

# **FINANCIAL SYSTEMS INTEGRATION OF BALKAN COUNTRIES IN THE EUROPEAN FINANCIAL SYSTEM: IMPACT OF GLOBAL FINANCIAL CRISIS**



Editors

Claude Berthomieu  
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## PREFACE

The research center CEMAFI ("Centre d'Etudes en Macroéconomie et Finance Internationale") of the University of Nice – Sophia Antipolis, in cooperation with the Institute of Economic Sciences of Belgrade, is realizing the research project titled Financial Systems Integration of Balkan Countries in the European Financial System within the program "Pavle Savić" of the "Partnership Hubert Curien". It is realized with support of French (Ministry of Foreign and European Affairs) and Serbian (Ministry of Science and Technological Development) Government. This research project is realized during the years 2008 and 2009.

During the period of the realization of this research project, within thematic section Financial Systems Integration of the Balkan Countries in the European Financial System, the following topics were treated:

- Transformation of financial and banking sector in Balkan countries
- Financial liberalization and growth
- Harmonization of financial regulation
- Venture capital, finance, taxation and regulation
- Foreign Direct Investments
- Monetary policies and the exchange rates.

As the result of the first and the second year of the research project "Pavle Savić" it has been organized two international scientific conferences – one in Belgrade at the end of the first year of the project (2008) and one in Nice at the end of the second year of the project (2009). For the reason that during these two years of the realization of the project two research teams (one from France and the other from Serbia) were researching the relevant topics for this project, we are publishing this book in order to allow wider population access to this very important scientific achievement.

Nice,  
November 2009.

Claude Berthomieu  
Jean-Paul Guichard  
Dejan Erić  
Srdjan Redžepagić



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# INTRODUCTION

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## ABOUT THE UNIVERSITY OF NICE - SOPHIA ANTIPOLIS AND CEMAFI

The University of Nice - Sophia Antipolis, second largest multidisciplinary university in France with 25,000 students, stands out as a higher education institution strongly committed to international openness. Spreading across the French Riviera, the University's geographical location, at the heart of the Mediterranean Basin, has helped develop a vivid cosmopolitan spirit drawing an ever-growing number of students from around the world, motivated by a prestigious training and research institution and a privileged study environment. Since its inception in 1965, the University has integrated a very significant rate of both international students and researchers who immediately felt at home within any of academic facilities: eight campuses, two institutes, a School of Engineering, a College for Doctoral Studies, an Institute for Scientific Culture, over 60 research laboratories, and more. Having fully adapted to the European LMD system effective since 2004, the University delivers over 230 diplomas recognized throughout the European Union. CEMAFI ("Centre d'Etudes en Macroéconomie et Finance Internationale"), created in 1989, is directed by Prof. Claude BERTHOMIEU. The CEMAFI is the research and teaching structure for Master "Macroeconomics and International Finance" and for students preparing their PhD in Economic Sciences. The research topics of CEMAFI are centered on the macroeconomic analysis of contemporary developed and developing countries in a context of world competition. CEMAFI constitutes the centre of an international network in macroeconomic research.



## ABOUT THE INSTITUTE OF ECONOMIC SCIENCES

The Institute of Economic Sciences (IES) was founded in 1958 as Department for Economic Researches and Methodology Planning of the Federal Bureau for Economic Planning. The Institute operated under this name until 1963 when, according to former Federal Government Regulation, it became Yugoslav Institute for Economic Research. In 1969 the Institute got its current name. In 1977, the Republic of Serbia, based on legal authority, made the Right founding of the Institute so today the Institute is registered as an independent institute within the Ministry of Science and Technological Development of Republic of Serbia. The Institute has the status of scientific institution of special public interest and importance.



The IES, as a research institution deals with scientific research in the field of macroeconomics, microeconomics, regional economic development, development studies of national and world market, international economic relations, beside the activities in consulting, professional training, and education related to current business economics, management, marketing, entrepreneurship and small and medium business development, financing, banking, etc. The Institute carries out the scientific and research activities through two scientific centers: Center for Economic Researchers and Center for Microeconomic Researchers & Consulting.

IES was very devoted to educational activities. In 1963, the IES Postgraduate School, the first postgraduate school in ex-Yugoslavia, not related to university started and it lasted until 1986. Twenty years later, IES created public-private partnership with Belgrade Banking Academy - Faculty for Banking, Insurance and Finance, the new academic initiative which offers different kind of undergraduate and graduate study programs, such ad Investment Banking, Financial & Banking and Business Management and Business Administration.

The Institute is a fonder and publisher of 2 scientific journals: *Economic Analysis* and *Journal of Women's Entrepreneurship – JWE*.

# Chapter 1.

## CENTRAL EUROPEAN TRANSITION AND THE DEVELOPMENT OF FINANCE

*Jean-Paul Guichard<sup>1</sup>*

### Abstract

*The contemporary global economy appears to be structured around the relationships established between countries with strong foreign exchange balances and low domestic indebtedness, like China, and countries with high foreign exchange deficits and high domestic indebtedness, like the United States. Those countries undergoing a major structural crisis and a « transitional » period which follows, when they once again achieve positive growth generally conserve, at least for a while, a significant foreign deficit, compensated for, it is true, by stimulating domestic demand by grace of foreign loans and direct foreign investment. In a given country, the nature of this FDI, along with development of the financial sector, to a more or less great degree, are going to contribute in large measure to putting the country in a surplus position, or, on the contrary, in a deficit position vis-à-vis its foreign trade.*

*Key words:* Crisis, Transition, Finance, Development

### 1. Demand, indebtedness and foreign trade

In two forthcoming articles,<sup>2</sup> Antoine Brunet and I show that the growth of a country responds to two currents: on the one hand, stimulation of domestic demand due to development of residents' net indebtedness, and on the other hand, the foreign trade balance, which is an expression of the incidence of foreign demand (and possible indebtedness of foreign economic agents). Analytically, it can be expressed as follows:

$$GDP_n = TDD_n + FTB_n$$

or  $TDD_n$  and  $FTB_n$  are, respectively, total domestic demand and the foreign trade balance during quarter (n).

From one period to another, the net indebtedness of the economic agents,  $(TDD_n - GDP_{n-1})$ , expresses the fact that during the current quarter, the agents are perhaps spending more than they earned in the preceding quarter. We could thus write:

$$GDP_n - GDP_{n-1} = (TDD_n - GDP_{n-1}) + FTB_n$$

Or else, the rate of growth:

$$\Delta GDP/GDP_{n-1} = (TDD_n - GDP_{n-1})/GDP_{n-1} + (FTB_n)/GDP_{n-1}.$$

<sup>1</sup> PhD, Professor at the University of Nice-Sophia Antipolis. Director of the research center CEMAFI

<sup>2</sup> Antoine Brunet: "A Pertinent Analytic Method to Correctly Measure Contributions to Growth in Gross Domestic Product", *Panoeconomicus*, 2009, Volume 56, Issue 3, Pages: 397-408); Jean-Paul Guichard: "Indebtedness and Mercantilism", *Panoeconomicus*, 2009 Volume 56, Issue 3, Pages: 409-416.

The growth rate thus appears as the sum of two terms:

- Net indebtedness to GDP ratio, which we can call the degree of stimulation of domestic demand;
- The Foreign Trade Balance to GDP ratio; if it is positive, it gives rise to a currency inflow, which expresses foreign indebtedness.

If the trade relations between nations were balanced, for each country, the foreign trade balance would oscillate around zero. The growth of the different economies would then be the result of stimulating domestic demand by indebtedness; an indebtedness regulated in such a manner as to avoid inflationist episodes, yet allow sufficiently strong growth. Unfortunately, things do not quite work out that way! International trade undergoes very grave imbalances; during long periods, some countries have a foreign trade surplus while other countries record recurring deficits.

If, as a result of the strategy that it has implemented, the Government of the country manages to assure that country enjoys renewed trade surpluses, it is playing a winning game in global economic competition. Indeed, the trade surpluses constitute a considerable advantage: thanks to them, it is not necessary to stimulate domestic demand strongly by indebtedness, thus protecting the country from the unpleasant outcomes susceptible to arise from too strong appeal of domestic demand. Growth, based on recurring trade surpluses, can be strong: it is the mercantilist model illustrated, in particular, by Japan between 1950 and 1990.

An economy whose foreign trade balance would be 6% of its GDP and whose quarterly growth would be 2% (8% annually) would thus have current domestic spending systematically lower (4% of GDP) than its income from the preceding quarter. If foreign demand should temporarily fall, for example following an economic crisis in its customer countries, the mercantilist country, which has low indebtedness due to the very strategy that it has implemented, is then in a position to compensate for this lack of foreign demand by having recourse to indebtedness to stimulate domestic demand and thus maintain growth at its former level.

A totally different matter is the situation of a non-mercantilist country recording repeated deficits, and which is subject to the effects of the mercantilist policies followed by other countries. To maintain a weakly positive growth rate, it is obliged to compensate its negative foreign trade balance by current domestic demand that must always be higher than the preceding quarter's income; growth is thus carried ever more greatly on the back of indebtedness, both domestic and foreign. If the foreign situation of such a country deteriorates, the will to maintain a minimum growth rate will then oblige it to stimulate domestic demand even more, which can only result, at least in the end, in grave consequences: indebtedness can not grow indefinitely...

The current dynamics of the global economy is thus organised around an opposition between "mercantilist" countries with a positive foreign trade balance and whose ratio of stimulation of domestic demand is generally negative<sup>3</sup>, on the one hand, and « non-mercantilist » countries whose foreign trade balance is negative and whose domestic demand is positive, on the other hand.

Given that there are two ratios that can be positive or negative, the preceding classification can perhaps be enriched by two other groups. First of all, there is the group whose two ratios are positive; that is a relatively rare situation that corresponds with countries undergoing a changeover: "mercantilist" countries which become "non-mercantilist" and conversely<sup>4</sup>. Next, there is the group, whose two ratios are negative, and whose rate of growth is necessarily negative: obviously, they are

<sup>3</sup> To these countries, mercantilist due to the economic strategy that their respective States have put into practice, we must add those countries which, thanks to their major natural resources, are « naturally » mercantilist, most notably in the case of the oil-producing countries.

<sup>4</sup> We must emphasize the fact: countries that have a foreign trade surplus are having during long periods and vice-versa for countries in deficit. Hence, it is rare that a country passes from one category to the other.

countries in crisis; this situation is notably that of the “former East Bloc countries” which, in the 1990s, were called countries “in transition”; this situation is also that of countries that today are subject to the crisis, as is the case of France.

The important element of the classification that has just been described is, of course, the duality between « mercantilist » and « non-mercantilist » countries, which can be illustrated, in the years preceding the current crisis, by China and the United States. That said, we can now face the question of the development of the financial sector in relation to economic growth.

## 2. Economic strategy and the development of finance

As we have seen, except for those countries enjoying vast natural resources, the fact that a country can record trade surpluses year after year is not due to serendipity: in general, it results from a strategy which, in one way or another, can be identified as a form of protectionism. This is notably the case of those countries that succeed, through monetary manipulation, in maintaining a grossly undervalued exchange rate, as was the case of Japan until 1985. The mercantilist strategy is based of foreign surpluses: the ratio of foreign trade (the foreign trade balance to GDP) is largely positive; that situation allows the ratio of domestic demand stimulation (i.e., the difference between domestic spending in the current quarter and the income of the preceding quarter to GDP) to be negative, and even clearly negative, even when annual growth is strong. In the fictive numerical example just cited here above, quarterly growth of 2% (8% yearly) is expressed as the sum of the two ratios: the ratio of domestic demand stimulation, which is -4% and that of foreign trade, which is 6%<sup>5</sup>. In a regular fashion, quarter after quarter, domestic spending in the current quarter is lower than the income of the previous quarter; savings are strong, and it is not necessary to stimulate credit. Better still, strong savings and the export of capital are part of the strategy of a mercantilist country; consequently, it is not necessary, nor even desirable, for the financial system to be highly developed. A sophisticated financial system is necessary when the goal is to stimulate domestic demand thanks to credit: that is not at all the case of a mercantilist country.

We can thus understand why prior to the 1990s, Japan’s financial and banking sector was not very developed; during the same period, the same is true of Germany, another notoriously mercantilist country. And we can also understand why contemporary China, the principal mercantilist country, is endowed with a bureaucratic banking structure that is probably not very effective: the very strong Chinese growth is based on foreign trade surpluses in goods and strong domestic savings, which allows for exporting capital, which in turn, permits the continued under-evaluation of the national currency and therefore, consistent foreign trade surpluses. One obviously must not believe that the fact of having strong savings prevents the domestic demand of a country with a strong trade surplus from growing: China is seeing its domestic demand grow at approximately the same rhythm as its GDP...

If savings are strong in the mercantilist countries, in contrast, they are negative in those non-mercantilist countries with major foreign deficits. In these countries, such as the United States or Great Britain, the GDP growth could only be slightly positive in the beginning of 2009, thanks to strong stimulation of domestic demand due to indebtedness. Thus, in the case of the United States from 2003 to 2006, the ratio of foreign trade was -6% while that of stimulating domestic spending was +6.75%, thereby allowing quarterly growth of 0.75%, making an annual rate of 3%. So that, quarter after quarter, the economic agents could spend more than they had earned and in such proportions, it was necessary to do everything possible for credit to be widely distributed by the banks, and for that, it was necessary to keep the interest rates as low as possible; it was also necessary that all or nearly all classes of the population could take on debt. Indeed, the interest rates were maintained by Mr. Greenspan at a very low level without its raising the least problem for financing the budget deficit: effectively, it was possible for the United States to maintain a very low level of bond market rates by

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<sup>5</sup> Orders of such magnitude are in conformity with the growth that Japan enjoyed in the 1960s.

replacing much of the monetary payment for the Chinese trade surpluses with the purchase of “treasury bonds”.

Thus, the credit to households, whether as consumer credit or real estate credit, could be extended, thanks to its relatively modest cost; this was, however, not enough: more was needed, and “painless” formulas had to be found, enabling the insolvent classes of the population to go into debt, too. It took a lot of imagination: very shrewd minds invented the “innovations” of sophisticated finance.

For fifteen years or so, the financial sector, measured by the volume of credit given to private economic agents, has particularly developed in countries with a foreign trade balance largely in deficit, the United States and Great Britain above all, where it was necessary to strongly stimulate domestic demand in order to obtain a non-negative growth rate.

In résumé, countries with a mercantilist policy that achieve major trade surpluses need anything but sophisticated finance: the growth rate of their GDP, which is strong, is paired with weak development in their banking and financial sectors<sup>6</sup>. Those countries which, on the contrary, are locked into a policy of accepting foreign deficits and stimulating their domestic demand need a highly developed and perfected financial sector to remain so: the rather mediocre growth rate of their GDP therefore goes along with strong development in their banking and financial sectors.

### 3. “Transition”, FDI and the development of finance

As we have seen, the two ratios employed—the one relative to domestic indebtedness and that relative to foreign indebtedness (the foreign balance of payments)—permit us to emphasize the opposition between the “mercantilist” countries and the “non mercantilist” ones, according to the sign which distinguishes each; the “domestic” ratio is negative, whereas the “foreign” ratio is positive for the mercantilist countries, while the inverse is true of the non-mercantilist countries.

The signs of these two ratios allow us to set up a table comprised of four boxes and, consequently, two supplementary categories: countries for which the two ratios are simultaneously positive and countries for which these two ratios are simultaneously negative.

« Domestic » ratio ( $TDD_n - GDP_{n-1}$ ) / $GDP_{n-1}$ )	« Foreign » Ratio ( $QFTB_n / GDP_{n-1}$ )	
	$> 0$	$< 0$
$> 0$	<p><b>T1 « Transition 1 »</b>            - passing from M/NM            - passing from NM/M            example: USA (1950/1960)</p>	<p><b>NM « Non Mercantilist » countries</b>            USA (since 1960)            GB (since 1950 except under Thatcher)            Spain  <u>Special case 1</u>: emerging countries receiving loans and FDI (example: Russia in 1900)  <u>Special case 2</u>: developed countries receiving a great deal of loans (example: Nazi Germany)  <u>Special case 3</u>: countries in crisis (USA 2009)  <u>Special case 4</u>: countries in the second phase of « transition »</p>

<sup>6</sup> These countries have a highly developed industrial sector that constitutes the basis of their trade surpluses and a relatively modest banking/financial sector.

< 0	<p><b>M « Mercantilist » Countries</b></p> <p>example: China (1989/2009) Japan (1950/1990) Germany (1950) USA (1940/1950)</p> <p><u>Special Case 1:</u> Countries « of independent means » (e.g., Persian Gulf Oil Producers)</p> <p><u>Special Case 2:</u> mercantilist countries undergoing a crisis (example: Japan today)</p>	<p><b>T2 « Transition 2 »: CRISIS</b></p> <ul style="list-style-type: none"> <li>- Countries in recession: France in early 2009</li> <li>- Countries in the first phase of « transition »</li> </ul>
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In either event, we are dealing with countries undergoing a « transition »; in the “T1” box, we are concerned with mercantilist countries that became non-mercantilist (the United States in the 1950s), as well as those countries following the opposite itinerary. These countries are in an unstable situation, a transitory one: they are in the midst of switching from one category to another.

In the « T2 » box, there are also to be found countries in an unstable situation, but the latter case is much more difficult than the precedent, given that we are dealing with countries in crisis; said crisis could result from a recession or from what belongs to the so-called “economy of transition”; in this last case, the crisis is deep because it affects all the structures of the society and it entails passing from one type of organization of the society to another, a very different mode of organization. It is this last category that will retain our attention in the development below.

After a very difficult first phase during which GDP significantly loses ground – the two ratios examined above are simultaneously negative – economies “in transition” recover, and their rate of growth becomes positive. What has happened is that the loans granted for foreign countries and/or international organizations as well as foreign direct investment (FDI) are producing their effects: domestic demand increases very markedly while foreign trade deteriorates because of new investments, principally FDI, necessitating major import fluctuations. All the same, the foreign deficit, which impacts negatively on growth, is more than compensated for by the new dynamism of domestic demand: there has been a shift from one box in our table to another, i.e., the country under consideration henceforth falls into the box of the “non-mercantilist” countries.

So does the story stop there? In the absence of any major exportable natural resources, does “transition” inevitably lead to a situation of trade deficit?

If the capital flow is maintained, when the exchange rate is flexible, the country’s exchange rate tends to rise, which in turn contributes to deteriorating its trade balance yet a bit more. The country, which virtually could have been very competitive thanks to its low salaries, thus loses, little by little, that virtual advantage...

What happens then if the incoming capital flow comes to an abrupt halt (“sudden stop”) or if a global crisis arises, which leads not only to such a diminished flow, but in addition, to the outflow of part of the capital which had, up until then, entered the country? Certainly, the situation is not bad in and of itself for the competitiveness of firms, but is it not already too late for some of them who have been ruined by too high an exchange level? Will the rise in exports not set off an inflationist process elsewhere?

We cannot help but point out that the FDI achieved in the automobile sector<sup>7</sup>, for example, fuels ulterior exports and consequently is excellent over the long-term development of the country.

<sup>7</sup> These investments are truly high in the Czech Republic, Slovakia, Poland and Romania.

What, however, can be said of the FDI realized in banking, very commonly representing 20% of the total FDI? That is a sector whose production is constituted essentially of non-exportable services: the FDI which concerns it can therefore only have relatively little influence upon the export capacity of the country in question. Nonetheless, this development of finance stimulates domestic demand, indeed, it is its principal function, and it thereby contributes indirectly to the trade deficit. The innovations made in developed countries in this sector have not failed to inspire applications in Central and Eastern European countries; that is why western banks, most notably Austrian banks, have been able to make numerous variable interest loans indexed on foreign currency (the euro or the Swiss Franc); the deterioration of exchange rates following the development of the crisis has therefore created an increase in defaults in these countries...

The present remarks, certainly too rudimentary, had only one goal: to call into question the « indisputable evidence » of the beneficial effect for growth of the development of finance in the Balkans; perhaps it would have been better to conserve more « rustic » instruments in the Balkans, but also elsewhere!

# IMPACTS OF GLOBAL RECESSION IN WESTERN BALKAN COUNTRIES: A COMPARISON WITH THE EU NEW MEMBER STATES<sup>1</sup>

*Matthieu Llorca<sup>2</sup>, Srdjan Redžepagić<sup>3</sup>*

## Abstract

*The current global crisis is systemic by being propagated in a banking, financial and economic crisis. It represents a negative external demand shock for Western Balkan Countries (WBC) with an impact on the banking and financial sector first (dice the third 2008 quarter) and then, since the first 2009 quarter on the real economy. The comparison with the crisis impacts for the EU New Member States reveals clearly that WBC were affected one quarter later due to specifics factors such as a less financial and trade integration with developed countries or a large informal sector. Finally, concerns about the financing of external deficits (trade and current account deficit) are arising due to the decline of remittances and Foreign Direct Investment inflows.*

*Key words: Global Economic and Financial Crisis, Channels Transmission, Policy Responses, Western Balkan Countries, EU New Member States*

## 1. Introduction

The current global crisis is of the exceptional width, the most serious since the 1930s Great Depression. Born with the real estate crisis in the United States (with the subprime credit crisis) since August 2007, it changed of nature since the Lehman Brothers bankruptcy (15<sup>th</sup> September 08). Indeed, it became a systemic crisis by being propagated in a banking, financial and economic crisis (Aglietta, 2008). Moreover, all the countries suffered: both developed and emerging economies.

Concerning the case of the European economy, the recession in Western European countries affects severely the EU New Member States (NMS), due to their economic and financial integration (Brunet and Guichard, 2009). And, Western Balkan Countries<sup>4</sup> (WBC) were also affected by this global crisis since the 2009 first quarter.

In these conditions, the current crisis constitutes a break in their economic process development, compared to their “golden years”: the period 2004-2007. Moreover, European integration on the road towards the EU is stopped (temporarily). Thus, global recession is inducing in WBC a growth

<sup>1</sup> This chapter is a part of a research project No. 159004, financed by the Ministry of Science and Technological Development of the Republic of Serbia, named: “The Integration of Serbian Economy into the EU - Planning and Financing of Regional and Rural Development and Enterprise Development Policy” and a part of a survey within a research project called “Integration of Financial Services Sector of the Balkan Countries into European Financial System.” as part of interstate programme of co-operation of „Pavle Savić” between the Institute of Economic Science from Belgrade and the University of Nice - Sophia Antipolis from Nice, France.

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<sup>4</sup> We consider the following western Balkan countries: Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro and Serbia.

deceleration, a decrease of credit to private sector, a decline of consumption and investment, the rise of unemployment, outflows of capitals, exchange rate depreciation or public finances deterioration.

As a result, the purpose of this article is precisely to analyze the impact of the global recession in WBC by highlighting the lagged crisis impact compared with EU NMS. After reminding briefly in a first section, some WBC characteristics and vulnerabilities associated with their macro-financial developments during the period 2004-2007, we study in a next section the crisis transmission channels (real and financial) and the remedies applied against the recession on the monetary and real side through the using of monetary and fiscal policy. In the section 4, we compare the crisis impact quarter by quarter and its intensity between WBC and EU NMS by proposing notably some explanations related to WBC specific factors. Finally, we consider one serious problem for WBC arising in the next years, and resulting from the crisis, namely: the financing of their external deficits.

## 2. Characteristics and vulnerabilities of WBC during their “golden years”: 2004-2007

WBC growth rates took off, averaging between 4 and 6 per cent per year (in real terms) from 2004 to 2007 (and even more than 6 % in Serbia and Montenegro), induced notably by credit growth to private sector (see table 1). Indeed, WBC, just like the EU NMS, have benefited during this period from relatively easy access to external financing with surges in net capital inflows. Moreover, WBC were characterized by an increasing trade integration with the EU.

