what extent has politics, and its capacity to perform efficient policy, influenced the behaviour of financial markets in the case of Croatia and Hungary. This section will diagnose main parties in these countries, main barriers to reforms and other determinants that may negatively affect the credibility.

3.1. Case of Croatia

On the first free elections in April/May 1990, Croatian Democratic Union (CDU), led by Franjo Tudjman, won the majority and established the first government after the regime change. From that point, CDU had a dominant position in the Croatian political arena for almost a decade. Nevertheless, this was a complex decade for Croatia because of the war, the post-war reconstruction and problematic privatization.

The CDU government initiated three important changes which included privatization of public firms, introduction of the 1993 Stabilization program, which managed to curb hyperinflation and reduction of price distortions.¹²⁴ This restored the credibility of the economy, which was awarded in 1997 with an investment rating and possibility

¹²⁴ Ivo Bicanic and Vojmir Franicevic, "Understanding Reform: the Case of Croatia", Global Development Network Southeast Europe, (November 2003), p.14

to borrow on international markets. Considering foreign direct investments (FDI), they started coming to Croatia only in the late 1990s¹²⁵.

Soon after the death of President Franjo Tuđman in December 1999, new elections took place in early January 2000, in which SDP (Social Democratic Party)-CSLP (Croatian Social-Liberal Party) coalition won the elections and they formed the coalition which totalled 6 parties that were governed by the SDP president Ivica Račan. He promised the opening and rebuilding of the Croatian economy, reduction of the state budget and democratization.¹²⁶ The political and economic opening to the EU happened with the Stabilization and Association Agreement in 2001.

The Račan government managed to stabilize financial sector, initiate unprecedented motorway construction projects and grant bigger independence to Croatian National Bank (CNB). However, due to coalition fragility, the structural reforms showed a reduced impact, except for performing a successful pension reform and fiscal decentralization and consolidation.¹²⁷

The main source of political challenges to the ruling parties came from The Hague Tribunal requirements. In the last days of the CDU government in the late 1990s, started first investigations by the ICTY (the Hague Tribunal) about the roles of Croatian generals during the Operation Storm which provoked public discontent.

However, the triggers for major protests were a 45-year sentence of Tihomir Blaškić, and later the cases of Ante Gotovina, Mirko Norac and Rahim Ademi. These protests

¹²⁵ Francis Carter and David Turnock, *Foreign direct investment and regional development in East Central Europe*, (Ashgate Publishing: 2005), p.9

¹²⁶ Europa publications limited, *Central and South Eastern Europe 2004*, (Routledge:2003), p.187

¹²⁷ *Ibid*, p.190

showed the power of nationalist groups, which managed to destabilize the Račan coalition, which lost next elections.¹²⁸

In the beginning of the 2000s, there were few signs of rising pressure groups that were capable of destabilizing political elite on power. First, in 2000, Croatian President Stjepan Mesić reacted in connection with Croatian army generals by forcing seven of them in pension, due to their open letter against government's cooperation with the ICTY.¹²⁹ Second, in February 2001, Ivo Sanader as an opposition leader told in front of 100000 protesters in Split that the Račan government should step down., because of cooperation with the ICTY, which was seen as a national betrayal by him¹³⁰ After he came to power in 2003, Ivo Sanader had to face with the cooperation and ICTY requirements, especially because it was a precondition for the start of EU negotiations.

Ivo Sanader won the party presidency in 2002 by defeating Ivić Pašalić, who represented “the extreme right element”¹³¹ in CDU. Sanader, who managed to reform CDU and turn it to become a modern conservative party, won later in the 2003 elections.

In 2005, a big challenge for government was to catch general Gotovina, which was achieved unexpectedly in December 2005. Interestingly, political and non-political pressure groups did not succeed in any major protest. From that point, we may say

¹²⁸ Ibid, p.188

¹²⁹ Jonathan Steele, “Croatia’s president gives seven generals their marching orders”, The Guardian, (30 September 2000), available at <http://www.guardian.co.uk/world/2000/sep/30/jonathansteele>, (accessed June 2009)

¹³⁰ The New York Times, “Croatian Rally Protests U.N. and Demands Early Elections” , (12 February 2001),available at <http://www.nytimes.com/2001/02/12/world/croatian-rally-protests-un-and-demands-early-elections.html>, (accessed June 2009)

¹³¹ Ibid. p.188

that there has been decline in pressure groups in Croatia and also decline of ultra-right parties. This is probably because they could not play on the card of anti-EU programme since there has been existing pact in Croatia called ‘Alliance for Europe’ .This consensus of all parties in Croatia that the EU path is strategic interest for Croatia and no party should use this for political points.¹³²