Concerning the WBC banking sector, it is dominated by foreign banks, just like in Central and Eastern European Countries. Thus, Austrian banks make 35 per cent of their profits thanks to the Central European and Balkan countries (see table 1 below); they have lent € 230 billion in the region (i.e 70 per cent of the GDP of Austria). Moreover, the WBC financial integration appeared recent and must be deepened.

**Table 1. Austrian banks' consolidated foreign claims (immediate borrower basis) vis-à-vis WBC and EU NMS (at June 30, 2009 in € billion)**

EU New Member States	EUR billion	Western Balkan Countries	EUR billion
<b>BG</b>	3,59	<b>HR</b>	17,47
<b>CZ</b>	39,43	<b>MAC</b>	0,16
<b>EE</b>	0,17	<b>MC</b>	0,09
<b>HU</b>	25,97	<b>SR</b>	4,16
<b>LV</b>	0,4		
<b>LT</b>	0,18		
<b>PL</b>	9,63		
<b>RO</b>	30,11		
<b>SK</b>	20,61		

*Notes:* We use the following notation BG for Bulgaria, CZ for the Czech Republic, EE for Estonia, HU for Hungary, LV for Latvia, LT for Lithuania, PL for Poland, RO for Romania, SK for Slovakia, and for WBC, HR for Croatia, MAC for Macedonia, MG for Montenegro and SR for Serbia.

*Source:* OeNB

Among the WBC vulnerabilities, we can quote

- The high trade and current account deficit resulting from the low WBC exports and large imports from EU notably.
- The high external private sector debt (household and corporate) with a large foreign currency exposure. Indeed, lower interest rates on foreign borrowing and foreign currency denominated loans became increasingly attractive for private sector borrowers (corporate and household).

- In these conditions, banks are vulnerable to funding and credit risks. First, they became increasingly dependent on foreign currency, which has increased their vulnerability to external developments and contagion risks, both directly through their foreign funding needs and indirectly through conditions in their parent banks).

Second, the large currency and interest rate exposures of the private sector could translate into credit risk for banks, particularly risks induced by exchange rate depreciation such as between October 2008 and March 2009.

### 3. General overview of the crisis channels transmission in WBC

WBC were affected by strong negative spillover effects from the global crisis: on the financial and real economy side. In these conditions, the crisis represents for these countries an exogenous negative external shock whose transmission channels are first the banking and financial sector (3.1) dice the third 2008 quarter, and then, since the first 2009 quarter, the demand side, i.e. the real economy (3.2).

#### 3.1. Crisis impacts on the banking and financial sector

When in October 2008, the global financial turmoil spilled into WBC local markets, the stock markets plunged and financial sector has come under increasing pressure, given its rapid integration with the rest of Europe and the very high level of foreign ownership of banking assets.

Thus, one of the major impacts of this global financial market turmoil on WBC was a global liquidity and credit crunch.

On the liquidity side, the interbank market tightened considerably between October 2008 and March 2009, increasing “risk premia”. This liquidity problem is explained by the fact that banks holding surplus national currency liquidity were reluctant to lend beyond the overnight market.

And, credit growth was constrained by such tight liquidity conditions and a more cautionary attitude by banks. Interest rate on credit and deposit increased drastically. Thus, in Serbia (and to a lesser extent in Croatia), the average interest rate on loans to the private sector jumped to 17 % in December 2008 (against 10 % one year earlier). More especially as Western European banks, faced with capital shortages, have reduced new financing to their local subsidiaries, which now need to finance loan growth from local deposits. In these conditions, small and medium-sized companies faced difficulties to find new financing.

In addition, the deepening recession and tightening of funding conditions caused an increase of nonperforming loans, especially those extended in foreign currencies. Hence, concerns about the financial health of the banking sector have intensified, even if Balkans banks’ exposures to sub-prime securities and structured financial products appeared to be insignificant<sup>5</sup>. These have been manifested in temporary withdrawals by depositors (notably in Bosnia and Herzegovina, Montenegro and Serbia) contributing to a further tightening in liquidity conditions. At the same time, market concerns over the health of Western European parents of WBC subsidiaries and their exposures to emerging Europe have risen.

Moreover, another impact associated with the global credit crunch was a sudden stop in capital inflows to WBC. And, such decline of capital inflows with balance of payment pressures (fall of exports) drove strong depreciation of the currency against the Euro from October 2008, putting pressures on

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<sup>5</sup> Moreover, banking sector in most WBC seems to be resilient with high profitability, a sound capital base resulting from earlier bank recapitalizations (notably in Croatia)

household, corporate and bank balance sheets. Thus, for the countries with flexible exchange rate regime<sup>6</sup>, we can remind that the Serbian dinar has lost close to 17 % vis-à-vis the euro during the fourth quarter 2008 whereas the Albanian lek depreciated by 7 % in the first quarter 2009.

Concerning the case of Croatia, although, the exchange rate is de facto pegged to the euro (although officially exchange rates are managed float), we had notice that the Croatian kuna depreciated by 4 % vis-à-vis the euro during the third 2008 quarter and march 2009.

In addition, the higher risk perceptions was reflected in intensification of the financial “euroization”, with all new credit being euro-linked and bank deposits increasingly shifting towards foreign currency.

Finally, the government bond market came under severe stress with sovereign spreads shot up in WBC.

### **3.2. Crisis impacts on the real economy**

The global financial crisis affects to its turn the real economy in WBC, notably since the first quarter 2009, inducing external negative demand shock.

Detail, trade, construction, real estate, transport, metal, steel industry and manufacturing (durable consumer goods) sectors were very affected. Thus, the decline in industrial production reached the double-digit territory in Serbia, Montenegro and the Former Yugoslav Republic of Macedonia while it was more subdued in the other economies. Moreover, with the increasing global risk aversion, Foreign Direct Investment (FDI) inflows declined notably in Croatia and Serbia. In other words, foreign investors became more hesitant to invest in the Balkan region as the crisis progresses.

In addition, demand domestic suffered of global financial crisis because credit became rarer, more expensive and private agents (households and corporate) had difficulty in their loan reimbursement.

Thus, the second-round effect of the crisis (the deleveraging phase) caused a decrease of investment (notably in equipment, housing and transport) and consumption spending, reducing thus income and output. As a result, unemployment increased (notably in Croatia and Serbia and, to a lesser extent though at an already very high level, in Bosnia and Herzegovina), so that private sectors expectations, confidence fall. Corporate and household are under financial constraint, they report their production and spending plans for the future. Moreover, company profits are lower, so that indebtedness firms have financial problems and can be bankrupted inducing banking losses.

Hence, the economic crisis amplifies the financial crisis by causing a depressive vicious circle. Only public investment (infrastructure) increases, thanks to State intervention.

### **3.3. Remedies used against the recession**

Usual economic policies against recession were first used: States and central Banks coordinated their actions through fiscal stimulus plans and an expansionist monetary policy.

First of all, monetary policy was used during the first stage of financial crisis against liquidity problems and to avoid systemic collapse in markets: decrease of minimum reserve rates on domestic deposits to boost liquidity (Croatia, Bosnia), liquidity injection in order to ease conditions in the interbank market. Moreover, central bank intermittent intervention on the FX market by using official foreign exchange reserves (case of the National Bank of Croatia, Serbia) between September 2008 and March 2009 succeed to stabilize markets, strengthen confidence, limit currency depreciation against

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<sup>6</sup> Bosnia and Herzegovina has a euro-based currency board arrangement around the fixed rate of 1,95583 BAM/EUR whereas Montenegro uses the euro as legal tender which protected him from any exchange rate instability during the tensions period.

the euro and boost foreign currency liquidity. Moreover, the banking sector (which is largely foreign owned) benefitted from state guarantees granted in parent banks' home countries.

And, to fight against household deposit withdrawals, the authorities (central bank and government) raised the coverage deposit (case of Serbia, Bosnia with a deposit guarantee to more than € 10 000 against € 3 500 previously or Croatia with a quadrupling of deposit insurance to € 56 000).

From the real economy side, governments use active fiscal policy to support domestic demand. In the case of the former Yugoslav Republic of Macedonia, the government reacted dice November 2008 with a 10-measure crisis response package equivalent to 5-6 % of GDP including tax rebates, write-offs of unpaid social security contributions (amounting to 3-4 % of GDP) and a reduction of taxes on profits and agricultural incomes (about 2 % of GDP). Such plan was financed through international loans and a Eurobond issue. Moreover, Serbia adopted at the end of January 2009 a set of measures against the recession with soft loans and guarantees.

Indeed, State, through consumption and investment spending (infrastructure projects), substitutes to private sector spending in order to inject liquidity in the economy, finance investment and Small and Medium Enterprises, and stimulate consumption of domestically produced goods. Hence, budget deficit in WBC increased because of:

- the reduction of income tax (due to the recession)
- the high social spending resulting from unemployment increase
- the increase of public discretionary spending.

Moreover, public debt increase because of the budget deficit, the slow privatization receipts and the increase of debt service (caused by the global aversion to emerging markets)

Although active policy responses from the monetary and fiscal side were adequate, it appears that the scope is limited. On the one hand, the use of the euro as financial currency (the euroisation)<sup>7</sup> reduced the scope and the room for "manoeuvre" for an "independent" monetary policy. On the other hand, fiscal policy stimulus differs from country to country according to the available fiscal room available.

In these conditions, the International Financial Institutions support helped some WBC with notably IMF "stand-by arrangement" signed for Serbia (€ 2,9 billion in may 2009) and for Bosnia and Herzegovina (€ 1,2 billion in June 2009).

Such institutional support helps to stabilize the financial sector (liquidity, credit, and reserves for the foreign exchange market) and to avoid negative confidence effects on the country and its neighbors.

#### **4. Crisis impacts comparison between WBC and EU NMS**

Behind this general overview of the crisis transmission in WBC, it seems interesting to compare the crisis impacts on WBC and EU NMS. Indeed, the comparison of the growth rate between 13 EU NMS and WBC from the 2008 third quarter to the 2009 second quarter (see table 2 below), reveals that the degree of slowdown varies.

It appears thus a lagged impact of the crisis in Eastern European and Balkans countries, which can be explained by several arguments:

First of all, it is important to recall that before the economic crisis, some countries, such as Estonia, Latvia or Hungary, were already in slow down at the first semester 2008 (Llorca, 2008). These same

<sup>7</sup> 75 % of the stock of domestic credit is either denominated in or indexed to the euro and 60 % of the bank deposits are denominated in euro in the Balkan region.

countries suffered still more with the crisis. Thus, for Hungary, who accumulated a high level of public debt (to try and alleviate popular discontent, before the crisis), the financial crisis produced (psychologically) a movement of “flight to quality”, towards financial products in euro and dollars, therefore a flight of capital and a fall in foreign exchange rates. Hungary needed the International Financial Institutions rescue to avoid Iceland bankrupt scenario (6,5 € billion of euro from the EU, 5 € billion from the Europe Central Bank, 12,5 € billion from the IMF and 1 € billion from the World Bank).

**Table 2. Grow rates in EU NMS and WBC, quarter by quarter (in quarterly % change)**

	2008Q3	2008Q4	2009Q1	2009Q2
<b>BG</b>	6,8	3,5	-3,5	n/a
<b>CZ</b>	0,5	-1,3	-4,8	0,1
<b>EE</b>	-3	-4,5	-6,0	-3,4
<b>HU</b>	-1	-1,9	-2,6	-2
<b>LV</b>	-1,8	-4,7	-11	-0,8
<b>LT</b>	-0,3	-1,4	-10,2	-9,8
<b>PL</b>	0,6	-0,1	0,3	0,5
<b>RO</b>	-0,1	-2,8	-4,6	-1,1
<b>SK</b>	1,8	2,1	-11,0	2,2
<b>HR</b>	1,6	0,2	-6,7	-6,3
<b>MAC</b>	5,8	2,1	-0,9	-1,4
<b>MG</b>	8	8,1	0	-3,5
<b>SR</b>	4,9	2,8	-4,2	-4

*Source: European Commission*

Moreover, another characteristics associated with this crisis is the fact that the countries the affected have the biggest openness size (see table 3 below). Thus, Poland resists better to the global recession than its Visegrád neighbors (the Czech Republic, Slovakia and Hungary) thanks to a less dependence to international trade and to its economic structure (Llorca and Redzepagic, 2009). Indeed, the polish economy which is specialized in medium-gam technology with price goods relatively high, present an advantage than other economy specialized in tradable good. On the contrary, Slovakia was severely affected by the crisis in the first quarter 2009 due to its sectoral car specialization but ever benefited from the renewal in the car sector since the second 2009 quarter. In addition, in some WBC such as Albania which has a low level of openness size, the crisis had less pronounced effects.

**Table 3. Openness size in WBC (measured by the ratio export expressed in % of GDP)**

	Export in % of GDP, 2007
<b>Albania</b>	9,9
<b>Bosnia</b>	37,5
<b>Croatia</b>	42,8
<b>Macedonia</b>	53,4
<b>Montenegro</b>	46,5
<b>Serbia</b>	20,2

*Source: Word Development Indicator (IMF)*

In addition, countries which are in a delicate situation of hard landing are those in which the total of the everywhere loans granted far exceeds that of local bank deposits. These loans originate from borrowings contracted by the head offices on the international markets. And Hungary is not - by far - the only Central and Eastern European country to have exploited what was a gold mine (see section 2) and has become a trap: the interest rates on the Swiss franc have risen by more than 3 per cent in less

than five years, thus contributing to make heavier the repayments by the debtors of Central Europe. Thus, the fall of the Hungarian forint by almost 10 per cent compared to the Swiss franc in the space of a few weeks further increased the debt of Hungarians whose incomes are obviously always made out in forints. As a result, short-term repayments on the debt are considerable: Eastern European countries will have to reimburse or refinance the equivalent of 400 billion dollars in 2009 - the equivalent of one third of the GDP of the region (and of the increase in the resources of the IMF which the countries of the G20 have just decided...).

Besides, growth rate divergence between CEEC and WBC can be explained too by the government fiscal stimulus reaction. Indeed, the situation in each country differs according to the way in which the governments has reacted to the crisis and to its fiscal room emerged the past years. Thus, in Poland, fiscal stimulus is focused on the one hand on tax cuts and the increase of public expenditure<sup>8</sup> for an amount of 1,5 billion euro (namely 0,5 % of the GDP) and on the other hand by additional loans to the private sector, and similar measurements of an amount of 4,9 billion euro, i.e. 1,6 % of the GDP (Saha, D. and von Weizsäcker, J., 2009 ).

Moreover, implementation of EU-funded projects can explain such growth divergence between CEEC.

Finally, some WBC are characterized by a large informal sector: on the one hand, informal sector activities represented 20-37 % of GDP in Bosnia and even 40-45 % of GDP in Macedonia (data from ETF and World Bank); on the other hand, the percent of household income undeclared amounted to 18-19 % in Serbia and Croatia until 45 % and 52 % respectively in Macedonia and Albania (Christie and Holzner, 2004). In these conditions, we can consider that in bad times, informal sector is not affected by the crisis and its financial and trade transmission channels, so that the impact crisis is less in country with large informal sector.

## 5. Concern for the future: the financing of external deficits in WBC

Due to the crisis, the financing of external deficits (trade and current account deficits) will not be benign. On the one hand, trade and current deficits are reduced thanks to the crisis (weaken domestic demand reduces import growth) but on the other hand, the decrease of FDI and remittances inflows put financing problems.

**Table 4. External deficits and their financings (expressed in % of GDP)**

	Trade deficit (% of GDP)	Current account deficit (% of GDP)	Remittances inflows (% of GDP)	FDI inflows (% of GDP)
<b>Albania</b>	-26,7	-10,4	13,6	5,9
<b>Bosnia</b>	-37,4	-10,4	17,8	13,8
<b>Croatia</b>	-22	-7,6	2,7	8,1
<b>Macedonia</b>	-20,3	-3	4,5	4,1
<b>Montenegro</b>	-47,8	-29,4	n/a	18,7
<b>Serbia</b>	-22,4	-15,6	13,9	6,2

*Source: World Bank and EU (2007)*

Thus, according to the table 4 above, it appears that remittances exceed FDI inflows in all WBC, except in Croatia and Montenegro. Moreover, the countries where remittances are most significant are Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia, where they represent around 16 %- 17 % of GDP. However, due to the crisis, remittances' inflows have decreased by end-2008 in Albania and Bosnia and Herzegovina. Indeed, the growth slowdown in some major European economies, such as Germany or Italy, is having a lagged effect for the WBC. Remittances inflows to WBC are affected by the unemployment increase in developed countries.

<sup>8</sup> Notably the public investment, such as for instance the public spending to organize the football Euro 2012.

In these conditions, financing of external deficits is difficult to realize and require the using of the official exchange reserves, amounted from four to six months of imports in WBC.

## 6. Conclusion: lessons from the crisis

The global economic and financial crisis revealed numerous lessons for WBC that we remind:

- First, the tightening credit conditions of risk, resulting from the global crisis, has stopped the WBC growth model based on easy access to external financing.
- Second, WBC were affected by the crisis one quarter later than the EU NMS.
- Third, countries with strong financial and trade integration with the EU were affected earlier and more severely. On the contrary, country with large informal sector and low openness size are less affected.
- Fourth, such crisis showed that State intervention is necessary to stabilize the economy.
- Fifth, concerns are arising about the WBC financing of external deficits (trade and current account deficits) due to the decrease of FDI and remittances inflows. It will be certainly necessary to use the foreign exchange reserves of the Central Bank to finance such external deficits.

## References

1. Aglietta, M. (2008), *La crise: Pourquoi en est-on arrivé là? Comment en sortir?*, Editions Michalon.
2. European Commission (2009), "The Western Balkans in Transition", European Economy, Occasional Papers, No. 46.
3. Guichard, J-P. and Brunet, A. (2009), « Une crise qui n'en finit pas de "rebondir" », *Panoeconomicus*, Vol. 56, Issue 1, p. 127-133
4. Llorca, M. (2008), Financial Developments in EU New Member States (NMS) and candidates: an empirical analysis based on the monetary circuit theory, STAREBEI Research Program between the European Investment Bank and the University of Nice Sophia Antipolis, CEMAFI, December 2008, 150 p.
5. Llorca, M. and Redzepagic, S. (2009), "Asymmetric impacts of global recession in Central and Eastern European Countries: Soft Landing VS. Hard Landing", Paper presented to the International Scientific Conference "Economic Policy and Global Recession", Faculty of Economics, University of Belgrade, Serbia, September 25-27 2009.
6. Saha, D. and von Weizsäcker, J. (2009), Estimating the Size of the European Stimulus Packages for 2009, An Update, Bruegel Policy Brief, 20 February 2009.

# INFLUENCE OF WORLD CRISIS ON WESTERN BALKANS COUNTRIES – UNDERTAKEN MEASURES AND EXPECTED EFFECTS<sup>1</sup>

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### Abstract

*This paper has attempted to analyse certain influence aspects the global crisis has had on the Western Balkans countries, above all on Serbia, Croatia, Bosnia and Herzegovina, Macedonia and Montenegro. Our analysis focuses on events on stock exchanges, for which we have applied comparative analysis method and noticed that indexes at Western Balkans countries stock exchanges have significantly more fallen (from -46,09% to -73,86%) for the same period of time from 1 January 2008 until 20 August 2009 than indexes at leading world stock exchanges, which have fallen in the ratio of -25,00% to -35,59%. In addition, we have discovered that reinforcement of the global crisis has led to a notable capital withdraw in Western Balkans countries; investors have lost trust in banking and financial system, as well as to a number of other negative occurrences. The world crisis has proven to have had a rather strong influence on countries in this part of Europe, which is an additional issue for governments of certain countries in finalising transition process and quicker accession to the European Union (EU). Different countries have reacted in different ways and this paper aims at underlining some of the most important undertaken measures, as well as at assessing their potential effects. The paper consists of five parts. The introduction reviews global crisis phenomenon, emphasizing a great number of issues open to debate and dilemmas it has brought about, trying to discover answers to some of them within this paper. The second part has been devoted to the crisis cause influence and its development phases, not only in developed countries, but in Western Balkans countries as well. The third part analyses empiric data on indexes fluctuation at stock exchanges of developed and Western Balkans countries. Following the review of negative effects of the global crisis, the forth part deals with a short analysis of measures that governments of the respective Western Balkans countries have undertaken in fighting the crisis, so that we are able to sum up in the fifth part and try to draw the most important conclusions.*

**Key words:** Global Crisis, Financial Markets, Financial Systems, Financial Crises, Stock Exchanges Indexes, Banks and Banking

### 1. Introduction – world crisis – open issues and dilemmas

The world economic crisis that has taken its full flow in the course of 2008/09, will definitely be remembered as one of the biggest in the recent history. Its occurrence, origin, development and

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consequences have opened a great number of issues, doubts and dilemmas. It has, almost without an exception, affected the most developed countries in the world, and left a lasting impression on less developed countries economies as well. Different ways of occurrences and causes of the crisis itself has stipulated different measures governments of certain countries have undertaken. World crisis related events have been a true challenge for economists, offering numerous opportunities for research and analysis. A great number of articles have already dealt with this topic, analysing various issues, such as: its evolution (*R. Barrell & P.E. Davis, 2008*), how financial crisis is related to political crisis (*R. Chang, 2007*) or systematic risk assessment in international financial system (*S.M Bartram & G.W. Brown, 2007*).

One of the basic questions to be asked in the beginning is – how comes something so big and devastating could happen under globalisation at the end of the first decade of the 21<sup>st</sup> century? This paper has no ambitions or pretensions to try to find a simple and single answer to this question troubling almost the whole world. Neither do we intend to examine wide aspects of influence of globalisation on different financial systems or analyse its benefits and shortcomings, but to reiterate once again that this global crisis is boundless (*F.S. Mishkin, 2007*). It does not hit only developed countries, but most countries of the modern world. We would, therefore, within this paper try to point at its negative effects on certain countries in South-Eastern Europe (SEE) region. We shall focus on five Western Balkans countries – Serbia, Croatia, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia (official name, hereinafter referred to as Macedonia) and Montenegro. Negative effects of global crisis have been monitored through changes in stocks prices at stock exchanges, i.e. fluctuation (fall) of stock exchange indexes to be more precise. Some of our findings undoubtedly prove this crisis has significantly more hit Western Balkans region than the most developed countries of the world if we consider this criterion only. Nonetheless, negative effects of the crisis in this region have not been this narrowly focused on only one segment of capital market. They are much wider and have manifested through loss of trust in already weak and underdeveloped financial system of countries in the region, withdrawal of capital and further on, insolvency of primarily financial institutions, as well as of all participants in economic and social life. We are of the opinion that loss of trust is a rather sensitive issue that might cause problems even when the crisis has gone, and once conditions for return of the capital to the region have been created, contributing to the quicker revival and to overall economic growth.

One of possible dilemmas in the course of 2007, when the crisis was only to be indicated, referred to understating its true nature – whether this is another financial crisis or perhaps an economic one? In an attempt to find the answer to this question, one has to remember this crisis started as financial, through credit crunch and financial meltdown in the most developed financial markets, the USA and UK above all. As the time went by, infection, caused by poor structure of portfolio assets of many financial institutions and large-scale losses, have spread, making us witness world economic crisis not seen for almost 80 years now. It has significantly surpassed usual cyclic recession trends by its scale and seriousness of symptoms. This has led Paul Krugman, Winner of the Nobel Prize in Economics, conclude the return of Depression Economics has come, by saying the following, '*... it means that for the first time in two generations, failures on the demand side of the economy – insufficient private spending to make use of the available productive capacity – have become the cellar and present limitation on prosperity for a large part of the world*' (*P. Krugman, 2008, pp. 182*).

Some issues have quickly proved to be superfluous although they seemed to be topical at the beginning of the crisis. Having started as a financial one, the crisis has in no time contaminated real economic flows and influenced deceleration of economic activities of almost all countries in the world. We have faced another proof of globalisation. This virus like infection has, from the US market of sub-prime loans and mortgage markets, transferred to other financial service and other economic sectors. This was an unequivocal answer to one of open questions from the crisis beginning – whether this is a national crisis of certain developed countries or an international one.