His 2003-2007 cabinet consisted, among others, of Croatian Party of Pensioners, which succeeded in pressuring government to finally fulfil the obligation to pay back the debt to pensioners. Namely, the Constitutional Court of Croatia concluded in 1998 that the State was responsible for non-paying the pensions in the period between 1993 and 1998. Sanader’s government decided to address this financial obligation (6% of GDP in 2006¹³³) and finally were four instalments paid in 2006 and 2007 (the reduced sum of debt for those pensioners that selected this model), while other option of the whole sum is still under way, lasting from 2008 to 2013.

Another significant burden for public finance is Croatian state aid, which is mostly channelled to help the loss-making shipbuilding industry. The European Commission warned Croatian governments to address this issue, because the amount of state aid is the biggest in Europe with the level of around 3% of GDP.¹³⁴

In the parliamentary elections in 2007, despite the decline in votes comparing to the previous elections, CDU managed to stay in power by forming a centre-right coalition

¹³² Zeljka Vujcic, “Croatia and the Hague: Gotovina in the Dock“, Transitions Online, (13 December 2005), p. 4

¹³³ European Union-Economic Policy Committee, “Structural Policy Challenges in Croatia”, (April 2006), p. 6

¹³⁴ Marina Kesner-Škreb, “State aid in Croatia: things are still moving forward”, Institute of Public Finance, (22 December 2008), p. 4

with CPP (Croatian Peasants Party)-CSLP (Croatian Social-Liberal Party) after a long bargaining procedure and the opposition's leader Zoran Milanović (Social Democrat Party) claim that he should form the government. However, after the Sanader coalition was approved, there were no destabilizing factors or groups to threaten the stability of the new government.

Considering Croatian way to the EU, the negotiations started in October 2005.

Croatia did many reforms in the sector of governance and making more reliable institutions. The government initiated and finally launched many measures that improved entrepreneurial activities in the country. All these efforts were recognized in mid 2008 when Croatia received the prize for the best reformer in Europe and the second best in the world, according to the World Bank Doing Business 2008 Prize.¹³⁵

Considering international position of Croatia, the situation has been positive because of the country's recognition as a stability anchor in the SEE and a role-model for other aspirant countries from the region to join the EU and NATO alliance in the time to come. This position of Croatia and its role was recognized and repeated by the US president George W. Bush, when he visited Zagreb in April 2008¹³⁶, almost a year before Croatian membership in the Alliance was signed.

Despite positive reforms and dedication to become a new EU member state, Croatia has been struggling with the huge problem of corruption, organized crime and

¹³⁵ Doing Business: Top Reformers in 2006/07, available at <http://www.doingbusiness.org/features/Reform2007.aspx>, (accessed June 2009)

¹³⁶ Catherine Dodge and Roger Runningen, "Bush, in Croatia, Says NATO Invite Vote of Confidence", Bloomberg, (5 April 2008), available at <http://www.bloomberg.com/apps/news?pid=20601087&sid=a0L.ktUBLV.0&refer=home> (accessed June 2009)

inefficient judiciary system. It is also problematic the Slovenian blockade that completely stopped Croatian negotiation efforts from the late 2008.

To sum up, Croatia can be characterized as a country with the historical dominance of conservatives (CSU) governments after 1990 and only a short period of one center-left government. There are no major right-wing groups or any significant groups that prevent government from making reforms. This is partly because of the fact that in Croatia, political elite has had consensus on the EU membership as a fulfilment of Croatian national interests.

Despite the credibility of the state in international arena, two consecutive governments of Ivo Sanader did many reforms that were recognised by the international institutions. Apart from this, Croatian National Bank, as completely independent from politics, managed to keep Croatian system stable, despite changing macroeconomic situation, especially in the last quarter of 2008.

3.2. Case of Hungary

Hungarian starting position as an emerging market economy was difficult because of the inherited debt obligations from the previous economic system (90% of GDP¹³⁷) that were pressuring public finances, already in problems because of the GDP contraction following the economic adjustments in the early 1990s.