Having in mind the fact that basic issues related disturbances in mortgage markets, many thought the crisis will be confined to the most developed countries in the world, since they had developed markets of mortgage backed securities (MBS), assets backed securities (ABS) or collateral debt obligation (CDO). It has, however, quickly proved such expectations are not realistic and that losses in one segment of financial system are rapidly transferred to other economic sectors, which is not only the case in developed countries. International crisis has thus become a global one.

Many institutions, even countries themselves, were surprised by size and scope of the crisis. Many people were shocked or simply taken aback when it occurred. Some books were soon published describing the state of consciousness: «*What Happened?*» (H. Pym & N. Kochan, 2008). We are of the opinion that «crisis causes blindness» is one of the main reasons. Namely, the crisis on mortgage markets segment ‘lulled’ many participants who did not have any activities related to this segment of financial markets. Prevailing pattern of thinking was - «This has to be someone else’s worry». It has, nonetheless, became obvious that crisis causes orientation has to be refocused quickly towards envisaging consequences that were merciless, evident and painful. Portfolio values have dramatically decreased, assets quality melted down, investment structures collapsed like house of cards... One more pattern has soon proved to be true – closely related financial and real sector. The crisis brimmed from a financial into a real sector of economy, leading to recession in many parts of the world.

Devastating consequences of the crisis have resulted in a hasty involvement of countries in finding resolution to the issues and covering losses. Nationalisation of certain huge banks, as well as abandonment of the much praised deregulation concept took place even in the most developed countries. A dilemma was raised whether this was a breakdown of liberal capitalism, victory of state-run interventionism or something else. Moreover, global crisis has also revealed certain weaknesses in international economic relations. We may say that certain «economic nationalism» has grown stronger. There is not much room for solidarity under difficult conditions. Statements such as «British jobs for British workers», «they cannot expect the US tax payers help European economy» or «workers may be made redundant but not in our country...» could frequently be heard. Unique crisis requires unique solutions. And every country is more or less left to its own devices in this respect. What could then less developed countries, such as Western Balkans countries for example, possibly expect under such circumstances?

## **2. Development phases and causes of the crisis in developed and Western Balkans countries**

This paper will not go into details of crisis anatomy analysis since this is simply not our objective. There are already certain papers dealing much more thoroughly with this issue, such as, for example, Ray Barrell and Phillip Davis (R. Barrell & P.E. Davis, 2008). Aiming at better understanding of the crisis influence on certain Western Balkans countries, we will, however, try to underscore certain phases that we believe can be identified as typical for the crisis so far, in 2007 and 2008 above all. We would like to note that even though they primarily refer to developed countries, we tried to draw a parallel with what happened in certain phases in the given Western Balkans countries. Generally speaking, we have identified the following three phases in development of the crisis:

- I phase – up to mid-2007 – with light turbulences at leading world stock exchanges and minor fall of stock exchange indexes. Certain solvency issues might be anticipated, related to only some financial instruments and institutions, leading to a slight increase in inter-bank interest rates. Reactions of central banks to such occurrences are mainly focused on increase of solvency. Problems French BNP Paribas Bank with its three investments funds or British Northern Rock Bank face are considered to be exclusively their problems, and not overall market related issues. Meanwhile, there is no indication of crisis in the Western Balkans countries. Stock prices go up, as well as stock exchange indexes, there are neither solvency issues nor any slightest hints pointing at the possible crisis. In the period from 1 Jan 2007 until 30 June 2007 stock exchanges indexes slightly went up in developed countries by

9,07% on average, while, in the same period, capital market of the Western Balkans countries rapidly grew, which brought about average index rise by almost incredible 70,90%!

- II phase – second half of 2007 – mid-2008 – in which disturbances in investment structure of many financial institutions have become more serious. Losses are evident and cannot be hidden any more. They are publicly announced for some of the biggest world financial institutions, such as Citigroup, Merrill Lynch, UBS or Credit Suisse. *Bear Stearns* Bank is taken over by *JP Morgan Chase Bank* with assistance of FED. Instability on the money market increases. All these negative events on developed countries markets brought about the fall of leading stock exchange indexes in the second half of 2007 (on average, -3,71%), which was significantly accelerated in the first half of 2008 (on average, -15,29%). Meanwhile, there are still no indications pointing at the crisis in the Western Balkans region until the end of 2007, although the value of regional stock exchange indexes fell by -11,58% on average, as a consequence of price momentum correction for the last year. Only in the first half of 2008 did the crisis started influencing financial markets in the region primarily due to withdrawal of foreign investors anticipating the crisis (e.g. portfolio investments in Serbia in the given period were around -100 million USD, and in Macedonia around -30 million USD), and stock exchange indexes thus significantly dropped by -35,54% on average.

- III phase – starts from the 3<sup>rd</sup> quarter of 2008 and is primarily related to the fiasco of the famous investment bank *Lehman Brothers*. Infection and contamination of assets of many financial institutions in the USA and UK is taking its tribute and increasingly spreads through the financial system. Central banks of different countries acted jointly, such as, for example, Federal Reserve, the Bank of England and the European Central Bank, which announced co-ordinated cuts in lending rates on 8 Oct. The merger between *Merrill Lynch* and *Bank of America* also took place in this period among all other things. The crisis was definitely internationalised by spreading into other countries in the world. It grew into a general economic crisis from a financial one by the end of that year. Many countries, as well as the world economy slowly enter recession. Many Western Balkans countries started feeling «on their own skin» negative influences coming from the global environment in this phase. By the end of this year, governments of certain countries started passing first programme measures, primarily focused on outstanding and growing distrust in domestic financial (banking) system and withdrawal of resources, which underlines additional problem – insolvency. Withdrawal of deposit and outflow of financial resources abroad took place in almost all respective countries, as well as striking issues related to establishment of balance in public finances.

Scope and scale of the crisis, as well as disturbances in the world market have indirectly hit all countries in the Western Balkans region. Their influence and appearance differed from country to country, which is logical having in mind differences in levels of overall economic and financial systems development. The first reactions to the crisis usually came down to – surprise. Many, not only financial experts, but officials in the region as well, were not only surprised by the crisis, but, what was even worse, completely unprepared for it. Hence, in certain countries in the period between October – December 2008, a significant withdrawal of deposit by residents took place (e.g. around 1 billion Euro citizens savings were assessed to be withdrawn in Serbia – according to the National Bank of Serbia Governor's statement, Mr Radovan Jelašić). The Government of the Republic of Serbia's reaction to such a panic situation was however late. Only on 22 Dec 2008 did it adopt Amendments to the Law on Deposit Insurance, raising a minimal amount for deposit insurance from 3,000 to 50,000 Euro. In addition to this, the Law on Temporary Exemption from Certain Type of Income Taxes entered the force on 30 Jan 2009. Aiming at stimulating saving, it abolished income tax on foreign exchange savings interest rate that was 20%.<sup>5</sup> Other countries in the region faced the same problems such as significant withdrawal of capital, the third and the fourth part shall deal with.

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<sup>5</sup> Law on Amendments and Changes to Deposit Insurance Law (2008), Ministry of Finances of the Republic of Serbia

Following the initial shock, the crisis was used by many in the region as an excellent excuse. Somehow, all of a sudden, as if overnight, it was to be ‘blamed for everything’. For everything incapable political leaders or their even less capable civil servants of small Western Balkans countries failed to do, there was an ideal excuse – the world financial crisis. Almost all countries started saying something like «*We would like to be able to do more, but it is crisis and there is no money, hence there is nothing else we can do ...*». Psychological factor turned out to be extremely strong and that the whole region is still facing insufficient level of trust in financial institutions and instruments. Ebb resources from developed countries have influenced a sudden withdrawal from financial markets by local and regional players, which further deepened the crisis initially caused from outside. Since many markets in the region are narrow and shallow, without developed bond or derivatives markets, plus with a small number of participants, dominated by banks (almost all financial systems of the countries in question are bank-centric systems), we have gained additional ideal internal mechanism to reinforce outside influences of the crisis. Naturally, many governments were not able to realise their mistakes related to lack of efforts, before the crisis, to establish a solid financial system that would be a bit more resistant to external influences. Instead of this, crisis and issues quickly brimmed from financial into a real sector, which was also used as a justification by those who did not take crisis seriously enough and were late to react by applying appropriate measures. To use medical terminology, certain «inflammation» took place, at which one was not able to differentiate causes from symptoms.

Someone may think that the fact that financial systems of the Western Balkans countries are less developed than in developed countries, seemed to be a ‘favourable’ circumstance for the region, i.e. it will be hit less by the crisis due to this very reason. This paper will show whether this fact was fortunate or not. However, underdevelopment of financial systems and completely different causes have indisputably caused the crisis with different flow and consequences in almost the whole region. It was thought by some people that since our financial systems are less developed – causes of the world crisis would not, generally speaking, have such a great influence on us. This is nothing but trust. But, again, only partly.

Before we see why is this so, let’s have a look at the most important causes of the crisis in the most developed countries.

Many experts believe that roots of the crisis are very deep and have been incorporated in the US financial system for years and years. There are authors and books calling the roll of the Chairman of the Federal Reserve for many years, famous and for a number of years much praised Mr Alan Greenspan, whose low interest rates policy in the period between 1987-2006 led to creation of potential instabilities that later on resulted in the credit crunch (*W. Fleckenstein, 2008*). In an attempt to underscore profound causes of the crisis on financial markets of the most developed countries, we shall try and systematise them in at least four groups, as follows:

I – Individual behaviour related gaps – dominated by greed as many times before in financial markets history development (*D. Eric, 2003*), particularly with respect to fluctuation of prices in real-estates and securities markets. For a number of years, appreciation of home prices was present of above 1 percentage over the rate of inflation, which approximately followed a growth in real income. However, in the period between 2000-2006, when inflation was at a relatively low level, average growth of major-market home prices was above 14% per year, which was far beyond real demographic and realistic basis (*C. Morris, 2008, pp. xvii*). There was obviously a reason for creation of a bubble on the real-estates market and price rise above their intrinsic value. On the other hand, low interest rates led to relatively «cheap» loans. The growing bull real-estates markets opened many opportunities for making speculative profits through buying and selling flats followed by taking new mortgage loans at the same time. A sub-prime market developed in the meantime, i.e. criteria for granting loans were reduced, which causes problems manifested when instability in the real-estates markets occurred. Many loan users gave up further repaying loans as soon as prices of real-estates fell below the mortgage values, and returned «keys» to their flats to financial institutions. All of a sudden, banks

were covered up by a bunch of real-estates they objectively did not know what to do with since their value was going down and loans remained unrecoverable claims.

II – Financial institutions business transactions related gaps – in which domination of greed has once again proved to be dangerous. We witnesses again and again how sensitive and extremely important business ethics issue is in finances (*J. Boatright, 1999*). Many institutions, motivated by as high profits as possible, tried to grant as many loans as possible. When you have relatively low interest rates situation, then you are motivated to indebt yourself at a low rate and make profit by placing resources at a higher one. In addition to this, criteria are lost; rules related to a debtor's creditworthiness and risk level are disrespected, as well as many other forms of unethical behaviour. Activities on the so-called sub-prime market increase. Securitisation process development and occurrence of MBS, ABS, CDO, as well as recording of off-balance assets, created basis for easy and quick money through business transactions. Greed of certain executive directors, who were motivated by high bonuses, caused mistakes in structured products system “*valuation*”. Having added up all, there were many gaps in management and business transactions of financial institutions that cost many of them either bankruptcy or huge losses.

III – Market related gaps – dominated by greed as well. Price rise on real-estates markets brought about price rise of structured products. More and more financial instruments occurred in the form of innovation. Many took financial engineering development process as a kind of financial alchemy.

IV – Regulatory bodies related gaps – it has proved, unfortunately too late, that many issues have not be regulated enough. Deregulation processes, so much praised in the '90s, 20<sup>th</sup> century, demonstrated a number of good, but also bad, almost catastrophic things. Time proved there were numerous omissions in control of work of the so-called “*originators*”, their separation from investors, as well as in control of rating agencies activities, etc. Having in mind all the complexity of control and regulations issues, as well as a growing role states have undertaken in mitigation of the crisis consequences, it is still difficult to forecast more precisely further directions of regulatory reforms and changes.

Taking all four groups of reasons that led to financial crisis into consideration, we may underline in the very beginning that they cannot apply to any Western Balkans country in a form explained here. A number of arguments support this statement. Level of a financial system development is the first and, definitely the most important one, since in most countries in the region they have only started developing. There are however gaps in market development strategy, and even in its regulations. Namely, many countries (with an exception of Croatia, to a certain extent) almost do not have bond markets, which has proved to be a huge problem in case of a sudden fall of stock prices. In addition to this, almost all countries have rather poorly developed primary and completely undeveloped secondary mortgage markets. This is not a particularly negative fact, i.e. it could have been a positive one if it were not for the crisis large scope and scale. Further on, most stock exchanges function as stock markets, narrow and shallow, since the majority of quoted firms reached stock exchanges through privatisation processes and not initial public offering (IPO). This fact proved to be fatal, since any higher capital inflows lead to a sudden growth, and outflows to a fall of stock prices and creation of a serious instability, this paper will elaborate on in the forthcoming part. Finally, to make it even worse, none of the respective countries have underdeveloped derivatives market, which deprived investors of any chances for hedging and protection from the risk. Many investors therefore simply fled and withdrew from the region as the crisis grew stronger, since they had no alternative possibilities for investment or hedging.

A relatively low level of trust in financial and banking system should be added to all the abovementioned, as particularly important factors that contributed to the crisis reinforcement and its negative effects. Financial systems are mainly bank-centric since banks are the biggest players. Role of other participants is relatively small, as well as their power, making them very susceptible to external influences.

### **3. Comparative analysis of events on financial markets in developed and Western Balkans countries and other crisis consequences analysis**

Four aforementioned groups of causes and phases in crisis development have been relevant for developed countries. However, it is questionable whether they can apply to the Western Balkans countries. The answer is at first glance undoubtedly negative. The first and second phase in crisis development mainly related to institutions and participants in developed markets, in the USA and UK above all. A much greater breakthrough of the crisis in continental Europe and hence in SEE and Western Balkans region took place in the second half of 2008, with the first tangible effects in October – November, i.e. in the third phase.

We have decided to analyse fluctuations of stock exchange indexes in order to be able to review development of the crisis as realistically as possible, as well as its influence on developed and Western Balkans countries. We shall focus on fluctuation of indexes in the period from 1 Jan 2007 until 15 Aug 2009, with 8 cross-sections on the following dates:

- I – 1 Jan 2007;
- II – 30 June 07;
- III – 1 Jan 08;
- IV – 30 June 08;
- V – 15 Sept 08;
- VI – 1 Jan 09;
- VII – 30 June 09 and
- VIII – 20 Sept 09.

We have divided respective indexes into three groups (Table 1), as follows:

I – Developed countries indexes, such as: the USA (S&P 500, DJIA, NASDAQ Composite), France (CAC 40), the UK (FTSE 100), Germany (DAX) and Japan (Nikkei 225).

II – Western Balkans countries indexes: Serbia (BELEX15), Croatia (CROBEX and CROBIS), BaH (SASX10 and BIRS), Montenegro (MOSTE) and Macedonia (MBI 10).

III – Indexes of certain neighbouring countries, EU members, we have used as a benchmark: Slovenia (SBI 20), Hungary (BUX and BUMIX), Romania (BET) and Bulgaria (SOFIX). We shall also analyse fluctuation of indexes MSCE EAFE for emerging markets.

**Table 1. Fluctuation of stock exchange indexes for the period from 1 Jan 2007, until 20 Aug 2009**

Country	Stock exchange	Index	1Jan 07	30Jun07	1Jan08	30Jun08	15Sep08	1Jan09	30Jun09	20Aug09	
<b>Developed countries</b>			I	II	III	IV	V	VI	VII	VIII	
USA	NYSE	S&P 500	1,418.30	1,503.35	1,468.36	1,280.00	1,192.70	903.25	919.32	1,007.37	
USA	NYSE	DJIA	12,463.15	13,408.62	13,264.82	11,350.01	10,917.51	8,776.39	8,447.00	9,350.05	
USA	NASDAQ	NASDAQ com.	2,415.29	2,603.23	2,652.28	2,292.98	2,179.91	1,577.03	1,835.04	1,989.22	
United Kingdom	LSE	FTSE 100	6,220.80	6,607.90	6,456.90	5,625.90	5,204.20	4,434.20	4,249.20	4,756.60	
Germany	Deutche Borse	DAX	6,596.92	8,007.32	8,067.32	6,418.32	6,064.16	4,810.20	4,808.64	5,311.06	
France	Euronext	CAC 40	5,541.76	6,054.93	5,614.08	4,434.85	4,168.97	3,217.97	3,140.44	3,615.81	
Japan	Tokio SE	NIKEI 225	17,225.83	18,138.36	15,307.78	13,481.38	11,609.72	8,859.56	9,958.44	10,383.41	
<b>Western Balkans</b>											
Serbia	Belgrade SE	BELEX15	1,675.2	2,835.52	2,318.37	1,783.28	1,287.54	565.18	569.27	659.05	
Croatia	Zagreb SE	CROBEX	3,209.48	4,835.28	5,239.03	3,587.59	3,255.45	1,722.25	1,896.36	1,897.22	
Croatia	Zagreb SE	CROBIS	101.06	99.08	96.48	95.29	96.33	90.62	86.27	86.52	
B&H	Sarajevo SE	SASX 10	2,855.59	4,366.67	3,685.15	2,286.87	1,722.71	1,233.65	1,040.45	963.29	
B&H	Banja Luka SE	BIRS	2,884.61	3,675.08	2,564.33	1,767.84	1,468.49	1,027.94	995.51	1,003.51	
Montenegro	Montenegrin SE	MOSTE	918.88	2,189.88	1,627.69	769.21	658.71	469.53	730.6	877.42	
Macedonia	Skopje SE	MBI 10	3,702.54	6,917.51	7,740.79	4,885.99	4,749.43	2,096.16	2,532.43	2,530.84	
<b>Neighbouring countries</b>											
Slovenia	Ljubljana SE	SBI 20	6,382.92	10,561.34	11,369.58	7,877.87	6,553.07	3,695.72	4,263.54	4,180.41	
Hungary	Budapest SE	BUX	24,844.32	28,929.73	26,235.63	20,387.52	19,223.14	12,241.69	15,320.14	18,213.59	
Hungary	Budapest SE	BUMIX	2,532.81	3,246.53	3,243.75	2,316.48	2,098.01	1,452.65	1,717.40	1,827.21	
Bulgaria	Sofia SE	SOFIX	N/A	N/A	N/A	N/A	931.02	358.66	356.73	436.84	
Romania	Bucharest SE	BET	8,050.18	9,665.61	9,825.38	6,502.65	4,823.21	2,901.10	3,434.43	4,043.22	
<b>MSCI Emerging markets</b>			<b>EEM</b>	<b>36.75</b>	<b>42.37</b>	<b>49.01</b>	<b>44.25</b>	<b>32.93</b>	<b>24.77</b>	<b>32.23</b>	<b>35.77</b>

We shall go on analysing index values changes for the following time intervals: I – 1 Jan 07 – 20 Aug 09; II – 1 Aug 08 – 20 Aug 09; and 15 Sept 08 – 20 Aug 09, as presented in the Table 2.

**Table 2. Changes in fluctuation of stock exchange indexes (in %)**

Country	Stock Exchange	Index	1 Jan 07 20 Aug 09	1 Jan 08 20 Aug 09	15 Sept 2008 20 Aug 2009
<b>Developed countries</b>		<b>Average*</b>	<b>-27.01</b>	<b>-30.60</b>	<b>-11.93</b>
USA	NYSE	S&P 500	-28.97	-31.39	-15.54
USA	NYSE	DJIA	-24.98	-29.51	-14.36
USA	NASDAQ	NASDAQ com.	-17.64	-25.00	-8.75
United Kingdom	LSE	FTSE 100	-23.54	-26.33	-8.60
Germany	Deutche Borse	DAX	-19.49	-34.17	-12.42
France	Euronext	CAC 40	-34.75	-35.59	-13.27
Japan	Tokio SE	NIKEI 225	-39.72	-32.17	-10.56
<b>Western Balkans</b>		<b>Average**</b>	<b>-44.86</b>	<b>-63.91</b>	<b>-29.97</b>
Serbia	Belgrade SE	BELEX15	-60.66	-71.57	-48.81
Croatia	Zagreb SE	CROBEX	-40.89	-63.79	-41.72
Croatia	Zagreb SE	CROBIS	-14.39	-10.32	-10.18
B&H	Sarajevo SE	SASX 10	-66.27	-73.86	-44.08
B&H	Banja Luka SE	BIRS	-65.21	-60.87	-31.66
Montenegro	Montenegro SE	MOSTE	-4.51	-46.09	33.20
Macedonia	Skopje SE	MBI 10	-31.65	-67.31	-46.71
<b>Neighbouring countries</b>		<b>Average</b>	<b>-34.71</b>	<b>-49.08</b>	<b>-24.72</b>
Slovenia	Ljubljana SE	SBI 20	-34.51	-63.23	-36.21
Hungary	Budapest SE	BUX	-26.69	-30.58	-5.25
Hungary	Budapest SE	BUMIX	-27.86	-43.67	-12.91
Bulgaria	Sofia SE	SOFIX	N/A	N/A	-53.08
Romania	Bucharest SE	BET	-49.77	-58.85	-16.17
<b>MSCI Emerging markets</b>		<b>EEM</b>	<b>-2.67</b>	<b>-27.01</b>	<b>8.62</b>

\*Arithmetic average

\*\* Zagreb SE CROBIS bonds index has not been included in this cross- section

It is clearly possible to notice, on the basis of comparative analysis of fluctuation of stock exchange indexes in developed and Western Balkans countries markets, that the fall is more underlines at fragile stock exchanges of the Western Balkans for all three analysed periods. Even in the course of the first analysed period, comprising enormously high price growth of shares in Western Balkans stock exchanges, indexes average values has significantly dropped (-44.86%) in comparison with average of developed (-27%) and neighbouring countries (-34.71%), which proves that all positive development effects from 2006 and 2007 have fully been annulled in the course of crisis. In the second analysed period, when the effects of approaching have started having a progressive influence on stock exchange son the global level, indexes at Western Balkans countries stock exchanges have sunk even deeper than in developed countries.

Average fall of regional indexes was 63.91%, what is more than double in comparison with developed countries (-30.6%), while in Serbia and Federation of Bosnia and Herzegovina that fall exceeded 70%. Situation is not much better in neighbouring countries where average fall was around 50% which indicates that their capital markets are not adequately developed in spite of the fact that they are the members of the European Union.

The last period that was analyzed refers to the events that followed *Lehman Brothers* bankruptcy on 15 Sep, 2008, when the crisis began to reach its peak, which lasted till 20 Aug, 2009. According to Table

1 during the summer 2009 world stock exchanges slightly recovered which resulted in noticeable rise of the leading indexes. Also, stock exchanges in the neighboring countries started to recover if compared with June 30, 2009. However, indexes of the Western Balkans countries (except for Serbia and Montenegro) have stagnated during the summer, so the gap between the average index fall in the developed countries which was -11.93% in the analyzed period was even deeper in comparison with the Balkans countries where the average fall was -30%. This proves that the peak of the crisis destroyed capital market of the Western Balkans countries which was already seriously shaken, and that its recovery is yet to come.

Particularly interesting is the fact that not only stock indexes fell but in Croatia securities stock exchange index of CROBIS fell by 10% in the period 1 Jan – 20 Aug, 2008.

One of the key factors of such a drastic fall of the stock indexes in the Western Balkans countries was withdrawal of the foreign investors from the capital market, which considerably reduced portfolio and foreign direct investments. In 2008 in Croatia, portfolio investments were reduced by 554.9 mil Euro, in Serbia by 134 mil USD while in Macedonia that reduction was by 72.48 mil USD<sup>1</sup>. Foreign direct investments follow almost similar pattern. According to the data provided by the National Bank of Serbia, from the beginning of 2009 to the end of July, Serbia received 894 mil Euro from the foreign direct investments, while in the annual analysis for 2007 and 2008 they were 1.8 bill Euro.<sup>2</sup> Foreign direct investments in Croatia in the first quarter of this year were 399 mil Euro, which in comparison with the same period last year is by 42% less.<sup>3</sup> In Montenegro foreign direct investments in 2007 amounted to one billion Euro, and in 2008 they fell to 832 mil Euro. In the first quarter of this year they amounted only 67.5 mil Euro.<sup>4</sup>

To perceive the results of the crisis is one of the most sensitive issues of the world crisis analysis. Roughly, all results could be divided into direct and indirect ones. Direct results can be analysed on two levels. The first level refers to the losses connected with real losses which some financial institutions suffered having invested in either basic financial instruments or derivatives on the most developed markets which collapsed. Yet there are no precise estimations not even for the most developed countries. Estimations constantly change, unfortunately to the worse, so that the amount bigger than 5 bill Euro has been mentioned lately. For the Western Balkans countries such kind of loss can hardly be big, since a small number of participants from the region have invested in the developed markets.

The second group of the direct effects of the crisis is connected with losses that financial institutions suffered due to the fall in financial instruments prices (mainly stocks) on regional markets of the Western Balkans countries. If we saw that the average fall was more than 60% it can be predicted how much 'big players' lost on stock exchanges in the region. Of course, these losses can neither be generalised, nor precisely identified, but evidently they exist.

Indirect losses entail opportunity costs, as well as hardly measurable consequences of non-liquidity and loss of trust. In our opinion, one of the biggest problems refers to the loss of already fragile trust. We have pointed out that only in Serbia, at the end of 2008, more than 1 bill Euro was withdrawn in the form of deposits. As the vice-governor of the Central Bank of Bosnia and Herzegovina stated, banks in Bosnia and Herzegovina in one week in October 2008 suffered withdrawal of deposits in the amount of 400 mill Euro, and in 2009 drastic fall in capital inflow can be expected. According to the bulletin of the Central Bank of Montenegro, total deposits by the end of March 2009 amounted to 1.76 bill Euro, while total loans amounted to 2.86 bill Euro, which gives difference of 920 mill Euro in

<sup>1</sup> Data source: Balance of payment, national banks

<sup>2</sup> Data source: Balance of payment, National Bank of Serbia

<sup>3</sup> Data source: Balance of payment, National Bank of Croatia

<sup>4</sup> Data source: Business operations of the Montenegrin economy under the conditions of the world economic crises (2009), Montenegrin Chamber of Commerce, downloaded from <http://www.pkcg.org>

favour of the credit gearing of the citizens and economy. Total deposits fell from August last year when they amounted 2.346 bill Euro, by 585 mill. Deposits from citizens amount to 780 mill Euro and they have been decreasing since August last year when they amounted 1.123 bill Euro. The ratio between loans and deposits, as stated in the most recent bulletin by the Central Bank of Montenegro, got worse and in March this year it was 1.52, while a year ago it was 1.15.<sup>5</sup>

Also, as the result of the fall in demand and increase of illiquidity at the beginning of the year in Serbia, 56 158 business entities were blocked (out of 320 000), with the remark that two thirds of them do not fulfill their obligations for more than a year.

The worst possible scenario is if the whole region becomes 'a black hole' for investments. The facts about great falls on stock exchanges may be a bad news, but the central issue for the region is whether there would be a fall if there were no crisis. Even though there are huge differences among the countries in the region, there are many similarities as well as the need for joint action. Namely, spreading negative image about the region can harm everyone. It would not be good once when the crisis is over. So, all countries in the region are responsible to point out a series of factors which make the whole region attractive. These are numerous possibilities for investing, relatively developed infrastructure, low labour costs, favourable opportunities for extra profit, etc.

#### **4. Short review of the measures undertaken to resist negative effects of the world economic crisis in the Western Balkans countries**

In the next few paragraphs we would try to give a brief of the most important measures taken over by the Western Balkans countries in order to ease off negative effects of the global economic crisis. Sometimes we would try to give comments and review efficiency of these measures. Especially we would like to emphasise that in some cases we were not able to do that because time was too short to estimate results of the measures.

##### **Serbia**

In November 2008 Government of the Republic of Serbia adopted a set of measures directed towards banks and financial system. The aim was to stabilise first of all banking system and prevent an increasing withdrawal of deposits, especially in foreign currency, which was a great problem. Concrete measures entailed:

- State guarantees for insuring deposits on savings – the limit was lifted up from 3000 to 50000 Euro. This measure proved effective, since it eased off panic among savings account owners and they stopped withdrawing deposits.
- Tax on capital gain was abolished – in order to prevent decrease of stock prices at the Belgrade Stock Exchange. The measure turned out to be problematic, since there was no profit (due to decreasing – *bear* market).
- Tax of 0.3% on the negotiation of absolute rights in trading stocks – which is not a measure in fighting against global crisis, but simply a correction of a deviation in financial operations in Serbia which originates from the 1990s.
- Since one of the biggest problems Serbian economy started to encounter was illiquidity, several measures were taken to solve that problem, such as: extension of the deadline for repayment of loans taken before, easier borrowing abroad through abolishment of mandatory reserves on new borrowing, measures directed towards prevention of negative exchange rate differences, etc. These measures were of a short-term character, since illiquidity crisis became deeper and deeper. For Serbia it was one of the biggest problems and the most negative effect of the global economic crisis.

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<sup>5</sup> Data source: Balance of payment, Central Bank of Montenegro

Another group of measures that the Government took over was directed towards the real sector in order to prevent increase of unemployment and decrease of economic activity. Within this set of measures the following should be pointed out:

- Measures of the state savings, which represent recommendations by the International Monetary Fund which entail – reduction of salaries in public companies, agencies and state administration – which was done at the beginning of the year 2009.
- Restrictions in terms of employment in state administration, downsizing through lay-offs and rationalisation – which was done more declaratively. However, Serbian government was not strong enough to fight that ballast, which may have had very serious social and political consequences.
- Favourable loans – for liquidity, investments, financing of operating capital, for development, etc. The problem was in very limited real sources.
- Provision regulating conditions for subsidizing interest rates for loans intended for perseverance of liquidity and financing of operating capital in 2009.
- Provision regulating conditions for the use of co-financed loans for investments with a guarantee by the Guarantee fund in 2009
- Provision regulating conditions and criteria for subsidizing interest rates for consumer's loans for the supply of certain commodity goods in 2009 – under favourable conditions, so as to prevent decrease in demand and further strengthening of crisis in real sector.
- Measures intended to increasing employment – favourable tax facilities for all employees who employ people who have not worked before.

## Croatia

Croatia is one of the countries in the Western Balkans region which has a comparatively highest indebtedness. Their gross external debt amounted to 39.8 bill Euro by the end of April 2009, while a year ago it was 35 bill Euro.<sup>6</sup> Croatia was more exposed to the negative effects of the world economic crisis. Apart from high repayment rates, Croatia faced a couple of other serious problems such as: economic activities slowed down, increase of unemployment (for the first time since 2000), high and permanent deficit of the current account of the balance of payments, limited availability and high costs of capital and objective dangers and fears from worsening the borrowing rating of the country.

The government of the Republic of Croatia has tried several times to ease off some of the negative effects stated above. On this occasion, we particularly point out the package of 10 anti-recession measures which were adopted in February 2009, which entail the following<sup>7</sup>:

- Additional strengthening of macro-economic stability – budget re-balancing,
- Exemption of all obligations except for taxes, wherever possible,
- Strengthening liquidity of the public companies, thus strengthening the whole sector of economy as a support to the sector of small and medium-sized enterprises (SMEs),
- Harmonisation of state policies of support with systems of support in the European Union,
- Strengthening support to insuring exports,
- Measures towards strengthening of tourist trade, as a very important branch of economy which is expected to bring high foreign currency inflow – action plan, improved promotion and a set of other measures. In spite of all that, the tourist season did not meet expectations in Croatia. There was 3-6% decrease in comparison with the previous year.
- Encouraging direct investments, and investments in new technologies,
- Support to real-estate market,
- Strengthening import control,
- Support to socially vulnerable categories in keeping adequate living standard.

<sup>6</sup> Data source: Balance of payment, National Bank of Croatia

<sup>7</sup> Package of ten antirecession measures (2009), Government of the Republic of Croatia

In estimation of the measures mentioned above, it can be said that they represent activities directed towards the real and financial sector simultaneously. Though observed in a short time, these measures proved to have had versatile impact.

### **Montenegro**

After getting independence in 2006, Montenegro experienced a very dynamic growth which manifested through high real growth rates of GDP by 10.7% in 2007 and 8.1% in 2008. Although smallest by its size and population, Montenegro was not exempt from the negative effects of the global economic crisis. In 2009 it is estimated that the real fall of GDP would be between 2.5 and 3%. Measures taken by the Montenegrin government could be roughly divided into two groups, as follows:

I – Measures intended to preserve trust in banking system and support to banks, including:

- Insuring deposits on citizens' savings
- Support to banking sector – short-term borrowings and guarantees on international market
- Banks were allowed to spend 20% of the mandatory reserves on buying state bills.

II – Measures intended to prevent unemployment, fall of economic activities and recession, which include the following:

- Lower tax on salaries from 15% to 12%
- Encouraging investments in infrastructure, but at the same time reduction of current, unproductive budget spending
- Abolition of various fees on oil prices, abolition of fee for building site
- Support to small and medium-sized enterprises for the project 'Business for You', subsidizing 10% of the electricity cost for economy
- Tax exemption in case of restructuring.

One should be very careful in estimation of the measures, since many measures were oriented towards consequences and not real causes of the crisis. Market structure of Montenegrin economy is such that there is a very narrow scope of domestic production, especially the one which is export orientated. Montenegro uses Euro as the national currency (and it is not in Euro zone) which considerably narrows possibilities for manoeuvre in macro-economic policy. Introduction of Euro only partially stabilised macro ambience, but inflation in 2007 and 2008 was much higher than in Euro zone – 7.7% and 6.9%. Thus, measures did not affect internal causes of instability, and small economies, as Montenegrin economy is, are exposed to negative external influences.

### **Bosnia and Herzegovina**

Bosnia and Herzegovina encountered economic problems even before the outbreak of the crisis. Particularly prominent is the high rate of unemployment, unfavourable structure of imports and exports, relatively low living standard, etc. Besides, there were certain open issues between the two entities – Federation and the Republic of Srpska. The outbreak of the crisis only worsened already difficult situation, first of all in terms of illiquidity growth and the number of the companies that are blocked. According to certain data in Bosnia and Herzegovina in 2008 almost 36000 companies were blocked.<sup>8</sup> Measures taken by some entities were different. Federal government took the following measures:

I – Fiscal measures – directed towards reducing budget deficit:

- Control of salaries and fees to officials and executives in government administration, organisations and agencies,
- Reduction of salaries to those employed in executive government bodies at all levels in order to save money in the budget,

<sup>8</sup> Measures for easing off consequences of the global economic crisis (2009), Government of the Federation of Bosnia and Herzegovina

- Reduction of all budget costs,
- Control of illegal employment and fight against 'grey economy' – which should bring about increase in budget revenues,
- After remedying of budget deficit – launching investments in infrastructural facilities.

II – Measures in the sector of economy and citizens – whose aim is to boost production and exports as well as increase liquidity of the economic sector and buying power of the citizens.

Some of the concrete measures were as follows:

- Subsidizing interest rates on loans for perseverance of liquidity and operating capital financing
- Subsidizing interest rates (50%) for consumer loans and leasing intended for buying domestic goods.
- Freezing certain obligations which economy should pay to the state.
- Directing a part of finances given by the IMF for development of agriculture, carrying out programmes of employment for those who participated in the war, increase of capital assets of Razvojna banka (Developing bank).

Another entity in Bosnia and Herzegovina – Republic of Srpska had a slightly different view of the crisis if compared with other countries in the region. In some materials the following statements can be found: ' Regardless of the fact that in the last quarter of the year 2008, the influence of the world economic crisis did not have any impact on the economy of the Republic of Srpska, the fact is that the world economic situation does not recognize boundaries and its effects would come into force... »<sup>9</sup> It is very strange that the crisis affected the whole region in the last quarter of 2008 and was desperately seeking solutions while another entity concluded that crisis 'has not affected their economy yet.'

But, similarly as in the Federation, a certain package of measures was adopted which had several directions:<sup>10</sup>

I – Measures in the domain of state administration, directed first of all towards stabilisation of the budget and balancing of the decreasing revenues and increasing expenditures.

II – Measures in economy – directed towards finding solution for a painful issue of illiquidity, development, additional employment, increase of exports, etc. Many concrete measures, which are not analysed in this paper because of the scope of it, have not much in common with the global crisis, but current economic structure and numerous anomalies in economic development.

III – Measures in financial sector – are divided into three segments:

- 1) Capital market (improvement of corporate governance, systemic support to public issuing of stocks, development of debt instruments, increase in rating of the Republic of Srpska at relevant international institutions, education of the young and adoption of legal framework for the introduction of capitalised pension funds. Objectively speaking, these measures are more elements of the strategy for development of the capital market than measures to resist global crisis.
- 2) Banking – intensifying activities on strengthening bank capacities for all kinds of risk management, launching initiative for rescheduling of the loans granted to economy and citizens.
- 3) Pension funds – continuation of the reform of pension system and active work of Pension reserve fund.

According to all stated above there is a list of a huge number of operating measures, among which we would like to point out the following:

<sup>9</sup> Measures for easing off negative effects of the world economic crisis (2009), Government of the Republic of Srpska

<sup>10</sup> Measures for easing off negative effects of the world economic crisis (2009), Government of the Republic of Srpska

- Starting up public works and infrastructural projects, so as to increase scope of domestic demand and increase of employment as well as total economic growth. In 2009 these means amounted to 667.3 mill KM and come from the following sources:
  - Means from the economic and social component of the Developing programme of the Republic of Srpska - 213 mill. KM
  - Budget of the Republic of Srpska 52.5 mill KM
  - Foreign loans – 291.5 mill. KM and
  - Other sources – 110.3 mill KM
- Provision of financial resources for the intervention measures for launching domestic production, exports and substitution of imports.
- Strengthening commodity reserves, food supply, as well as a set of measures which are more like a list of wishes and political promises given to voters, rather than serious measures that should ease off effects of the crisis.

## Macedonia

Macedonia possesses a relatively simple financial system in which banks play the major role. According to official data<sup>11</sup> during 2008 only 2.8% of the total liabilities are based on borrowings from foreign banks. As the major source of Macedonian banking system has been in the form of domestic savings in the form of deposits by the economy and household, the crisis slightly affected it. More severe negative effects struck Macedonian Stock Exchange (MSE) where stock prices fell by 73.3% from 1 Jan, 2008 to 1 Jan, 2009, thus bringing Macedonia into a position to beat the records in the region.

In the real sector, after real growth of GDP by 5% in 2008, it is predicted that it would fall by approximately 2% in 2009. Macedonian Government adopted a set of 10 measures as follows: <sup>12</sup>

- Writing off the outstanding current liabilities for health insurance
- Writing off all accumulated interest payables of the liabilities for social care insurance benefits if the company pays the principal debt
- Writing off all accumulated interest payables of the unpaid tax liabilities if the company pays the principal debt (VAT, Income tax, Property tax, PIT)
- Opportunity for the company to postpone payment of the main taxes if the company secures the debt with a bank guarantee of 100% or offers mortgage worth 250% of the main liability. Exemption of income tax payment if the total annual profit is retained within the companies (if no dividends are paid)
- Reduction of the customs taxes
- Lower personal income taxation rates for the individual farmers
- Postponing of the payment operations law for a period of one year, for the companies which have blocked accounts
- Transformation of the tax receivables of the government into permanent share in some companies where the government is already the major shareholder/owner
- Reduction of all the Governmental spending.

In estimation of these measures we have to be reserved. Some of them, as in some other countries, represent an attempt to solve some accumulate problems from the past, while others represent measures to prevent recession. Time has proved that these measures have not solved one of the major problems Macedonian economy faced with – huge illiquidity. Thus, on April 21, 2009 the Government adopted a new set of measures which entailed 70 measures divided into 3 groups:

<sup>11</sup> Global financial crises impact on Macedonian economy (2009), Center for Economic Analyses - CEA, downloadd from [www.cea.org.mk](http://www.cea.org.mk)

<sup>12</sup> Global financial crises impact on Macedonian economy (2009), Center for Economic Analyses - CEA, downloadd from [www.cea.org.mk](http://www.cea.org.mk)

I – Budget rebalancing for 2009 with a review of macroeconomic projections – where the budget got reduced by 9% with the aim to stay within a planned framework of deficit and perseverance of the national currency stability – denar.

II – Measures to credit support to economy – for which a credit line from the European Investment Bank has been introduced in the amount of 100 mill Euro plus about 50 mill provided by commercial banks. In this group there are programmes for co-financing of loans for operating capital, programmes for subsidizing interest rates for loans from commercial banks and programmes for guarantees. The aim of these measures was to give financial support to Macedonian companies, especially SMEs.

III – Other measures of support to companies – which did not entail loans, that is financing. In this group there are 54 measures which should facilitate business regulations, reduction of customs tax and make the overall ambience more suitable for investing, growth and development.

Being introduced short time ago, it is very difficult to give precise estimation of the effects of these measures. What is evident from Table 1 is a solid growth of MSE index from 2,096.16 in January 1, 2008 to 2,530.84 on August 20, 2009.

\* \* \*

The ebb in financial resources from the developed countries affected almost all countries of the Western Balkans region. Majority of these countries is still on the way of the process of transition, and is about to finish building up strong economic and financial system. Domestic savings are often not enough for carrying out ambitions investment programmes and projects. Thus, the whole region depends on the inflow of foreign finances. As that inflow was not satisfactory, the majority of the countries encountered the problem of liquidity. The liquidity crisis caused problems in payments, low economic activity and it was difficult to keep the balance of the public finances.

All countries reacted with hesitation and such reaction dealt with consequences and not real causes of the crisis. Open issue remains – whether each country was able to analyse causes of the crises or accepted crises for granted.

## 5. Conclusion

In this paper we have tried to show how global economic crisis 2008-2009 affected not only developed countries, but countries in the Western Balkans region. Measured by the fall in the stock exchange index, such decrease was much bigger if compared with the developed countries. As the crisis opened many issues in the developed countries such as whether it is a breakdown of liberal capitalism or the victory of state interventionism – so the region faced with its challenges which were often connected with certain problems in economic development and finding ways to fasten up growth after the crisis.

Global economic crisis pointed out effects of globalisation once again. It turned out that the world is interconnected and interlaced. The crisis affects all, maybe not equally, but with consequences for sure. The crisis showed certain gaps in international economic relations presented in the form of the so called 'economic nationalism'. What else should we say for the statements such as 'British jobs for British workers' or 'would not American tax payers recover European economy'... Fortunately, such kind of nationalism did not spread in the Western Balkans region, what is very good, having in mind destructive effects of some other kinds of nationalism during the 1990s. Instead, awareness have been raised on the need for joint action so as to prevent the region to become a 'black hole' in the eyes of the investors.

Our analysis pointed out the importance of proper understanding of the causes of the crisis. The causes in the most developed countries are not identical in comparison with the Western Balkans countries.

Here we can raise the following question – If there was no 'credit crunch' would there be a crisis in the region? Most probably yes, because the wave of bubbles and surpluses in financial resources brought about creation of local bubbles. Having this in mind, it is probably that some prices should have been corrected and reduced. The scope of a disaster that the global economic crisis caused on one hand, and the underdevelopment of financial systems, first of all market and instruments of the countries in the region, affected the region much more than the developed countries themselves where the crisis began. Different causes required different measures and mechanisms of reaction. As crisis grew bigger in the real sector, so the measures became harmonised among different countries in the region. However, when one looks into the individual measures of the five analysed countries, the following directions can be traced:

- 1) Stabilisation of public finances, that is budget
- 2) Support to banks and financial institutions
- 3) Support to economy and citizens.

What all these measures have in common is the reaction against consequences not the cause of the crisis. Due to the scope of this paper, we were not able to give more comprehensive analysis of each measure. Also, in estimation of their efficiency we did not have time horizon long enough. However, it was possible to notice that many measures have not much in common with the global economic crisis. Many of them are the result of the previous economic problems, inadequate economic policy or simply the existing economic structure and numerous anomalies in the field of economy. Thus, global economic crisis in some countries could be a good opportunity to solve certain problems which they suffer from for a long.

It is evident that there is no uniform economy in the region. However, at the same time, there are many similar characteristics. We should not search for differences, because they can be easily identified. In the whole region there are many attractive factors such as: possibility of growth, developmental projects, infrastructural works, relatively developed investment infrastructure, relatively cheap labour, etc.

Each crisis, as well as the global one, brings about a lot of dangers which each country has already faced with. However, at the same time it brings about certain opportunities. The approach we recommend is to analyse crisis in a proactive way, through chances to correct irrational and illogical deeds (especially in public spending), make improvements and create healthy basis for the real growth when the overall economic climate changes.

The region has to be observed as one whole. Problems, missed activities, scandals in one country do not have negative effects that struck that particular country but have much broader implications. Joint problems require joint action. And the main aim of all countries in the region should be to make the region attractive and secure for investments. By the way, the principle of 'domestic market' should not be ignored, where local markets represent natural field for many domestic small and medium enterprises (SMEs) to collect domestic capital through public issuing of stocks to ensure business expansion. Thus, huge fall in stock exchange indexes as a consequence of the fall in share prices must worry everyone in the region. It requires joint efforts and cooperation in finding solutions for open issues and problems. In the field of financial markets it is very important to provide exchange of data, publishing financial reports of the companies, transparency, respect of principles and standards of corporate governance, etc. The last, but not the least, the issue of education at all levels is very important, as a precondition for proactive approach in problem solving and responding to challenges brought about by the global economic crisis.