¹³⁷ Horvath (2009), p.1

In the first elections in 1990 following the collapse of communism, centre-right coalition with the Prime Minister Jozsef Antall and Peter Boross, who took the position of Prime Minister following Antall's death in the late 1993. This was the time of market and banking reforms, mixed with recession, divisions in society and crisis in legitimacy.¹³⁸ The government neglected the needed reforms of public finance because of the upcoming elections, which in total brought country in a delicate situation.¹³⁹

In May 1994, MSZP (The Hungarian Socialist Party) won the elections with Gyula Horn as the Prime Minister. He appointed Lajos Bokros as a finance minister in the early 1995, who tackled the problematic public finance immediately and cut many social benefits in order to save the system from the collapse. However, some authors claim that Hungary was pushed into austerity measures by the IMF and left to cope with the measures alone in the time of destroyed economic credentials.¹⁴⁰ For example, budget and current account deficit became unsustainable in light of general distrust in Hungary, triggered by the Mexican crisis in 1994.¹⁴¹

It was pretty much successful from the point that recession and crisis were avoided, but the same government augmented public expenditure by raising pensions by 22% and public sector wages by 16%, as the way to win the 1998 elections.¹⁴²

¹³⁸ Chris Hasselmann, *Policy reform and the development of democracy in Eastern Europe*, Ashgate Publishing, (2006), p.84

¹³⁹ Dóra Györfy, "Political Trust and the Success of Fiscal Consolidations", TIGER Working Paper Series, No.101, (July 2007), p.14

¹⁴⁰ László Andor, *Hungary on the road to the European Union*, Praeger Publishers, (April 2000), p.63

¹⁴¹ Lajos Bokros and Jean-Jacques Dethier, *Public finance reform during the transition*, A World Bank Publication, (1998), p.139

¹⁴² *Ibid.*, p.14 and p.15

Already increased levels of spending went up further when Viktor Orban with Fidesz took the office between 1998 and 2002. Initially he returned lots of benefits that were cancelled following the Bokros package and later he increased the minimum wage twofold and civil servants' wage by 30%.¹⁴³ Equally important, he initiated a mortgage subsidy program in 2001. Despite these efforts, next elections in 2002 were won by the Socialists.

The MSZP-SZDSZ (Alliance of Free Democrats) was the government that took Hungary in the European Union in 2004. Medgyessy, who lost the support of the coalition, was replaced by Ferenc Gyurcsany in the middle of the mandate.

This period was characterized with further government spending and the 50% increase in salaries for public servants, tax reductions for minimum wages and reluctance to do structural reforms which could reduce spending in the future.¹⁴⁴ From other generous measures, one has to mention the VAT cut to 20% in January 2006, which all resulted in a huge budget deficit of 9%, which deserved Hungary, combined with other structural weaknesses, the title of the country having the weakest fiscal framework of CEE countries that joined the EU in 2004.¹⁴⁵

In September 2006, after being re-elected for the post of Hungarian Prime Minister as a leader of winning MSZP-SZDSZ (Hungarian Liberal Party) coalition in the April 2006 elections, the private speech from a closed-door party meeting in May 2006 leaked in the public. During that speech, the Prime Minister Gyurcsány admits that his

¹⁴³ Györfly (2007), p. 15

¹⁴⁴ Ibid., p.16

¹⁴⁵ Ibid.

party was lying about the terrible state of the public finance in order to win the elections and adding that his party had not achieved much of reforms in the previous four-year mandate.¹⁴⁶

These events caused massive protests against the government in front of the Parliament and questioning of Gyurcsány's legitimacy to govern the state. The anti-government protests were mostly organized around opposition leader and Fidesz president Viktor Orban, who wanted the government to step down. Nevertheless, apart from attracting non-violent people, these protests were also accompanied by far-right groups. The protests did not stop in October 2006, they continued sporadically on the biggest holidays during 2007. Therefore, the evident rise of the right-wing pressure groups started posing a huge burden to the reform programs of Gyurcsany's government.

One of the last defeats to the government's ability to successfully reform the system came from Fidesz when they championed for the referendum about the announced reform of healthcare and education, which would include fees for using it. So, the referendum from March 2008 resulted in the big political victory for FIDESZ when citizens rejected this possibility with around 80% of them voting against the proposed reforms. Of course, we could say that this was a huge blow for Hungarian credibility in the eyes of investors.

3.3. Conclusion of the chapter

We can see that because of the unity of all parties in Croatia regarding the EU negotiations, there is consensus on the reform needs in connection with the EU

¹⁴⁶ BBC News, "We lied to win, says Hungarian PM", (18 September 2006), available at <http://news.bbc.co.uk/2/hi/europe/5354972.stm> (accessed June 2009)

aspirations. This makes reforms in Croatia relatively easy to perform because of the Brussels as an excuse. This element lacks in Hungary after the accession to the EU.