## References

1. Barrell, Ray and Davis, E. Phillip (2008), “*The Evolution of Finance Crisis of 2007-8s*”, National Institute Economic Review, Issue 206, pp. 5-14
2. Bartram, Sohni M, Brown, Gregory W. (2007), “*Estimating Systemic Risk in the International Financial System*”, Journal of Financial Economics, Vol. 86, Issue 3, pp. 835-869
3. Boatright, John R, (1999), “*Ethics in Finance*”, Bleckwell Publishers Inc, Maiden MA and Oxford UK
4. Center for Economic Analyses (2009), Global financial crises impact on Macedonian economy
5. Chang, Roberto (2007), “*Financial Crises and Political Crisis*”, Journal of Monetary Economics, Vol. 54, Issue 8, November, pp. 2409-2420
6. Erić, Dejan. (2003), “*Finansijska tržišta i instrumenti*”, Čigoja štampa, Beograd
7. Fleckenstein, William A. with Frederick Sheehan (2008), “*Greenspan's Bubbles – The Age of Ignorance at the Federal Reserve*”, McGraw Hill, New York
8. Government of the Federation of Bosnia and Herzegovina (2009), Measures for easing off consequences of the global economic crisis
9. Government of the Republic of Croatia (2009), Package of ten antirecession measures
10. Government of the Republic of Srpska (2009), Measures for easing off negative effects of the world economic crisis
11. Krugman, Paul (2008), “*The Return of Depression Economics and Crisis of 2008*”, Penguin Books, New York & London
12. Luo, Juan and Tang, Wenjin (2007), “*Capital Openness and Finance Crisis: A Financial Contagion Model with Multiple Equilibria*”, Journal of Economic policy Reform, Vol. 10, No. 4, pp. 283-296
13. Ministry of Finances of the Republic of Serbia (2008), Law on Amendments and Changes to Deposit Insurance Law
14. Mishkin, Frederic S. (2007), “*Is Financial Globalization Beneficial?*”, Journal of Money, Credit and Banking, Vol. 39, No. 2-3, pp. 259-294
15. Montenegrin Chamber of Commerce (2009), Business operations of the Montenegrin economy under the conditions of the world economic crises
16. Morris, Charles R. (2008), “*The Two Trillion Dollar Meltdown – Easy Money, Hing Rollers, and the Great Credit Crash*”, Public Affairs, New York
17. Pym, Hung and Kochan, Nick (2008), “*What happened?*”, Old Street Publishing Ltd, London
18. <http://finance.yahoo.com>
19. <http://zse.hr>
20. <http://www.belex.rs>
21. <http://www.blberza.com>
22. <http://www.bse.hu>
23. <http://www.bse-sofia.bg>
24. <http://www.bvb.ro>
25. <http://www.ljse.si>
26. <http://www.capitalmarket.ba>
27. <http://www.montenegroberza.com>
28. <http://www.mse.org.mk>

## ASSESSING THE LEVERAGE EFFECT OF PUBLIC DEBT IN ALBANIA AND SERBIA

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### Abstract

*In this paper, we attempt to measure the leverage effect generated by public indebtedness by showing that it is advisable for a Government to jointly use public funds and public debt when financing public expenditures because of the improvement in public fund profitability produced by such a combination. To this regard, we will first elaborate a theoretical background of public fund profitability derived from private sector investment project analyses, before providing a simple assessment technique of public debt leverage on public funds. It will be evidenced that as far as Albania and Serbia are concerned, the leverage effect of public debt is positive only if interest rates are not too high, if public expenditures are no greater than GDP (gross domestic product) and no smaller than public debt.*

*Key words:* *Public Debt Leverage Effect, Public Fund Profitability*

### Introduction

According to the economic literature, public investments affect positively or negatively economic growth (Ahmed H., & Miller S., 2000). Negative impacts arise because of crowding-out effect on private investment (Aschauer, D. A., 1989b). Positive impacts result from public expenditure multiplier effects or from positive public externalities (Pereira, A.M., 2001a). Both studies are partly based on the Ricardian equivalence assumption which stipulates that no matter how a Government finances its public expenditures, the effect on economic growth will be similar (Banzhaf H.S. & W.E. Oates, 2008). It is obvious, therefore, that the economic literature neglects to study thoroughly the fact that the types of funding used to back-up public expenditures might matter. Indeed, it does not put forth the potential complementarity between public funds (such as public financial resources obtained from tax collection) and public indebtedness, even though it could be assumed, as in private sector productivity analysis, that public debt use is likely to improve the equity profitability of the public sector. This paper attempts to answer the following question: how and under which conditions does public debt exert a leverage effect on public fund profitability? The rest of the paper is structured as follows: Section 1 provides a theoretical background of debt leverage effect, from which a public debt leverage formulation will be derived in Section 2; Section 3 examines the illustrative cases of Albania and Serbia and Section 4 concludes.

### Section 1 - Theoretical background of debt leverage effect

This section provides a simple theoretical background used in the analysis of the profitability of different investment projects (Smart S. & W.L. Megginson, 2008) in order to find out which project yields a better payoff for the entrepreneur on the basis of a hypothetical case study. A similar approach will be used in Section 2 to examine the relationships between the profitability of public funds and the use of public debt.

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The objective of this theoretical background consists of studying how an entrepreneur takes advantage of the joint use of equity funds and debt when financing his investment project.

### A - Equity profitability without debt use

First, let us suppose that the entrepreneur exclusively uses equity funds to finance his project by investing 1000 currency units and that he expects to receive an investment return of 1100 currency units. His equity profitability could be assessed by the net cash flow<sup>2</sup> to equity ratio (Tuller L.W., 1998) as formulated below:

$$EP = \frac{IR - II}{II} \quad (1)$$

with  $\begin{cases} EP: \text{Equity profitability} \\ IR: \text{Investment return} \\ II: \text{Initial investment, totally financed by equity funds} \end{cases}$

Therefore, we obtain  $EP = \frac{1100 - 1000}{1000} = 0,1 \text{ or } 10\%.$

### B - Equity profitability with debt use and leverage effect

Now, let us suppose that the entrepreneur decides to jointly use equity funds and debt, with a currency unit allocation of 750 and 250, respectively. In such case, since the entrepreneur contracts a debt, he has to pay debt interests which necessarily come to reduce his expected investment return<sup>3</sup>. Consequently, equity profitability changes and is measured by the ratio of net cash flow less debt interest payment to the amount of equity<sup>4</sup> used to finance the project.

$$EP_D = \frac{IR - II - rD}{II - D} \quad (2)$$

With  $\begin{cases} EP_D: \text{Equity profitability with debt use} \\ r: \text{Interest rate incurred on debt} \\ D: \text{Debt} \end{cases}$

As a first illustration, let us consider that an interest rate of 7% is levied on debt. The equity profitability of the entrepreneur becomes:

$$EP_D = \left( \frac{1100 - 1000 - (250 \times 0,07)}{1000 - 250} \right) = 0,11 \text{ i.e. } 11\%.$$

This shows that using debt along with equity funds when financing a project has helped the entrepreneur to improve his equity profitability by 1%. This positive impact of debt on the profitability of equity funds is commonly referred to as **debt leverage effect** (denoted L) and is measured by

<sup>2</sup> Net cash flow = Investment return – Initial investment (when taxes are not taken into account as in this paper).

<sup>3</sup> The decrease in investment return depends on the interest rate applicable to the debt. The higher the interest rate, the greater the investment return diminishes.

<sup>4</sup> The amount of equity used to partially finance the investment is equivalent to the difference between initial investment and debt.

calculating the difference between equity profitability with debt use and equity profitability without debt use, as expressed hereafter:

$$L = EP_D - EP \quad (3)$$

As a second illustration, let us consider that debt bears an interest rate of 11%. The new equity profitability of the entrepreneur becomes:

$$EP_D = \left( \frac{1100-1000-(250 \times 0,11)}{1000-250} \right) = 0,097 \text{ or } 9,7\%$$

This shows that using debt is also likely to deteriorate equity profitability. It appears, indeed, that with an interest rate of 11%, the equity profitability of the entrepreneur records a decrease from 10% to 9,7% which generates an adverse leverage of about -0,3%. This negative impact of debt on equity profitability is referred to as **debt overhang effect**<sup>5</sup> (Cordella T. & al., 2005).

To sum up, let us put forth the role played by debt in financing a project along with equity funds through its three potential impacts on equity profitability:

- (a) If  $L > 0$ , debt generate a leverage effect.
- (b) If  $L = 0$ , debt is neutral because it has zero impact.
- (c) If  $L < 0$ , debt generates an overhang effect.

From this simple theoretical background, a similar methodology will be used to examine the case of the public sector in an attempt to assess the potential impact of public indebtedness on the profitability of public funds, when it is partially used in financing public investments or public expenditures.

## Section 2 - Public debt leverage effect analysis

Before any other analysis, it is useful to mention that a number of assumptions restrict our study. For instance, we suppose that public investments or public expenditures help improve the socio-economic performance of the country thanks to a multiplier effect<sup>6</sup>. Consequently, we consider that economic growth is in part the fruit of a given public intervention financed by a given amount of public funds and that the multiplier effect is equivalent to the profitability of public funds. Our concern in this Section 2 is to find out how public debt contributes in improving such multiplier effect.

### A - Public fund profitability without public debt use

Let us define public fund profitability as in Section 1 by considering first that the Government finances its public expenditures exclusively with public funds, i.e. without contracting public debt:

$$PFP = \frac{PII - PE}{PE} \quad (4)$$

with  $\begin{cases} PFP: \text{Public fund profitability} \\ PII: \text{Public intervention impact on socio-economic performance} \\ PE: \text{Public investments or public expenditures} \end{cases}$

<sup>5</sup> Debt overhang effect may be due to a debt interest rate superior to equity profitability when investment is exclusively financed with equity funds (Debt interest rate > EP).

<sup>6</sup> We use quite similar interpretations of the multiplier effect as in Keynesian economics.

Appropriately, public fund profitability (PFP) refers to the rate of return of public expenditures exclusively financed with public funds. This means that PFP measures the efficiency of public expenditures at generating an improvement in the performance of the economic agents who have benefited from public intervention.

Public intervention impact (PII) refers to the effect of public expenditures on the socio-economic performance of the country. For the overall performance of the country, we consider economic growth as a measure of PII since more adequate indicators should be used as far as the well-being of other agents is concerned.

Public expenditures refer to the amount of Government spending (at a national or sector level) deemed useful to improve the socio-economic performance of a targeted economic agent (or groups of economic agents).

## B - Public fund profitability with public debt use and leverage effect

Now, if the Government is used to financing its public expenditures by using joint public funds and public debt, the new public fund profitability is given by:

$$\boxed{\text{PFP}_{\text{PD}} = \frac{\text{PII} - \text{PE} - \text{rPD}}{\text{PE} - \text{PD}}} \quad (5)$$

with  $\begin{cases} \text{PFP}_{\text{PD}}: \text{Public fund profitability with debt use} \\ \text{PD: Public debt} \\ \text{r: interest rate on public debt} \end{cases}$

On the one hand, public debt refers to overall public sector borrowings, which sometimes include other publicly guaranteed borrowings<sup>7</sup>. Public debt may be contracted with domestic or foreign creditors. In a country where financial system is underdeveloped, internal public debt (or public debt held by domestic creditors) is generally low in comparison with external public debt (or public debt held by foreign creditors).

On the other hand, public debt interest payment is the amount of interest borne on the remaining public debt stocks. Since most Governments contract new debt on an annual basis or even on shorter terms, it is advisable to consider the average interest rate levied on new official commitments to simplify the analysis of public fund profitability.

Finally, in order to determine the leverage effect of public debt, it is useful to calculate the difference between public fund profitability with and without public debt use. Therefore, public debt leverage (L) is given by:

$$\boxed{\text{L} = \text{PFP}_{\text{PD}} - \text{PFP}} \quad (6)$$

In order to improve the interpretation of this expression of public debt leverage, let us write it as follows:

$$\text{L} = \frac{\text{PII} - \text{PE} - \text{rPD}}{\text{PE} - \text{PD}} - \frac{\text{PII} - \text{PE}}{\text{PE}} \quad \text{or} \quad \boxed{\text{L} = \frac{\text{A} - 1 - \text{r}}{\text{B} - 1} \quad \text{or} \quad \text{L} = \left( \frac{1}{\text{B} - 1} \right) (\text{A} - 1 - \text{r})} \quad (7)$$

<sup>7</sup> A part of the private sector indebtedness is guaranteed by the Government in order to minimize credit risk default.

$$\text{with } A = \frac{\text{PII}}{\text{PE}} \text{ and } B = \frac{\text{PE}}{\text{PD}}$$

Therefore, in order to get an effective leverage effect of public debt, three main conditions have to be observed simultaneously:

(a)  $A > 1$  i.e. public intervention impact should be greater than public expenditures.

(b)  $B > 1$  i.e. public expenditures should be greater than public debt.

(c)  $C = \frac{\left(\frac{A}{B-1}\right)}{\left(\frac{1+r}{B-1}\right)} > 1$  i.e. public debt interest payment should not significantly erode public intervention impact.

In the next section, we will conduct a case study on Albania and Serbia in order to determine this leverage effect of public debt on the profitability of public funds and the productivity of public expenditures.

### Section 3 - Public debt leverage assessment in Albania and Serbia

The following empirical analyses are based on a number of simplifying assumptions. We consider no time lag, that public intervention impact (PII) is equivalent to gross domestic product (GDP), that public expenditures (PE) equal total Government expenditures, that public debt (PD) is totally held by foreign creditors and is totally used in public sector activities. We simply apply the previous formulation to Albania and Serbia by mentioning that this analysis could be of some help in their effort to gradually integrate the European system by respecting the Government finance accession criteria.

As far as Albania is concerned, table 1 provides this assessment from 1997 to 2007.

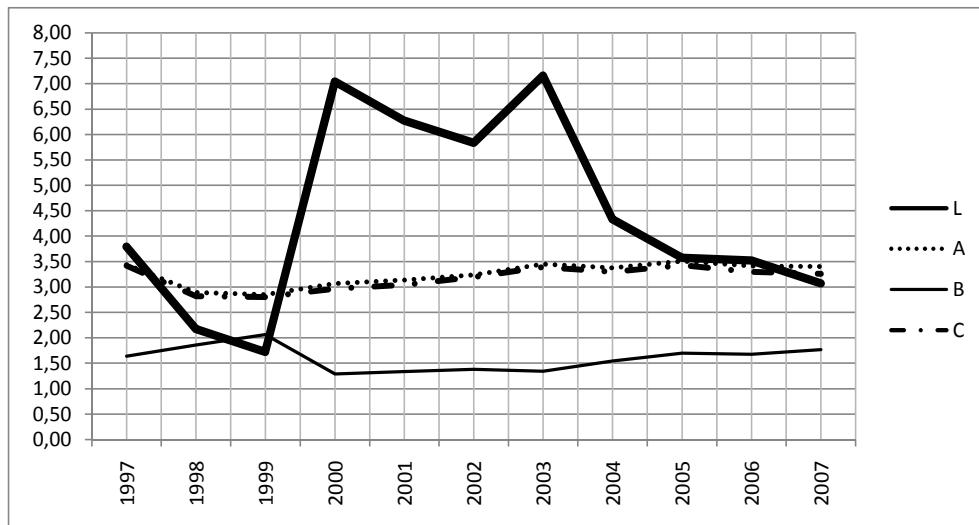
**Table 1. Albania public debt leverage assessment (1997-2007)**

Years	In million leks			r	In unit terms		
	GDP	PE	PD		PFP <sub>PD</sub>	PFP	L
1997	346 198	100 730	61 377	0,53	6,23	2,44	3,79
1998	409 209	141 628	76 244	2,60	4,06	1,89	2,17
1999	471 578	165 692	80 330	1,68	3,57	1,85	1,72
2000	523 043	170 621	132 401	3,46	9,10	2,07	7,04
2001	583 369	186 049	139 302	3,23	8,40	2,14	6,27
2002	622 711	192 517	139 426	1,24	8,07	2,23	5,84
2003	694 098	201 152	150 113	1,80	9,61	2,45	7,15
2004	750 785	222 439	144 164	2,33	6,71	2,38	4,33
2005	814 797	232 339	137 056	2,26	6,08	2,51	3,57
2006	882 209	258 816	154 549	3,37	5,93	2,41	3,52
2007	971 222	285 674	161 642	4,28	5,47	2,40	3,07

Sources: National Institute of Statistics of Albania, WDI World Bank and own calculations

All three conditions for public debt leverage to be effective are satisfied in Albania. Public expenditures are always smaller than GDP, but greater than public debt between 1997 and 2007. Moreover, public debt interest payments do not erode public intervention impact at all as illustrated in graph 1.

**Graph 1. Public debt leverage analysis in Albania (1997-2007)**



Sources: *Own calculations*

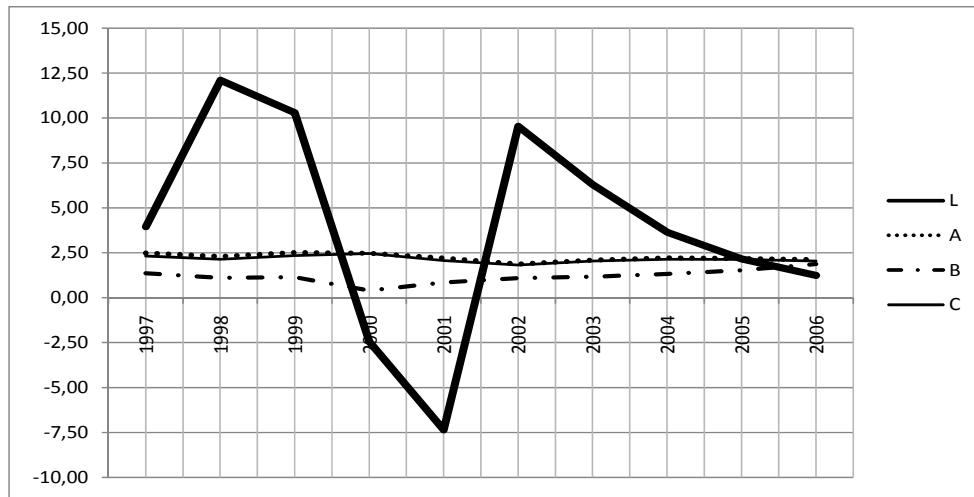
As far as Serbia is concerned, the leverage effect of public debt on the profitability of public funds is provided by table 2.

**Table 2. Serbia public debt leverage assessment (1997-2006)**

Years	In million RSD			In %	In unit terms		
	GDP	PE	PD		PFP <sub>PD</sub>	PFP	L
1997	121 713	49 038	36 118	6,90	5,43	1,48	3,95
1998	163 156	71 340	64 810	6,90	13,38	1,29	12,09
1999	206 594	82 365	72 239	6,64	11,79	1,51	10,29
2000	386 910	156 333	390 236	0,42	-0,98	1,47	-2,45
2001	768 576	349 795	413 359	6,62	-6,16	1,20	-7,36
2002	983 831	527 976	485 242	2,47	10,39	0,86	9,52
2003	1 137 607	546 800	468 112	2,38	7,37	1,08	6,29
2004	1 388 099	627 717	474 200	3,30	4,85	1,21	3,64
2005	1 691 941	780 409	508 452	1,73	3,32	1,17	2,15
2006	1 987 765	940 608	501 760	3,79	2,34	1,11	1,23

Sources: *System of National accounts of Serbia, WDI World Bank and own calculations*

On general, Serbia also meets the different conditions of effective public debt leverage between 1997 and 2006, except for 2000 and mainly for 2001. Table 2 shows that public debt is greater than public expenditures for both periods, which partly explains the corresponding debt overhang effect. In addition, public debt interest significantly erodes GDP for 2001, which can be supposed to generate such adverse impact on public fund profitability. This is illustrated in Graph 2.

**Graph 2. Public debt leverage analysis in Serbia (1997-2006)**

Sources: Own calculations

## Section 4 - Conclusion

This paper has formulated public debt leverage effect inspired from private sector investment project analysis in order to show to what extent and under which conditions public indebtedness could affect the profitability of public funds. In sum, public debt leverage is effective provided that (a) public expenditures be smaller than public intervention impact (an economic performance or a well-being indicators), public expenditures be greater than public debt and (c) public debt interest payment not erode significantly public intervention impact. The empirical analysis shows in general that between 1997 and 2007, public debt affects positively public fund profitability both in Albania and Serbia, which highlights the potential efficiency of financing public expenditures both with public funds and with public debt simultaneously.

The proposed analysis could be (1) improved through a better choice and a better definition of the variables used in order to minimize possible economic misinterpretation and (2) extended through a disaggregated analysis, i.e. examining public debt leverage on each category of economic agents (on household well-being, on firm and financial institution viability and profitability) since it could be supposed that public debt is used to finance a given category of public expenditures depending on the priorities in the country.

## References

1. Ahmed H., & Miller S. (2000), Crowding-out and crowding-in effects of the components of government expenditure, in *Contemporary Economic Policy*, 18(1), pp. 124-133.
2. Aschauer, D. A. (1989a), Is public expenditure productive? in *Journal of Monetary Economics*, 23, pp. 177-200.
3. Aschauer, D. A. (1989b), Does public capital crowds out private capital? in *Journal of Monetary Economics*, 24, pp. 171-188.
4. Banzhaf H.S. & W.E. Oates (2008), On Ricardian equivalence in local public finance, in *WPS n° 1248002* - Georgia State University, p. 34.
5. Cordella T. & al. (2005), Debt overhang or debt irrelevance? Revisiting the debt-growth link, in *IMF WP n° 05/223*, p. 55.

6. Odedokun M.O. (1997), Relative effects of public versus private investment spending on economic efficiency and growth in developing countries, in *Applied Economics*, 10(28), pp. 1325-1336.
7. Pereira, A.M. (2001a), On the effects of public investment on private investment: what crowds in what, in *Public Finance Review*, 29(1), pp. 3-25.
8. Pereira, A.M. (2001b), Public investment and private sector performance- International evidence, in *Public Finance and Management*, 1(2), pp. 261-277.
9. Smart S. & W.L. Megginson (2008), Corporate Finance, *Cengage Learning EMEA*, pp. 400-431.
10. Tuller L.W. (1998), The Small Business Valuation Book, *Adams Media*, pp. 78-92.
11. Vukmirovic D. & al. (2008), System of National Accounts of the Republic of Serbia 1997-2006, Statistical office of the Republic of Serbia, pp. 163-248.
12. [www.bankofalbania.org/](http://www.bankofalbania.org/)
13. [www.imfstatistics.org/gfs/](http://www.imfstatistics.org/gfs/)
14. [www.instat.gov.al/](http://www.instat.gov.al/)
15. [www.minfin.gov.al/](http://www.minfin.gov.al/)
16. [www.mfin.sr.gov.yu/](http://www.mfin.sr.gov.yu/)
17. [www.nbs.rs/](http://www.nbs.rs/)
18. [webrzs.statserb.sr.gov.yu/](http://webrzs.statserb.sr.gov.yu/)
19. [ddp-ext.worldbank.org/ext/DDPQQ/](http://ddp-ext.worldbank.org/ext/DDPQQ/)

## Chapter 5.

### THE IMPACT OF GLOBAL FINANCIAL CRISIS ON SERBIAN BANKING SECTOR – THE NBS RESPONSE

*Periša Ivanović<sup>1</sup> Mladenka Balaban<sup>2</sup>*

#### Abstract

*This paper presents a set of measures and instruments which National Bank of Serbia has taken to prevent or at least ease the effects of global financial crisis on national financial system and support confidence in Serbian banking sector during the last two years. It describes the main drivers of global financial crisis and recognize their indirect impact on Serbian economy. Our aim was to recognize effectiveness of NBS monetary policy in maintaining financial stability as one of the potential guidelines and guarantees for the further development of Serbian banking sector. We found out that NBS activated both conventional and non-conventional measures and instruments of policy under Vienna Initiative and in relation to the arrangement with IMF. All these measures were very successful if we take in consideration that NBS was running last five years anti-cyclical policy and given that there were no serious liquidity problems and capital adequacy ratio for whole banking system is beyond required minimum even under performed stress tests.*

**Key words:** NBS, Crisis, Banks, Financial Markets, Monetary Policy, Financial Stability, Confidence, Liquidity, Capital

#### 1. The building up the crisis on the global level

„The sudden manifestation of the crisis in 2007 was the result of two important fundamental macroeconomic imbalances that persisted for too long; one, the monetary policy of the FED Reserve in the Greenspan era and second, the growing global imbalances. Both these factors were clear precursors of unsustainable bubbles, which were ignored in general because of the pre-crisis phase of high global growth with low inflation<sup>3</sup>“.

The global financial markets changed drastically after the collapse of Lehman Brothers in September 2008. Market participants became increasingly cautious about taking counterparty risk, causing trading volume to decrease sharply and market liquidity to decline significantly. Credit spreads widened and the prices of financial products, including securitized products plunged. Consequently, financial institutions experienced business difficulties or failed one after another in many countries, thereby aggravating financial system concern. Credit provisions from financial institutions to firms and households declined markedly, leading to a global credit contraction. „Confidence, which is the most crucial element in the financial system and markets to function smoothly, was virtually lost“<sup>4</sup>.

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<sup>3</sup> Chakrabarty K.C. (2009), “Global Crisis – genesis, challenges and opportunities unleashed”, Inaugural address at the 21<sup>st</sup> Anniversary Convention of the Association of Professional Bankers, Sri Lanka, Colombo, 25 September 2009.

<sup>4</sup> Yamaguchi H. (2009), “Some remarks on the financial crisis over the past year”, Speech at the 4<sup>th</sup> Annual Euromoney Japan Capital Markets Congress, Tokyo, 18 September 2009.

Meanwhile economic conditions deteriorated simultaneously and rapidly around the globe. This deterioration, together with a spread of anxiety among firms and households, exacerbated the malfunctioning of the financial system, which in turn deteriorated economic conditions further, causing a downward spiral.

Recent reports by the Committee on the Global Financial System (CGFS) and the G20<sup>5</sup> have discussed, among other things, the link between domestic financial development in emerging economies and financial stability in the light of the ongoing financial crisis. Both publications have remarked that limited progress in financial innovation has implied, as a welcome indirect by-product, very limited exposures of emerging economies to sub-prime mortgage markets. As a result, emerging financial markets were able to retain the confidence of international investors in the early stages of the crisis, and until summer 2008 suffered from limited spillover effects from the financial turmoil occurring in advanced economies. However, when the crisis intensified in mid-September 2008, factors such as global deleveraging, the sudden evaporation of market liquidity and flight to safety had a major impact on emerging financial markets, but these markets proved to be overall more resilient than in past crisis episodes.

### **Leverage**

Use of leverage merged as the sure means to maximize income in the US economy. American household and corporate debt had increased significantly before the crisis. Numerous recent studies have highlighted how the size of households debt and house prices moved together in the US, and every increase in house prices induced further growth in debt for consumption purpose. The wealth effect of asset price increases, thus, seemed to be much more significant than what was perceived earlier by the policy makers. Correction in asset prices, thus, led to an intense deleveraging process. Asset prices and leverage represent two important variables that must be constantly monitored, as risk from both of them to the financial system could be significant<sup>6</sup>. “But to an extent, leverage was a symptom rather than a cause of the underlying crisis. In my opinion, the root cause of the problems was the underpricing of risk as the financial sector interacted with nonfinancial sectors<sup>7</sup>.

### **Deterioration in credit standards**

The deterioration in credit standards facilitated by the sustained easy monetary policy stance (Anna J. Schwartz, 2008) and deregulation induced opportunity for shifting of credit risk through securitisation, contributed to growth in credit to sub-segments (Laurent Clerc, 2008). It is often argued that easy access to liquidity alone could not have led to deterioration in credit standards<sup>8</sup>. Securitisation and innovations (structured products and credit derivatives) linked to such securities opened up the option to shift credit risk in sub-prime loans to the markets and thereby free the pressure on bank's capital, which in turn led to the significant weakening in standards for credit assessment<sup>9</sup>.

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<sup>5</sup> See CGFS (2009), “Capital flows and emerging market economies”, report submitted by a working group established by the CGFS, CGFS Papers, No. 33 (January); and G20 (2008), “Study group on Global Credit Market Disruptions”, paper prepared by Australia.

<sup>6</sup> Shin H.S. and Tobias A. (2007), Liquidity and Leverage, working paper, FRB New York and Princeton University

<sup>7</sup> Kohn L.D. (2009): Comments on “Financial Intermediation and the Post-Crisis Financial System”, At the 8<sup>th</sup> BIS Annual Conference 2009, Financial System and Macroeconomic Resilience: Basel, Switzerland

<sup>8</sup> “Banks spurred the US sub-prime mortgage crisis by offering excessively risky loans to borrowers and selling the bad loans to other lenders”, found Purnanandam A. in a recent University of Michigan study (2008).

<sup>9</sup> See Ivanović P. (2009): “Banks and Securitization”, Presentation on 8<sup>th</sup> International Seminar for Bankers and Financial Experts (Banking Management), Miločer, Montenegro, in organization of CISEF Ljubljana, Slovenia,

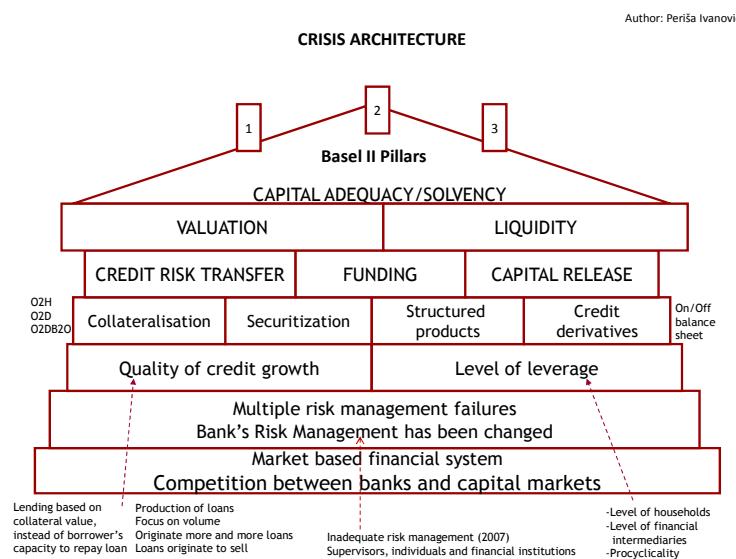
### Emergence of vehicular finance (shadow banking)

“The uncertainty stems from changes not just in instruments and markets, but also in institutions – ie in the nature and structure of financial intermediaries. This is the of what I call vehicular finance<sup>10</sup>”. Many leading international banks started/sponsored off balance sheet Structured Investment Vehicles (SIVs) to freely undertake activities which were not possible otherwise because of regulatory norms for banks, like capital adequacy, credit risk management and management of liquidity risks. Once the crisis started, the sponsoring banks had to take the losses of the SIVs. In addition to, banks from advanced economies have registered, licenced and founded financial subsidiaries in emerging countries as domestic financial institutions, but large part of their transactions had involved basic characteristics of shadow banking.

### Financial innovations

Earlier, it was not easy to securitise any type of loan, like sub-prime loans, and create a market for them. The financial engineers of the Wall Street, however, found the answer in two things: First, by creating information asymmetry by converting the pool of difficult to market loans into CDO, and second, creating market for different tranches based on “ratings”. Thus, a “AAA” rated CDO could be created out of cash-flows linked to sub-prime loans. “In the post crisis period, some have questioned the relevance of such innovations in any financial market. Innovations need to be encouraged for enhancing market efficiency, but market efficiency cannot be achieved without proper information”<sup>11</sup>. “The significance of financial innovations has been greatly reinforced by changes in valuation methods and the increasingly widespread use of mark-to-market accounting. This has boosted the financial accelerator effect, which is a mechanism whereby the level of asset prices influences the level of credit and then the real economy, which in turn impacts the value of assets. This may be an upward spiral or, as is the case at present, a downward spiral<sup>12</sup>. Picture 1. summarized all abovementioned drivers of global crisis.

**Picture 1. Building up the crisis on the global level**



<sup>10</sup> Tucker P. (2007): “A perspective on recent monetary and financial system developments”, Bank of England, Quarterly Bulletin, 2007 Q2.

<sup>11</sup> K.C.Chakrabarty (2009): Global crisis – genesis, challenges and opportunities unleashed, inaugural address at the 21st Anniversary Convention of the Association of Professional Bankers, Sri Lanka, Colombo, September 2009.

<sup>12</sup> Banq de France Bulletin Digest, (2007), Financial innovations and the effectiveness of monetary policy, No. 168, December 2007 .

## 2. What problems have arisen in Serbia in the wake of the crisis?

In Serbia the financial crisis has led to a number of problems:

- The banks have become unwilling to assume counterparty risk by lending money without collateral to other banks, especially at longer maturities.
- The loss of confidence and fear of inflation caused increasing demand for foreign currency and made it difficult for NBS to halt further depreciation of dinar (there was depreciation of 17% during July09/July08).
- The lack of funding in foreign currencies has been a problem even for banks which are subsidiaries of foreign banking conglomerates.
- The banks have become unwilling to assume new credit risk by lending money without collateral to companies and households.
- The households have become to draw their foreign currency despositos from banks as a result of deteriorated confidence and negative experience during the 1990 years (time of abnormal inflation).

National bank of Serbia has been conscious from the beginning that long-term growth cannot rely on domestic demand expansion which permanently generates profound internal and external imbalances, thus increasing general indebtedness. Also, all time NBS was oversighting pro-cyclicality of banks regarding their volume of loans, balance sheets and volume of recapitalisation. Therefore, it has been generally necessary to run anti-cyclicality during 2004-2009. Even now (October 2008 - September 2009), regarding slowing rate of credit growth, NBS is implementing anti-cyclical operations and measures.

“The genesis of this problem is well known from the experience of some other countries where strong foreign capital inflows and credit expansion exerted a powerful influence on goods and services markets, as well as the securities and real state markets”<sup>13</sup>. In the former case, the credit-supported demand for goods and services exceeding the short-term domestic supply capacities was satisfied by stronger import based supply, which led to an increase in the current account deficit, but also helped maintain the relative price stability on these markets (import of deflation). Naturally, this was not the case with the financial markets, where supply was much more restricted so that the growth of demand resulted in a considerable price increase, which finally produced a pure bubble effect. This in fact led to a vicious circle in which credit expansion, supported by optimistic expectations, resulted in an asset price increase, providing an incentive to investors and raising the prices of collateral, which all together further encouraged credit expansion.

Thus, strong credit and investment growth, as well as rising prices of securities and real estate coincided with relatively low inflation measured by the consumer price index, huge inflow of capital through FDI, crossborder finance and funding banks from their groups. As this process was also connected with the real growth of economy, it increased preparedness for taking risks, thus giving further impetus to the credit cycle. Such capital flows also had a strong impact on changes in monetary systems and monetary policies in general, particularly in small, highly euroised economies as it is Serbia. “These policies were no more based on fully endogenous creation of money supply by central banks which, through an interaction with demand, target the general price level, exchange rate and interest rates. In contrast to this “neoclassical” scenario, in an environment of liberalised financial flows, monetary policy, as a kind of a “filter”, has through the interrelationship between relative prices and returns, influenced capital inflows into and outflows from the country’s financial system, thus acting as a moderator of the general economic performance”<sup>14</sup>.

<sup>13</sup> Rohatinski Ž. (2009): Economic Crisis and Monetary Policy, Prepared for a round table at the HAZU Department of Social Sciences: Crisis and Economic Policy Frameworks, Zagreb 7 July 2009.

<sup>14</sup> Rohatinski Ž. (2009): Economic Crisis and Monetary Policy, Prepared for a round table at the HAZU Department of Social Sciences: Crisis and Economic Policy Frameworks, Zagreb 7 July 2009.

This capital has its benchmark foreign interest rate and its conversion into the domestic currency has an appreciation effect on the exchange rate. Being aware of all this, the NBS has, for a number of years now, emphasized high risks facing the Serbian economy in the globalised financial system, as well as of internal shocks caused by the processes initiated or supported by foreign capital inflows in an environment of relatively low disposable income and a high propensity to consume in the country.

Therefore, the primary task of the NBS's policy in the previous years was to regulate the inflow of capital into the banking system in such a way that it supports, rather than impedes sustainable economic growth through its unchecked expansion. In doing so, it had to be borne in mind that all large banks in Serbia actually operated as a subsidiaries of financial conglomerates (groups), and as such, they directed the employed foreign capital and alternative forms of domestic savings to the markets, with a view to maximizing returns at the group level.

Under such policy approach, in selecting monetary policy instruments priority was given to those which made the banks' external sources of funds more expensive and limited their credit multiplication (indirectly reduced return on bank capital which is main motive for aggressive credit supply). To this end, the NBS has primarily applied, and gradually tightened, direct influence measures (higher policy rate on account of sterilization of exceeded liquidity; intervention on foreign exchange market; ratio of gross household lending to share capital; ratio of indebtedness of natural persons on their wages/salaries and maintaining of high reserve requirement rate for new fx deposits and loans from abroad), and, complementarily, prudential measures aimed at maximizing the effects and reducing the linearity of direct measures. In spite of all abovementioned problems NBS has succeeded to maintain inflation inside targeted range.

Of course, such policy was not readily accepted by banks and very often by some political agents. And not only by them. International financial institutions have precisely anticipated the risks arising from expansionary foreign capital inflow, but have given preference to prudential and market-oriented monetary policy solutions, emphasizing the long-term damages of "administrative" measures. The NBS's ability to resist these pressures at the onset of the global financial crisis had two positive effects. First, NBS's Serbian monetary policy has significantly impeded the growth of credit and foreign debt, and consequently the growth of credit liabilities of the corporate and household sectors, relative to what it might have been without such policy. And second, the application of the "administrative" instruments made it possible to create liquid reserves and higher capital adequacy at the entire banking system level, which served as the necessary shock absorber when the external shock occurred.

### **3. NBS response to the crisis – building confidence in the long-run: liquidity and capital regulation**

The crisis awareness heightened in Serbia (very similar to other countries in region) during October 2008, due primarily to the stock market crash and loss of confidence, and was expected to end in a large-scale financial collapse. However, this was not happened, thanks to a prompt and efficient reaction on the part of the monetary system, based exactly on the principle of anti-cyclicality. At that moment, it was crucial to prevent the loss of saver confidence in the banking system and maintain monetary policy credibility. Without this, the "vicious circle" of the financial crisis would be set in motion<sup>15</sup> and leads to further erosion of confidence. "If confidence for the entire banking sector disappears, a financial crisis is a fact"<sup>16</sup>.

All over the world central banks and governments have taken a number of measures to prevent or at least ease the effects of the world financial crisis on the stability of their national financial systems.

<sup>15</sup> This circle has been described by Paul Krugman as the interdependence of three elements causing the loss of confidence — exchange rate depreciation, the growth of interest rates and a slump in demand — which results in financial problems for enterprises, banks and households that lead to further erosion of confidence.

<sup>16</sup> Ingves, S. (2009): A Cure for Crises: Confidence, Confidence and Trust, Speech, Locality: Eurofi Forum, Gothenburg, September 2009.

The NBS is no exception in this respect, especially considering the fact that preserving financial stability is one of its legally mandated objectives<sup>17</sup>.

One of the first consequences of the international financial downturn in Serbia was a system-wide loss of confidence<sup>18</sup>. As this was bound to affect domestic financial institutions, the NBS adopted a set of measures to facilitate access to foreign sources of finance. First, the NBS amended its regulations to abolish reserve requirements on foreign borrowing and subordinated credit for banks, as well as reserve requirements on foreign borrowing for leasing providers. This measure was geared at boosting foreign borrowing by making it less costly. To enable banks to make adequate plans for financing their business activities in an environment of global liquidity crunch, in December 2008 the NBS stipulated mid-2010 as the deadline by which the above lifting of reserve requirements shall apply.

In view of the effects of the global crisis, already in December 2008 the NBS adopted a number of amendments to stimulate bank lending and improve the stability of financial institutions in Serbia. Amendments to secondary legislation envisaged non-inclusion of the effects of depreciation in the calculation of the ratio of gross household lending to bank capital, as well as exemption of loans for agricultural production and loans to entrepreneurs from the calculation of this ratio in order to stimulate lending to entrepreneurs. Pursuant to the Decision on Adjusting Gross Household Lending to Share Capital of Banks, the ratio of gross household lending to share capital was raised from 150% to 200%. Depreciation effects were also excluded from the calculation of the ratio of installment to net regular monthly income of the client (30/50% ratio). Hence, banks' receivables on foreign currency indexed loans were not downgraded when this ratio was exceeded due to the effects of depreciation on condition that the client obligations were regularly settled and that he/she was experiencing only temporary repayment difficulties. Another measure for preserving financial stability exempted banks from the obligation to classify receivables unsecured with a 30% deposit into category E. In addition, the reserve for general banking risks, which is normally applied when the annual increase in credit activity exceeds 15% of the bank's risk-weighted assets, was temporarily lifted in December.

Some measures adopted on the basis of amended regulations relate to investment by financial institutions where, on the one hand, scope for investment in high quality products is broadened, and on the other, certain limits are set to improve the quality of such investment so as to ensure additional impetus to liquidity and stability of the financial system in the currently highly turbulent financial environment. First, the National Bank amended regulations governing the operations of insurance companies. These amendments assume higher limits on investment from technical reserves into bank deposits, as well as changes in the criteria to be met by shares to qualify for investment of technical reserves. These measures of the NBS further enhanced the stability of the overall financial system as, among other things, they aim to improve liquidity<sup>19</sup>.

Finally, pursuant to amended regulations, indicators of large exposure of banks against parent institution guarantees will be lowered on condition the bank obtains a letter to that effect from the majority of shareholders of the parent institution. However, should a bank fail to ensure such support, it will not be permitted to engage in distribution of profits, other than into capital and reserves during the period of application of lowered foreign currency risk indicator (from 20% to 10%).

In February 2009, National Bank of Serbia initiated agreement among commercial banks to enable clients to overcome temporary difficulties in loan repayment and/or decrease or eliminate their foreign

<sup>17</sup> In addition to its year-long conduct of conservative prudential and monetary policies, the NBS has from the very beginning of financial turmoil kept a close eye on movements in the global financial market

<sup>18</sup> Republic of Serbia like many other countries accepted to guarantee saving accounts up to 50.000 euros.

<sup>19</sup> During the application of the Decision on Temporary Measures for Preserving Financial Stability in the Republic of Serbia banks and other residents from Article 16 of the Law on Foreign Exchange Operations may make payments to purchase financial derivatives abroad, but only for the purpose of hedging against interest, currency and market risks. During the same period, residents from Article 13 of that Law (legal entities, entrepreneurs and natural persons) may make payments to purchase foreign securities other than in the form of direct investment and long-term debt securities issued by OECD countries and international financial institutions.

currency risk exposure. This set of options will remain on offer for a limited period of time and assumes possibility of early loan repayment without payment of penalty fee plus three other options at client request: (1) one year extension of the life of the loan; if extension is requested for cash loans, they must first be converted into dinars, (2) conversion into dinars of foreign currency clause indexed loans, and (3) conversion of CHF indexed loans into EUR indexed loans. The main precondition is that these optional arrangements are conducted in a fair manner, without additional costs and at equal or better conditions to clients who regularly settle their obligations but are experiencing only temporary difficulties. By amending pertinent regulations the NBS has ensured that the extension of the life of the loan does not result in loan downgrading.

The National Bank of Serbia issued a set of additional measures to maintain the quality of bank portfolios under the Financial Stability Support Programme that came into existence as a result of the Vienna Initiative.

### **Vienna Initiative**

Following the successful financial sector coordination meeting on Serbia held in Vienna on 27 March 2009, and in relation to the arrangement with the IMF, the NBS drew up special facilities in support of the country's financial stability with the aim of upholding confidence in the banking sector and preserving financial and macroeconomic stability. The facilities are designed to enable continuous access to sources of dinar and foreign exchange liquidity, stabilise the forex market, maintain the quality of bank assets (pre-emptive measure) by establishing the framework for the rescheduling of loan repayment terms for bank clients, as well as to reduce the outflow of foreign exchange and alleviate depreciation pressures<sup>20</sup>.

Special facilities are available to those banks that, together with their majority shareholders, assume certain commitments. The majority shareholders of banks commit to maintain their December 2008 level of exposure to the Republic of Serbia until end 2010 (if their head office is located outside of the Republic of Serbia) and to keep bank capital adequacy and liquidity ratios at the levels prescribed, whereas the NBS will assess the future movements in capital adequacy ratios in accordance with the methodology harmonised with the IMF. Banks, on the other hand, have to commit to enable borrowers to convert their foreign currency loans and foreign currency clause-indexed loans into dinar loans, and to provide for the rescheduling of loan repayment terms under the framework defined.

Banks that meet these conditions gain access to the following facilities: new liquidity sources – dinar loans with a repayment period of no longer than 12 months, and short-term foreign exchange swap transactions, including the abolishment of reserve requirements for deposits and loans received from abroad from October 2008 to December 2010 until their maturity date. Banks can also include in their capital, for regulatory purposes, subordinated liabilities up to 75% of their core capital. Besides, in the calculation of arrears on loans whose repayment terms were rescheduled under the framework defined, and for the purposes of their classification requirements, banks are permitted to apply the subsequently agreed maturity date, as well as to raise foreign exchange risk ratio from 10% to 20% of their capital.

### **Capital requirements**

The crisis has shown that there should be more capital, and more high quality capital, in the banking system, over and above the present regulatory minimum levels. Capital of Serbian banking sector at the end of March 2009 has amounted 432 billion of dinars expressing growth of 18% in terms of same period of last year<sup>21</sup>. Capital adequacy ratio of whole banking industry reached level of 20.8% on the March 2008 (lower for 1.2 bp in terms of December 2008). Very strong recapitalization of banking sector during last 5 years as a result of rigorous requirements by NBS and respond to very aggressive

<sup>20</sup> See: Decision on Special Facilities Supporting the Countr's Financial Stability; Decision on Terms and Conditions of Granting Short Term Dinar Loans to Banks; and Decision on Terms and Conditions of Foreign Exchange Swap Trading between the National Bank of Serbia and Banks

<sup>21</sup> NBS, Financial Stability Report, May 2009. pg.51

lending policy by banks made our banks more resilient to market turbulences. From the end of 2006 to beginning of 2009 the capital of banking sector has been doubled (core capital has grown 85%). All these years NBS has insisted banks to hold more capital, especially in good times (counter-cyclical), not only to cover idiosyncratic risks but also to incorporate the broader macro-prudential risks (forward looking approach)<sup>22</sup>.

#### 4. Opportunities in the post crisis period

Every major crisis exposes the limitations and rigidities of the existing systems, thereby creating compelling pressures on the authorities to reform and restructure. This global financial crisis will provide the trigger for major revamping of the financial stability architectures around the world, besides fostering better governance of the globalization process and encouraging relevant cooperation among national policy makers. The key areas that could strengthen the financial stability architecture, as agreed in the recent G-20 meeting in London, and which National Bank of Serbia intend to follow, include:

- More and better quality capital as the best first line of defence against financial crisis;
- New liquidity rules strengthening base banking principle of confidence;
- Introduction of countercyclical buffers during good times to strengthen resilience during bad times;
- Introduction of leverage ratio as an element of the Basel II framework while further strengthening the risk based capital requirement;
- Consistent and coordinated implementation of international standards, including Basel II, to prevent emergence of new risks and regulatory arbitrage;
- Introduction of Central Counterparties for credit derivatives;
- Oversight of credit ratings agencies and hedge funds;
- Quantitative retention requirements for securitisation;
- Convergence towards a single set of high-quality, global, independent accounting standards on financial instruments, loan-loss provisioning, off-balance sheet exposures and the impairment and valuation of financial assets; and
- Stronger regulation and oversight for systematically important firms (“too big to fail”).

#### 5. Conclusion

Central banks around the world have implemented extensive measures to counteract the effects of the financial crisis. In many cases, the same type of extraordinary measures have been used but in some cases, however, the central banks have chosen to take different measures to counteract the effects of the financial crisis in their respective countries. This is due to differences in the structure of the financial sector in the various countries. The NBS's policy in the previous years was to regulate the inflow of capital into the banking system in such a way that it supports, rather than impedes sustainable economic growth (without inflation) through its unchecked expansion. Under such policy approach, in selecting prudential rules and monetary policy instruments, preference was given to those policies which made the bank's external sources of funds more expensive and limited their credit multiplication (and risk aspects), strengthening banking liquidity sources and level of required capital simultaneously. In this sense the NBS's long run anti-cyclical policy has shown as very fruitful in a time of crisis - banking system is liquid and there is no need for recapitalization of banks - confidence is essential for a well-functioning financial system.

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<sup>22</sup> In accordance with Vienna Initiative NBS has performed stress test for 16 banks (the biggest) which amount 83% of total banking assets. If we presume pesimistic scenarios to occure composite capital adequacy ratio will be far above regulatory required level of 12%. Also, through stress test NBS has concluded that there is no need for recapitalization of banks (neither extraordinary nor preventive recapitalizations).