Croatia and Hungary also diverge in the level of violence and opposition to reforms. In this sense, Croatian political sphere is less volatile than Hungarian which makes the whole country more credible in the eyes of investors.

Conclusion

This thesis approached the link between external vulnerabilities, crises and its determinants, sovereign credibility and politics in an innovative way. As the literature does not include political factors more than just a small variable in the explanatory models, this thesis stressed the importance of equal treatment of both approaches.

The central point of this thesis was the Hungarian financial crisis and reasons that motivated financial markets and investors to downgrade their expectations and show mistrust in the Hungarian economic and financial viability, which turned in a negative direction and made Hungary search for the IMF assistance.

In order to see to what extent economic fundamentals contributed in this sense, this thesis took the case of Croatia, as a highly comparable and compatible to Hungary, which did not have major problems connected with the general trend of investors' decreasing risk tolerance in the international financial markets.

The levels of external vulnerabilities of Croatia and Hungary were compared to some Latin American and East Asian countries, from the time when they faced the crises, and this revealed that both Croatia and Hungary have much higher levels of vulnerabilities. Despite this, since the main drivers of accumulation of external vulnerabilities lies with the banking sector and its loans that make countries exposed to exchange rate vulnerabilities, this thesis further dealt with the financial structures and balance sheet analysis of the banks. This has shown that Hungary is less exposed to foreign currency than Croatia through the banks. However, debt and deficit levels

of Hungary are slightly higher than Croatian, but Croatia has bigger debt service burden.

The third chapter revealed the political situation, the pattern of budget spending and the reform capabilities. Due to high public debt levels and very complex political situation in Hungary, that makes reforms and budget cuts very slow and inefficient, this paper shows that the answer to a puzzle is political factor, which affects the levels of country's credibility. In line with this, it is also important to mention the positive role the central banks, international reserves and monetary policy, as guarantors of exchange rate stability, which is important in the cases of huge external vulnerabilities and exposures that Croatia and Hungary are faced with.

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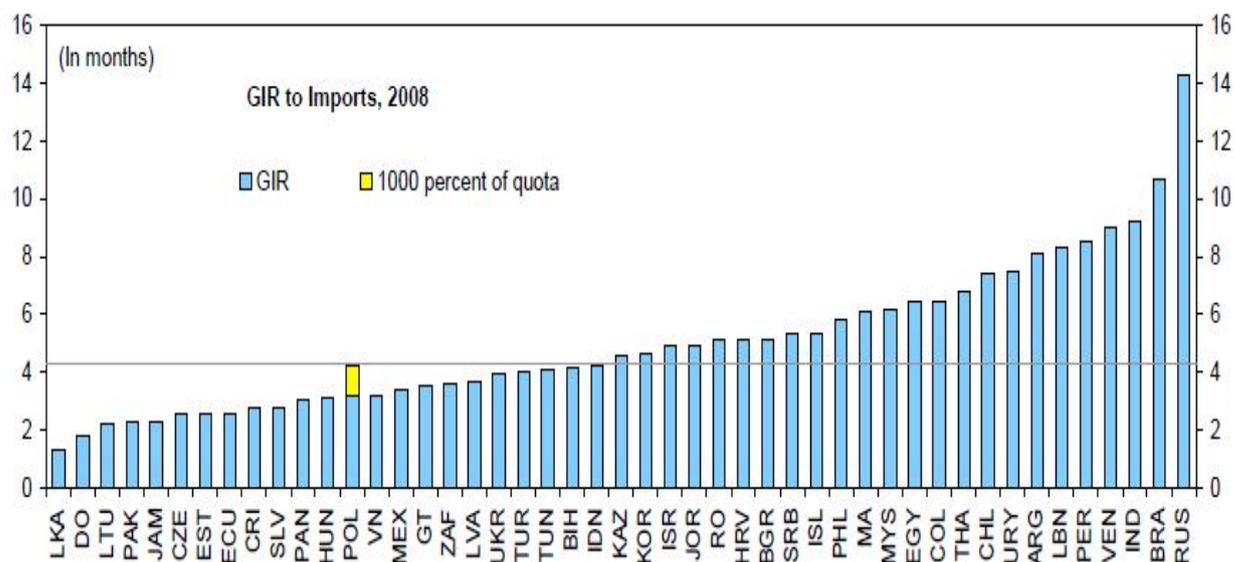
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Appendix