## References

1. Banq de France, Liquidity, Financial Stability Review, February 2008.
2. Banq de France, The Future of Financial Regulation, Financial Stability Review, September 2009.
3. Banq de France Bulletin Digest, (2007), Financial innovations and the effectiveness of monetary policy, No. 168, December 2007 .
4. CGFS (2009), “Capital flows and emerging market economies”, report submitted by a working group established by the CGFS, CGFS Papers, No. 33 (January); and G20 (2008), “Study group on Global Credit Market Disruptions”, paper prepared by Australia.
5. Clerc L. (2008), A Primer on the Subprime Crisis, Banque de France, Occasional Papers, No. 4, February 2008.
6. Chakrabarty K.C (2009), Global crisis – genesis, challenges and opportunities unleashed, Inaugural address at the 21<sup>st</sup> Anniversary Convention of the Association of Professional Bankers, Sri Lanka, Colombo, 25 September 2009.
7. FSA, The Turner Review, A regulatory response to the global banking crisis, March 2009.
8. Ingves S. (2009), A Cure for Crises: Confidence, Confidence and Trust, Eurofi Forum, Gothenburg, Speech, 29 Septembre 2009.
9. Ivanović P. (2009): “Banks and Securitization”, Presentation on 8<sup>th</sup> International Seminar for Bankers and Financial Experts, Miločer, Montenegro, in organization of CISEF Ljubljana, Slovenia,
10. Jelašić R. (2009), Current monetary and macroeconomic trends, Beograd, 10. July, 2009. Presentation of Governor.
11. Kohn L.D. (2009): Comments on “Financial Intermediation and the Post-Crisis Financial System”, At the 8<sup>th</sup> BIS Annual Conference 2009, Financial System and Macroeconomic Resilience: Basel, Switzerland
12. National Bank of Serbia (2009), Financial Stability Report, May, 2009.
13. National Bank of Serbia (2009), Annual Report 2008.
14. National Bank of Serbia (2009), Statistics.
15. Rohatinski Ž. (2009), Economic Crisis and Monetary Policy, Speech prepared for a round table at the HAZU Department of Social Sciences: Crisis and Economic Policy Frameworks, Zagreb 7 July 2009.
16. Shin H.S. and Tobias A. (2007), Liquidity and Leverage, working paper, FRB New York and Princeton University.
17. Schwartz A. (2008), Origins of the Financial Market Crisis of 2008, Cato Journal, Vol.29, No.1 (Winter 2009.).
18. Tucker P. (2007): A perspective on recent monetary and financial system developments, Bank of England, Quarterly Bulletin, 2007 Q2.
19. Yamaguchi H. (2009), Some remarks on the financial crisis over the past year, Speech at the 4<sup>th</sup> Annual Euromoney Japan Capital Markets Congress, Tokyo, 18 September 2009.

## PROFITABILITY AND FINANCIAL POWER ANALYSIS

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### Abstract

*The procedures necessary for the assessment of financial power and profitability of business operations of the enterprise "D", which are set as a goal analysis has been carried out. Procedures applied in the analysis increased the power of information and usefulness of available information, through which lead to deeper knowledge about the profitability of companies in the observed period. In order to survive and maintain their position in the market Company pay great attention to monitoring, analysis and evaluation of business. Financial management analysis is based on real data, time and space comparable and comparable with the competition. Analysis and evaluation of financial operations is being realized through analysis of financial statements. In this work a financial result analysis given by financial report of the enterprise "D", in the period since 2003 to the year of 2007, has been presented. For the purpose of the analysis, in order to facilitate it, in addition to absolute numbers in this work were used and the relative numbers.*

*Key words: Analysis, Enterprise, Profitability, Financial Power, Capital, Income, Tax, Interest, Fixed Obligations*

### 1. Introduction

Business of modern enterprises operates in conditions of globalization, internationalization of markets, rapid development of production technologies and use of modern information and communication technologies. Because of mercilessly competition, financial management does not tolerate mistakes. In order to survive and maintain their position in the market Company pay great attention to monitoring, analysis and evaluation of business. Financial management analysis is based on real data, time and space comparable and comparable with the competition. Analysis and evaluation of financial operations is being realized through analysis of financial statements. Balance-sheet analysis is based on quantitative and qualitative relation, starting from the subject of analysis, general aim of analysis, which is the evaluation of financial result and financial position. In the Income Sheet Balance is given an estimation of the financial result which is giving relevant data about the structure and disposition/distribution of total/or business income, and, thereafter, of structure and distribution of the financial result. The obtained information may be especially useful in the case that the enterprise has got a negative financial result in the sense of discovering of possibilities of emerging from the loss zone ,as well, in case of positive financial result of the enterprise - in order to get possibility of its improving.

### 2. About the Enterprise

The company exists since 1991. and overwhelming business is the production of plastic packaging. Since 1995 its occupation has been production of multi-layered film, thermal-formed packaging

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(glasses for milk industry). In addition to the mentioned activities, the enterprise deals with wholesale. Following of the choosy market demands they produce milk industry packaging with high-quality technology and unique look. The goods are placed on the domestic and foreign markets. Activity is performing in the production plant of 3.000 squared meters, annual processing is about 4.000 tons and about 50.000.000 units by month. The society was registered in 1991 in court register of the Commercial Court. An additional registration was done in Serbian Business Registers Agency in 2005 and in this way harmonized with Business Registration Law (legal form, body management, basic capital, general acts and founding agreement). According to criteria for classification from Law on Accounting and Auditing, Society was classified to medium-sized legal entity. The average number of employees was 36 in 2007. On the day of 31<sup>st</sup> December 2007 the enterprise had 36 employed workers. Professional and skills structure was as follows: 2 highly-skilled workers, 12 with high school, 8 skilled workers, 2 semi-skilled workers and 12 unskilled workers.

### 3. Financial Power Analysis

Financial Power Analysis means determination of way of cover of fixed obligations, referring mostly to coverage of costs of interest, fixed debits, and preferential dividend.

#### 3.1. Coverage of costs of interest

Coverage of costs of interest and financing costs is obtained from relationship between operating profit and cost of interest. Thereby, operating profit represents difference between income and sum of variable and fixed expenses, excluding financial costs. The relation shows how many times the operating profit is greater than costs of interest. The ratio greater the coverage of costs of interest and the financial power accordingly greater, and vice versa. The formula clearly proves the coverage of costs of interest depends on two variables: amount of operating profit and amount of cost of interest. During analysis of business risk, it has been seen the amount of operating profit depends on coverage margin, which is relating to the parity of selling and purchase prices, productivity, volume of the production and sales, amount of fixed and mostly fixed expenses excluding financial expenses etc. On the other hand, the amount of cost of interest depends on relation between total debt and total assets and the amount of interest rates. When given interest rates, balance power will be greater if the ratio of total debt and total assets is lower, because in this case, interest costs will be lower, and their coverage greater. Greater coverage means greater surety the enterprise will pay the rates of interest and greater gross return to total result. The cover of rates of interest is shown in the following table:

**Table 1. Coverage of rates of interest (in thousands of dinars)**

Item	Position / Year	2004	2005	2006	2007
1	Operating Profit	10529	16269	23365	28622
2	Costs of Interest	3865	6101	6797	7171
3	Coverage of Costs of Interest (1/2)	2,72	2,67	3,44	3,99

In year of 2003 coverage was not in consideration due to the fact that the enterprise achieved a negative result that year. In the following years data show the surety the enterprise will pay the interest. The best situation is in 2007 when coverage is 3.99% that mean the situation was improving from year to year.

#### 3.2. Coverage of fixed expenses

Coverage of fixed charges results from the ratio of operating profit increased by rental costs, and fixed charges comprising costs of interest, due principal of long-term debt and rental costs, with the assumption that in the fixed tax obligations is not included in the financial result. This ratio shows how

many business profit increased by the cost of renting is higher than the fixed charges, and if the relationship is higher, the better the financial power. The ratio is determined by two variables, the amount of business profit increased by rental costs and the amount of fixed charges (cost of interest, due principal of long-term debt and rental costs).

The amount of due principal of long-term debt depends on the relation of long-term debt and total capital, and the level of the rental costs depends on the extent the enterprise uses rent of office space and equipment and the amount of rental.

If the tax to financial result included in the mentioned form of determining of coverage of fixed expenses within fixed expenses and its result is one or more than one, the substitution of due principal of long-term debt by its proper capital would be assured, under the condition that during distribution of net profit at least to the amount of due principal of long-term debt be accumulated for its proper profit. Necessary data missing, coverage of fixed expenses in this work not counted.

### **3.3. Coverage of preference dividend**

This coverage represents the company's liabilities to the preference shareholders to which belongs fixed dividend. The base for calculating of coverage of preference dividend deriving from the ratio between business profit increased by rental fees and fixed charges and the fixed dividend increased by tax to financial result. The fixed dividend being included in tax base during calculating of tax to financial result, during determining of its coverage the fixed dividend increases by the amount of the belonging tax to financial result. The base for determining of preference dividend is accounting data related to the nominal value of preference dividend and the rate of fixed dividend. However, due to preferential dividend is not the only fixed liability for the enterprise; in the denominator must be included the other fixed obligations as well. On the base of this relation we can recognize how many times business profit increased by the rental fees higher than costs of interest, rental fees, due principal of long-term debt as well as the preference dividend increased by the amount of the tax to financial result. The relation higher, the financial power higher, and vice versa. The included tax to financial result being a part of the tax, in order to assure the coverage of the remaining part of tax to financial result, the determining of coverage of total fixed charges has to be done. The total tax to financial result being included in denominator, therefore the preference dividend is not increased by the belonging tax to financial result. Besides, the enterprise assures coverage of fixed charges if the result of this ratio is one or more than one. In case the result would be higher than one, coverage is also higher. In that way the financial ability to settle the total fixed expenses is greater as well, and vice versa. The society is registered as a limited liability company and has not got the obligations based on the fixed dividend. Profitability shows an ability level of invested funds to reject the yield as a result of its proper use. Measurement and analysis of profitability are made from the position of total capital; own capital and financial result from investments.

## **4. Analysis of profitability of investments**

At profitability of total result we distinct two segments: profitability of total capital and invested capital. Total capital includes total invested funds i.e. total amount of assets excluding stated loss. Profitability of total capital, versus result of total capital occurs as gross return as well as net return to total capital.

### **4.1. Profitability of total capital**

Gross return to total capital represents business profit in form of a difference between income and expenses without costs of investments. Basic components of business profit are: costs of investments, net profit, taxes and contributions to financial result. The taxes and contributions make this income as

gross category because the owners of the capital have to pay taxes and contributions to the financial result. Rate of gross yield to invested capital depends on the level of economy and on the degree of efficiency, versus rationality of use of the invested assets. This indicator can be obtained by multiplying the rate of business profit, obtained from the business of profit and income multiplied by the table, with a coefficient of trades of investment, given the relationship of income and invested assets. The difference between income and expenses excluding costs of financing greater, the business profit greater and the efficiency of the enterprise greater, the coefficient of turnover of assets, as well as the rate of gross yield on the total capital. Rate of gross yield on total capital realized by the enterprise in the observed period was shown in the following table:

**Table 2. Rate of gross return on the total capital (in thousands of dinars)**

Item	Position	2004	2005	2006	2007
1	Operating Profit	10.529,00	16.269,00	23.365,00	28.622,00
2	Invested Assets	147.214,00	199.736,50	221.056,00	232.128,50
3	Rate of Gross Return on the Total Capital	7,15%	8,15%	10,57%	12,33%

Since the invested funds may be different, due to oscillations over the years, when determining the gross rate of return on total capital, the average of business assets was used, obtained as a ratio of the sum of total business assets by the opening balance of assets and business by closing balance on the one hand and number two on the other side. The analysis shows relatively low rate of gross return on the total capital and that is not a good indicator. However, the situation is improving from year to year within the observed period and in 2007 reaches the maximum when 100 dinars of the invested funds rejects gross return of 12,33 %. Because the enterprise achieved negative business result that year, in 2003 rate was not count.

***The net return to the total capital*** represents the sum of financing costs and net loss, which belongs to owners of their proper capital of the enterprise to the amount of net profit on the one hand, and to creditors to the amount of cost of interest on the other hand. The net return on the total capital is expressing by the rate of net yield to the total capital. The rate of net return on total capital is in percents and obtains as the ratio of net profit increased by costs of interests and average operating assets determined by the same procedure as at the rate of gross yield on total capital. The rate of net return on the total invested capital is determined by economy and efficiency of use of assets as well as by the amount of taxes and contributions on financial result. Thereby, the amount of taxes and contributions on the result depends on the amount of gross profit, on the amount of the costs unacknowledged by the side of tax legislation, on the amount of tax relief and on the amount of tax rates.

Higher tax base and higher tax rate requires a higher tax on the financial result, which result in reduced net rate of return on total capital and vice versa. Net rate of return on total capital, which the enterprise realized in the observed period, is shown in Table 3:

**Table 3. Rate of net return on total capital (in thousands of dinars)**

Item	Position	2003	2004	2005	2006	2007
1	Net Profit increased by the Costs of Interest	1.314,00	7.545,00	7.922,00	13.743,00	19175
2	Invested Assets	83.578,50	147.214,00	199.736,50	221.056,00	232128,5
3	Rate of Net Return on the Total Capital (1/2)	1,57%	5,13%	3,97%	6,22%	8,26%

The given data show relatively low rate of net return on the total capital, which is not the good indicator. Dynamics is such that the net rate of return on total capital increases since 2003 where is 1,57 %, with deviations in 2005 when the rate fall down to 3,97 %. Thereafter, the growing occurs to 6,22 % and the situation improves in 2007 when the rate is 8,26 %.

Since recognized by the Tax legislation, expenses based on interest are not included in tax base. In accordance with, the savings on taxes are the result based on interests, and consequently, the rate of net return on total capital increases. In contrary, enterprise financed exclusively by own capital and spontaneous sources, has no the expenditures based on interests which results with an net yield on total capital lower than enterprise with these expenditure. However, it should bear in mind that the tax savings realized only in the achievement of positive financial results, and gross profit and not a loss. Since interest expenses vary over time, and thus vary the net rate of return on total capital-which results it can't be compare as per space and time. In order to eliminate the impact on the net rate of return on total capital, and therefore it did time and space comparable, came to idea that in its determination to exclude the impact of tax savings by the cost of interest.

#### 4.2. Profitability of invested capital

**Profitability of invested capital.** Invested capital of an enterprise is equal to its own capital and long-term liabilities. Net return on invested capital is equal to a sum of net profit and costs of interests.<sup>2</sup> Rate of net return on invested capital shows an profitability of the invested capital, and is obtained as a ratio of net profit increased by the costs of interests and average invested capital. Elevation of the rate during the observed period is given in Table 4.

**Table 4. Rate of net return on invested capital (in thousands of dinars)**

Item	Position	2003	2004	2005	2006	2007
1	Net Profit increased by Costs of Interests	1.314,00	7.545,00	7.922,00	13.743,00	19.175,00
2	Average Invested Capital	58.830,00	79.514,50	92.542,50	107.938,50	126.399,50
3	Rate of Net Return on Invested Capital (1/2)	2,23%	9,49%	8,56%	12,73%	15,17%

Rate of net return on invested capital has the same dynamics during the period as rate of net return on total capital, however it is higher because the average invested capital is lower than average invested assets that we divide by the net profit increased with costs of interest. It is the lowest in year of 2003 and counts 2,23 %. Then it records a significant growth in 2004 to 9,49% with a fall of the rate in 2005 to 8,56 %. A situation improves in last two years and rates of net return on invested capital reaches its maximum of 15,17 % in 2007. Rate of net return on invested capital can be also determined by excluding influence of savings of tax on financial result based on costs of interests, from the same reason as at the rate of return on total capital by excluding savings on taxes based on the costs of interests.

#### 5. Profitability of own total capital

Profitability of own total capital is expressed by rate of profitability which obtained from ratio of net profit and average own capital. Average own capital is a sum of own capital from the Balance when opening and own capital from the Balance when closing, divided by two.

<sup>2</sup> Jovan Rodić, Gordana Vukelić, Mirko Andrić, *Theory,policy and analysis of Balance*, Faculty of Agriculture, Belgrade 2007, page212

Higher net profit in the own capital rejects higher rate of profitability of its own capital and vice versa. In accordance, in the net profit, lower own capital has as result higher rate of profitability of own capital and vice versa. Over the years the enterprise achieves the following rates of profitability on own capital as per above table.

**Table 5. Rate of profitability on own capital (in thousands of dinars)**

Item	Position	2003	2004	2005	2006	2007
1	Net Profit	1.079,00	3.680,00	1.820,00	6.946,00	12.004,00
2	Average Own Capital	58.830,00	79.514,50	78.862,50	80.480,00	91.719,00
3	Rate of Net Return on the Own Capital (1/2)	1,83%	4,63%	2,31%	8,63%	13,09%

As per data mentioned in the table the concerned enterprise records a growth of rate of profitability on own capital with the exception of year 2005 when decrease to 2,31 % happens. It is the lowest in 2003 i.e. 1,83 %, grows up to 4,63 % in 2004, than decreases ,and increases in 2006 again to 8,63 % with achieved maximum of 13,09% in 2007. Rate of net return on own capital increases influenced by net income. The decrease of net income occurred in 2005 which caused a decrease of rate of net yield on own capital as well, that means these are two mutually dependant categories.

## 6. Profitability of shareholder's capital

**Profitability of shareholder's capital** counts on two ways: by rate of net profit on s shareholder's capital or by the absolute amount of net profit as per one share. A rate of profitability of shareholder's capital has been determining by ratio of net profit and average shareholder's capital, and has been expressing in percents. It may conclude the net profit be directly proportional to a rate of profitability of shareholder's capital, and shareholder's capital and a rate of yield/return are inverse one another. Besides, in joint stock companies, the rate of profitability of shareholder's capital is always higher than the rate of return on own capital. Higher level of own capital of the equity/shareholder's capital is conditioned by the fact that its own capital in this case, in addition to equity capital, including reserves, accumulated profits and possibly emission profit and undistributed profits of previous years. Since the enterprise „D“ was registered as a limited liabilities company, has owner's shares instead of share capital and the rate of profitability shal not be counted.

## 7. Conclusion

The procedures necessary for the assessment of financial power and profitability of business operations of the enterprise "D", which are set as a goal analysis has been carried out. Procedures applied in the analysis increased the power of information and usefulness of available information, through which lead to deeper knowledge about the profitability of companies in the observed period. The following conclusions say in the favour of:

- Analysis of financial power from the aspect of coverage of costs shows an surely the enterprise shall pay the rate of interests, with exception of the first year, 2007, when the operating result increased proportionally more than the costs of interests increased. Coverage of fixed expenses and preferential dividend, due to missing of necessary data, more accurately, of due principal of long-term debts, was not counted and the enterprise doesn't have the obligation based on due dividend being no joint-stock company.
- Analysis of profitability is made from the aspect of total capital and own capital. Data obtained by the analysis show a low rate of gross yield/revenue to the total result ,but the situation is going better ,and reach the maximum of 12,33 % in 2007. A rate of gross return for year 2003 was not counted due to the negative business result. A rate of net return to the total capital is low too, but with the tendency of growth. It is the highest in the year of 2007,

i.e. 8,26 % and the lowest in 2003, i.e. 1,57 %. The decreasing of the rate of net return to total result came in the year of 2005 which is logical after the decrease of result happened. Because of missing of data rates of return with exclusion of the influence of savings on taxes based on the expenses of interests was not counted. A profitability of invested capital has the tendency of growth in the observed period which showed by rate of net yield/return on the invested capital the highest in the year of 2007, i.e. 15,17 %. As the matter of profitability of the own capital, the enterprise records a growth, with exception in the year of 2005 when slight decrease to 2,31 % happened. It is the lowest in 2003, i.e. 1,83 %, growing up to 4,63% in 2004 ,than decreases, and increases up to 8,63 % in 2006 again, reaching the maximum of 13,09 % .A rate of net return on the own capital growths under the influence of the net revenue. The decrease in net income in 2005 provoked decrease of the rate of return to the own capital that means they are two categories mutually dependant.

## References

1. Fraser, L. M., Ormiston, A., (2004) *Understanding Financial Statement*, Pearson Prentice Hall, New Jersey
2. Rodić J, Vukelić G, Andrić M. (2007) *Theory, policy and analysis of balance*, Faculty of Agriculture, Beograd
3. Rodić J. (1997) *Theory and Balance Analysis*, Privrednik, Beograd
4. Rodić, J., Filipović, M., (2006) *Business Finance*, Asimex doo, Beograd
5. Ruth, G. (2006) *Analysing Financial Reports*, Daily Press, Podgorica
6. Vukelić G. (2008) *Financial Accounting*, Belgrade Banking Academy, Belgrade
7. [www.divi.com](http://www.divi.com)
8. [www.nbs.yu](http://www.nbs.yu)
9. Official scheme of profit and loss account for the years 2003, 2004, 2005, 2006 and 2007) of the „D“ company

# Chapter 7.

## FINANCIAL INTEGRATION OF WESTERN BALKAN COUNTRIES: DO FOREIGN CAPITALS MATTER?

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### Abstract

*The impact of international financial integration on economic performance continues to be one of the most debated issues among economists. Theoretical models have identified a number of channels through which financial integration can promote economic development and growth in developing countries and countries in transition. However, in spite of its benefits, financial integration can also be dangerous, as it has been witnessed in many recent financial crises. Therefore, this paper presents potential benefits and costs of financial integration as well as new risks currently threatening Western Balkan countries. Since the composition of capital inflows can also have an influence on the vulnerability of countries to exogenous financial shocks, this paper studies theoretical effects of different types of foreign capital inflows on the host country economy and analyses different patterns of foreign capital inflows received by Western Balkan countries. This paper concludes with some recommendations concerning further integration of these countries into the EU financial system.*

*Key words:* *Financial Integration, Foreign Capital Inflows, Western Balkan Countries*

### 1. Introduction

The European financial integration has considerably progressed since the signature of the Treaties of Rome. With the two last EU's enlargements (accession to the EU of Estonia, Hungary, Cyprus, Latvia, Lithuania, Malta, Poland, the Czech Republic, Slovenia, and the Slovak Republic on May 1, 2004, and Bulgaria and Romania on January 1, 2007), the EU, nowadays, counts twenty seven Member States. Recently, the governments of the EU Member States have agreed to extend the EU perspective to countries in South East Europe, namely Croatia, the Former Yugoslav Republic of Macedonia, Albania, Bosnia and Herzegovina (BiH), Montenegro and Serbia. However, as for today, there are only two *candidates* for EU membership among these countries: Croatia and FYR of Macedonia. Other countries of the region are considered as *potential candidate countries* (Albania, Bosnia and Herzegovina, Montenegro and Serbia).

During the last fifteen years, Western Balkan countries made considerable progress towards integration with a world economy and especially with the EU. The integration of potential candidate countries into enlarged Europe is currently realised through *Stabilisation and Association Process (SAP)* which aims to bring these countries progressively closer to the EU. The centerpiece of the process is a *Stabilisation and Association Agreement (SAA)*, which represents a contractual relationship between the EU and each potential candidate country, entailing mutual rights and obligations. For each of the potential candidate countries of the Western Balkans, the *Commission of*

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*European Communities* negotiates SAAs<sup>3</sup> which have three aims: first, to encourage regional cooperation; second to promote economic stabilisation and a swift transition to a market economy; and third to offer the *prospect of EU accession*. Thus, SAAs explicitly include provisions for future EU membership of the country involved.

It is important to underline that the integration into the EU economy (and the EU accession) requires the EU candidate countries to fully liberalize their capital account by the time of EU accession at the latest, as the free movement of capital is one of the leading principles of the EU<sup>4</sup>. However, the experience of some countries has shown that in spite of its obvious benefits, the financial integration can also be dangerous, especially in crisis time.

In fact, vulnerability of countries to exogenous financial shocks highly depends to *which extend the country is integrated into the world economy* and the *pace* and the *sequencing* of the removal of capital restrictions play a crucial role in preventing and mitigating crisis. The *composition of capital inflows* plays an important role in preventing the propagation and mitigation of crises, since *not all capital flows are equal*.