Chart A1: Reserves to Imports Ratio, 2008



Source: IMF Country Report No. 09/138

Table A2: Vulnerability Indicators for Selected Regions

	<i>East Asia 1996</i>	<i>SEE 2006</i>	<i>Croatia 2008</i>	<i>Hungary 2008</i>
Current Account	-4,4	-11,3	-9,4	-7,8
External Debt	49	68	82,6	113,2
Reserves to Short Term Debt	59	167	152,18	87,74
Fiscal Balance	1,1	-0,7	-2,7	-3,4
Public Debt	24	31	47,8	73,0
GDP Growth	7	6,1	2,9	0,5
Inflation	5,9	7,4	5,7	6,0

Source: Sorsa et al. (2007), P.10 and author's modifications based on the following sources Croatian National Bank and Austrian National Bank

Table A3: Main Economic Indicators of Hungary

	Real GDP ¹⁾	Unemployment rate ⁶⁾	HICP ¹⁾	Budget balance ³⁾	Current account ²⁾	Gross external debt ^{2) 7)}	Reserve assets ²⁾	Exchange rate ⁴⁾	Key interest rate ⁵⁾
2000	5.2	6.4	10.0	- 2.9	- 8.4	62.7	23.2	260.07	11.8
2001	4.1	5.8	9.1	- 4.0	- 6.0	62.7	20.4	256.60	9.8
2002	4.4	5.9	5.2	- 8.9	- 7.0	54.5	14.0	242.95	8.5
2003	4.2	5.9	4.7	- 7.2	- 8.0	61.7	13.5	253.51	12.5
2004	4.8	6.1	6.8	- 6.5	- 8.4	66.9	14.2	251.73	9.5
2005	4.1	7.2	3.5	- 7.8	- 6.8	74.5	17.6	248.04	6.0
2006	3.9	7.5	4.0	- 9.2	- 6.1	91.4	18.2	264.26	8.0
2007	1.3	7.4	7.9	- 5.5	- 5.0	96.5	16.2	251.33	7.5
2008*)	1.9	8.3	6.3	- 4.0	- 4.4	..	..	257.41	..
2009*)	3.2	7.8	3.7	- 3.6	- 3.9	..	..	256.78	..

1) Year-on-year change in %; annual average.

2) In % of GDP.

3) In % of GDP, general government net lending.

(according to ESA 95; according to the definition for the excessive deficit procedure, including the costs of the pension reform).

4) Period average; local currency per euro.

5) 1-month reverse repo rate until 1998, thereafter two-week deposit rate of the central bank; end of period.

6) LFS-based unemployment rate, annual average.

7) Total gross external debt, end of period.

*) Forecast: Spring Economic Forecast of the European Commission, 2008.

Source: EUROSTAT, European Commission, NCB.

Table A4: Main Economic Indicators of Croatia

	Real GDP ¹⁾	Unemployment rate ⁶⁾	CPI ¹⁾	Budget balance ³⁾	Current account ²⁾	Gross external debt ^{2) 7)}	Reserve assets ²⁾	Exchange rate ⁴⁾	Key interest rate ⁵⁾
2000	2.9	n.a.	6.4	n.a.	- 2.8	61.4	18.9	7.64	5.9
2001	4.4	n.a.	5.0	n.a.	- 3.7	61.4	24.1	7.48	5.9
2002	5.6	15.1	1.7	- 4.1	- 8.6	61.9	23.1	7.41	4.5
2003	5.3	14.5	1.8	- 5.5	- 7.2	75.8	25.0	7.57	4.5
2004	4.3	14.1	2.1	- 4.3	- 5.0	79.9	22.4	7.50	4.5
2005	4.3	13.0	3.4	- 4.0	- 6.3	82.3	23.8	7.40	4.5
2006	4.8	11.5	3.2	- 2.5	- 7.9	85.6	25.5	7.32	4.5
2007	5.6	9.1	2.8	- 1.6	- 8.6	87.8	24.8	7.34	4.5
2008*)	4.5	8.9	5.9	- 2.1	- 8.1	..	..	7.27	..
2009*)	5.0	8.4	3.0	- 1.8	- 7.8	..	..	7.27	..

1) Year-on-year change in %; annual average.

2) In % of GDP.

3) In % of GDP, general government net lending (according to ESA 95).

4) Period average; local currency per euro.

5) Discount rate, end of period.

6) LFS-based unemployment rate, annual average.

7) Total gross external debt, end of period.

*) Forecast: Spring Economic Forecast of the European Commission, 2008.

Source: EUROSTAT, European Commission, NCB.