Therefore, this paper is organized as follows. Section 2 presents potential benefits and costs of financial integration as well as new risks currently threatening countries all around the world. Section 3 studies theoretical effects of different types of foreign capital inflows on the host country economy. Section 4 analyses different patterns of foreign capital inflows in the Western Balkan countries (Albania, Bosnia and Herzegovina, FYR of Macedonia, Montenegro and Serbia). Finally, the paper concludes with some recommendations concerning further integration of these countries into the EU financial system (Section 5).

## 2. Financial integration, its potential benefits and costs

The benefits of strong inflows of foreign capital, which have been largely exposed in the economic literature, are quite obvious. The “partisans” of financial liberalization argue that free movements of international capital can encourage a relatively more efficient allocation of economic resources, offer good risk diversification opportunities and help to promote financial development (S. Fischer, 1998, M. Obstfeld and K. Rogoff, 1998, M. Klein and G. Olivei, 1999, L. Summers, 2000, B. Eichengreen, 2001). In the case of transition countries, which include Western Balkans, the foreign exchange inflows offer opportunities to complete their economic transition and to speed up economic development as investment is no longer limited by national savings. Moreover, in some cases, the international capital inflows can ease countries’ foreign exchange shortages.

Others consider increasing financial liberalization and unrestrained capital flows as a serious hazard to global financial stability (e.g., D. Rodrik, 1998; J. Bhagwati, 1998; J. Stiglitz, 2002) and dispute its utility for reasons of provoking the generation and propagation of serious financial crises.

In fact, in spite of their benefits, the strong capital inflows can also have less desirable effects on the financial sector and, therefore, can create serious problems for policy makers. For instance, in the context of incomplete structural reforms, international capital flows carry considerable risks and may magnify underlying macroeconomic and structural weaknesses. If the country receiving the large foreign inflows has a weak institutional framework, there is a high risk that foreign inflows will be *misallocated* and, consequently, have a potentially negative impact on the financial sector and on the real economy. Besides, “large capital inflows have been associated with rapid credit expansion and

<sup>3</sup> SAA signature: Albania – 12/06/2006; Montenegro – 15/10/2007; Serbia – 29/04/2008; and, Bosnia and Herzegovina – 16/06/2008).

<sup>4</sup> Article 56 of EC Treaty: “...all restrictions on the movement of capital between Member States and between Member States and third countries shall be prohibited ...”

riskier lending practices in many countries. Large inflows can also lead to *significant nominal appreciation of the exchange rate*, resulting in a loss of competitiveness of domestic products and deterioration in the debt servicing capacity of clients in the internationally exposed sectors and thus in the quality of banks' balance sheets" (W. Buiter and A. Taci, 2003).

Furthermore, risks associated with capital inflows include also the *sudden* (unexpected and large-scale) *stop* or *reversal* of some type of flows, particularly short-term inflows. The sudden stop problem, firstly emphasized by G. Calvo (1998), features a cessation in foreign capital inflows and/or a sharp capital outflows concurrently with currency/balance of payments crisis. "Sudden stops may have severe consequences for the economy, as the abrupt reversal in foreign capital inflows in conjunction with a realignment of the exchange rate may cause a sharp drop in domestic investment, domestic production and employment", (M.M. Hutchison and I. Noy, 2006). Besides, if an economy relies heavily on foreign exchange inflows, which suddenly stop or reverse there will be a sudden shortage of foreign exchange to finance imports, as well as a dramatic decline in domestic demand. Combined, these could produce both a currency crisis, with huge swings in exchange rates, and as a consequence a recession.

Moreover, in time of crisis, countries with *original sin*<sup>5</sup> problem (with external debt denominated in foreign currency) will have difficulties in servicing their external debt since in "bad times" the real exchange rate tends to weaken and, consequently, to reduce the power of domestic output over foreign claims, (B. Eichengreen et al, 2003). Besides, the inability of the country to serve its external debt will reduce willingness of borrowers to lend in the future and thereby to accentuate the pro-cyclical nature of capital flows. Additionally, the *currency mismatches*<sup>6</sup>, either in the public sector, the corporate sector or other sectors can also generate serious problems for the economy (particularly if there is a reversal of foreign exchange inflows) if the liabilities in foreign exchange greatly exceed their foreign exchange assets or earnings.

The *composition of capital inflows* can also have an important influence on the vulnerability of countries to exogenous financial shocks caused by current crisis since *not all capital flows are equal*.

### 3. Effects of different foreign capital inflows on the host country economy

As we've just mentioned before, theoretically the financial integration, can generate a variety of benefits and, at the same time, can be quite dangerous, as it has been witnessed in many past and recent financial, currency and banking crises. In fact, the *degree of country's financial integration* and the *composition of capital inflows* can play a crucial role in preventing and mitigating crisis (since not *all capital flows are equal*). For instance, flows like Foreign Direct Investment (FDI) and, perhaps, international portfolio flows are not only presumed to be more stable and less prone to reversals (S-J. Wei, 2006). Thus, the composition of capital inflows can have an important influence on the benefits of financial integration for developing countries and transition countries.

It is difficult to enumerate all positive effects of *Foreign Direct Investment (FDI)* mentioned in the economic literature. In fact, FDI could enhance economic growth in the host country through *direct* and *indirect channels*: directly, by increasing the stock of physical capital in the host country; and indirectly, via transfer of technological and managerial know-how (J. Stiglitz, 2000). However, it is also important to distinguish the Greenfield investments from Mergers and Acquisitions (M&A) since

<sup>5</sup> The *original sin* is defined as the inability of a country to borrow abroad in its own currency. During crisis, a depreciation of domestic currency may lead to balance sheet problems, which could become a key source of financial instability and possibility of default (B. Eichengreen et al., 2003).

<sup>6</sup> *Currency mismatches* are differences in the values of the foreign currency denominated assets and liabilities on the balance sheet of households, firms, the government and the economy as a whole (B. Eichengreen et al., 2003).

the effects of such inflows on employment in host-country will be different. Moreover, FDI is also considered to be the most stable and less volatile. However, during prolonged crisis time, even FDI inflows can suddenly stop.

*Remittances*, which are transfers of money by foreign workers to their home countries, are also likely to be a relatively long-term source of foreign exchange. They are an increasingly important source of external finance for many developing and transition countries. While other capital flows tend to rise during favorable economic cycles and decline in bad times, remittances tend to be counter-cyclical relative to recipient countries' economic cycles (D. Ratha, 2003). They are likely to rise when the recipient country suffers an economic downturn following a financial crisis, natural disaster, or political conflict as migrants transfer more funds during hard times to help their families and friends. Usually, "this type of inflow is considered independent from shocks in international financial markets and is generally countercyclical; meaning that part of the impact of a shock is typically offset by remittances" (C. Dieterich, 2007). However, the current crisis has shown that even remittances can be volatile in nature. According to C. Berthomieu et al (2009) and C. Dieterich (2007), remittances seem to be highly dependent on economic situation of the sending country as well as of world oil prices. The current economic downturn in developed countries is forcing immigrant workers all over the world to reduce the amount of income they send home to support their families. As workers' monetary remittances decline, countries that have grown reliant on such flows already feel painfully their absence.

Just like other foreign capital inflows *external debt (foreign debt)* constitutes one of the important sources of financing for many developing and transition countries. However, effect of debt flows on host country's economy depends on the maturity of the debt. According to the World Bank (2000), the *short-term debt flows* are the most reversible component of private capital flows. This is because shorter maturity enables the investor to withdraw quickly, and because withdrawal of other types of capital can be costly during difficult times. For instance, liquidating FDI may involve selling plants and machinery, and selling stocks or bonds usually involves loss for the investor. In contrast, short-term bank loans can be reversed at relatively minimal costs. Moreover, the short-term debt flows are usually procyclical, rising during favorable periods and reversing more sharply in times of adverse shocks. The procyclical and highly volatile nature of these flows can magnify the adverse impact of negative shocks on economic growth. Furthermore, opening up to debt flows can give profligate governments and weakly supervised financial sectors a lot more room to increase their vulnerability to shocks.

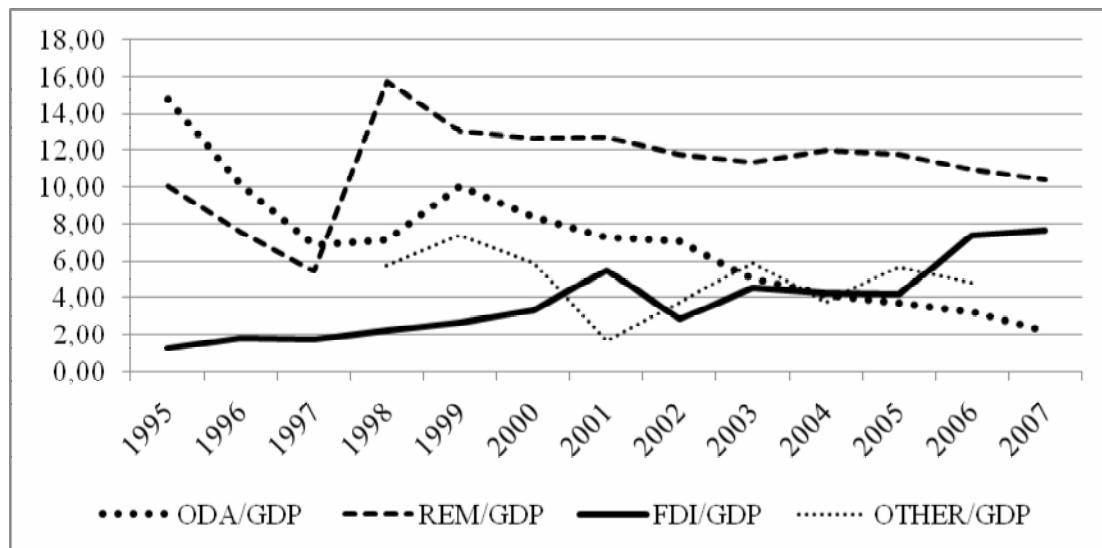
As for *long-term debt flows*, they can take a form of commercial or bank loans (private flows), or foreign aid such as Official Development Assistance (ODA), which consists of loans, grants, technical assistance and other forms of cooperation extended by governments to developing and transition countries (official flows). These flows usually have positive effect on economic growth in the host country by providing necessary capital for domestic investment. In addition, ODA has a critical role to play in improving the environment for private sector activity and in helping enterprises to respond to new and changing demands, and thus in helping to pave the way for robust growth. However, sometimes these flows can be misallocated by government's officials. Moreover, the excessive reliance on aid inflows can provoke the exchange rate overvaluation and lead to host country's poor economic performance because of deterioration of its competitiveness (R. Rajan and A. Subramanian, 2005).

According to R. Levine (1997), *international portfolio flows* (bonds and equities) can stimulate domestic financial sector development by increasing the liquidity of domestic stock markets. The increased foreign ownership of domestic companies and banks can also generate a variety of other benefits. However, the effects of portfolio flows depend on their nature. In other words, some empirical studies have found a positive relationship between *equity portfolio flows* and economic growth, while *bonds portfolio flows* do not seem have positive effect on economic growth due to their volatility.

#### 4. Composition of capital inflows to the Western Balkan countries

Western Balkan countries have recently received an important amount of foreign capital inflows. Figure 1 presents the composition of foreign capital flows in average in five Western Balkan countries (except Montenegro). We can see that remittances represent the biggest part of foreign inflows during whole period. The ODA was quite important between 1995 and 2000; however, starting from 2000, the level of ODA as percentage of GDP is decreasing. As for other investments (monetary authorities, general government, banks, other sectors)<sup>7</sup>, they represent in average 4% of GDP.

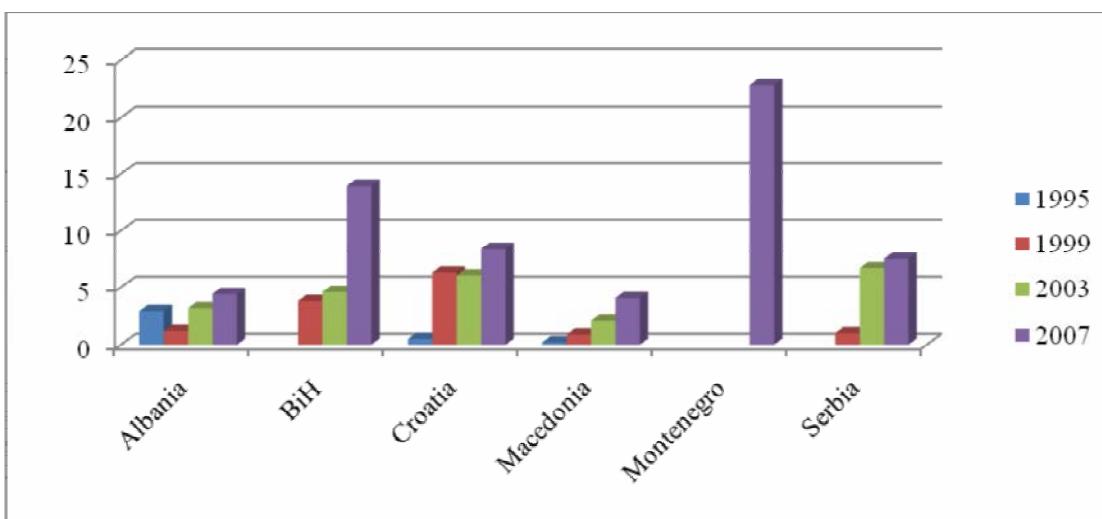
**Figure 1. Foreign capital inflows in five Western Balkan countries (except Montenegro).**



Source: WDI, World Bank; IFS, IMF and authors' estimations.

Note: Other investments/GDP – data available only for four countries (Albania, BiH, Croatia and FRY Macedonia). There is no data available for Portfolio Investments for these countries.

**Figure 2. Foreign Direct Investments (as % of GDP), six Western Balkan countries, 1995-2007.**



Source: WDI, World Bank.

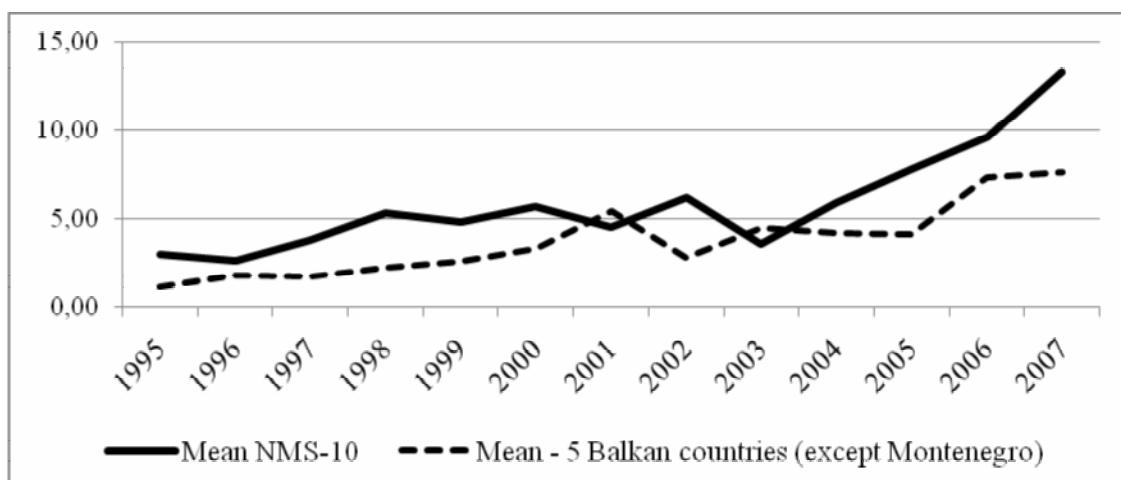
<sup>7</sup> Other investment liabilities include all financial transactions not covered in direct investment, portfolio investment, financial derivatives, or reserve assets. Major categories are transactions in currency and deposits, loans, and trade credits.

FDI, which were almost non-existent at the beginning of the period, have grown almost constantly to achieve in average 8% of GDP, and in 2004 even surpassed the ODA inflows. This fact is very important since the reliance on FDI is much more preferable to dependence on official aid flows since FDI inflows are more likely than other forms of capital flows to translate into increases in domestic investment and therefore boost economic growth and development.

Figure 2 illustrates the evolution of FDI by country. It shows that all countries of the region have experienced increases of FDI as percentage of GDP; however, the increase in FDI/GDP ratio was not equal among countries. If we do not take into account data for Montenegro, the highest increase in FDI/GDP ratio has been observed for BiH (from 4,5% in 2003 to 14% in 2007). Slight increases in FDI inflows were observed in Albania (3,2% in 2003; 4,4% in 2007), in Croatia (0,5% in 1995%, 6% in 2003; 8,4% in 2007), in FYR of Macedonia (2% in 2003; 4% in 2007) and in Serbia (1% in 1999; 6,7% in 2003; 7,5% in 2007). As for Montenegro, the data are available only for two years (22,9% in 2006; 22,7% in 2007), since this country has become independent only few years ago.

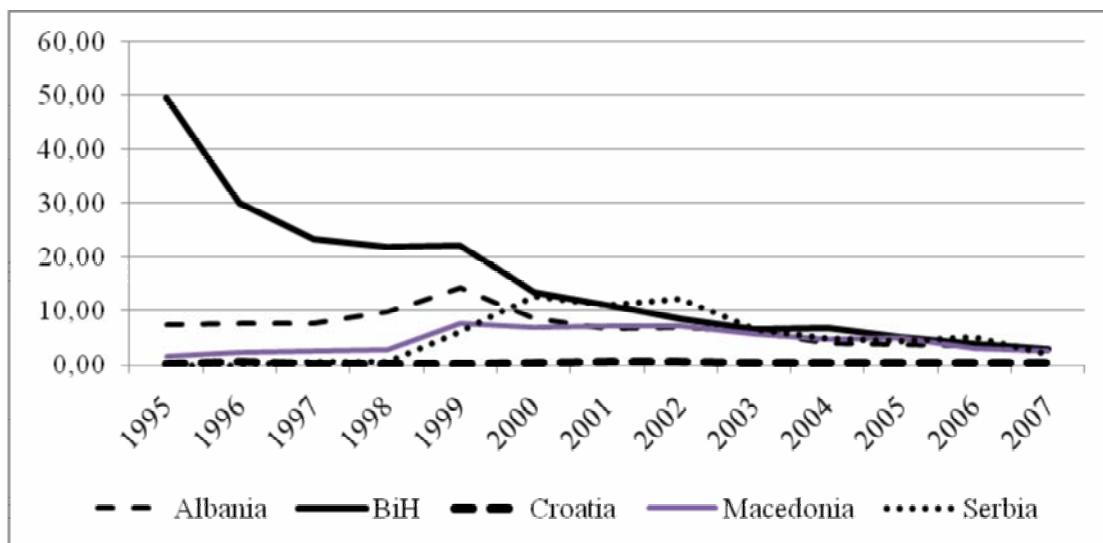
If we compare FDI received by five Western Balkan countries to those received by the New Member States of the EU (NMS-10) at the same period of time, we can see that in average the NMS-10 had attracted more FDI than Western Balkan countries (see Figure 3). However, the difference can be explained by the political instability in the Balkan countries in 1990s and, on the other hand, by the accession of the NMS-10 into the EU in 2004 and 2007. Yet, in 2001 and 2003 the ratios of FDI to GDP were almost at the same level in both groups of countries.

**Figure 3. Foreign Direct Investments (as % of GDP), NMS-10 and five Western Balkan Countries, 1995-2007.**



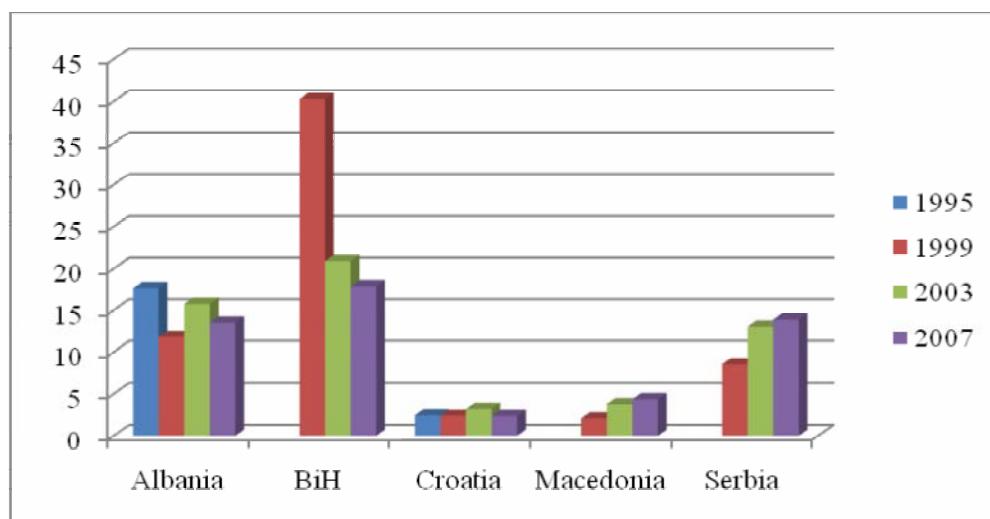
Source: WDI, World Bank.

Figure 4 points out that during 1990s BiH was the principal receiver of ODA in the region (49,5% in 1995; 30% in 1996; 20,6% in average between 1998 and 2000), while, in other countries of the region, ODA has represented in average between 5% and 7% of GDP (Serbia – 6%; FYR of Macedonia – 4,6%; Albania – 6,8%), except Croatia, where ODA represented in average less than 1% of GDP (according to WDI data).

**Figure 4. Official Development Assistance (ODA), five Western Balkan countries, 1995-2007.**

Source: WDI, World Bank and authors' estimations.

Figure 5 (below) represents the evolution of the ratio “workers’ remittances to GDP”. It shows that some countries of the region (namely Albania, BiH, and, to some extent, Serbia) are highly dependent on migrant remittances. In Albania, remittances has represented 15% of GDP in 1995 and still represented 13,5% of GDP in 2007. In BiH remittances were almost 50% of GDP in 1998, 40% of GDP in 1999; 17,9% of GDP in 2007. At the same time, even these two countries are still highly dependent on immigrants’ money transfers, we can observe a slight decline of remittance inflows in Albania and an important decrease of this type of flows in BiH. While in Serbia and FRY of Macedonia remittances flows has grown from 2,1% in 1999 to 4,5% in 2007 in FYR of Macedonia and from 8,5% in 1999 to 13,9% in 2007 in Serbia.

**Figure 5. Remittances flows, five Western Balkan countries, 1995, 1999, 2003 and 2007.**

Source: WDI, World Bank.

## 5. Conclusion

Since the composition of capital inflows can have an important influence on the benefits of financial integration, in order to “successfully” integrate the EU financial market, Western Balkan countries should chose a cautious attitude towards capital account liberalization, which takes into account the countries’ starting conditions and adjusts the liberalization strategy to macroeconomic development. It is preferably to liberalize Foreign Direct Investment (FDI) before financial flows, inflows before outflows, and long-term flows before short-term flows.

The composition of foreign capital inflows in Western Balkan countries has shown that some of these countries are highly dependent on remittances flows. Even if these flows are considered to be long-term in nature and counter-cyclical, they usually do not used for boosting domestic investment and simply used for consumption. Moreover, due to the economic slowdown in the United States, in the EU and in other developed countries, remittances flows has decrease dramatically over 2008 and 2009 and will, probably, continue to decline. Therefore, countries that are highly dependent on remittances could face some problems since the one of the major component of their income is vanishing.

On the other hand, we have seen that FDI flows were growing in all Western Balkan countries and have even surpassed the ODA flows, which can positively affect economic growth and development in these countries. However, the decline in FDI flows was also observed at the worldwide level but we do not have data for 2008 and 2009 for FDI inflows in Western Balkan countries to make any conclusion concerning the evolution of these flows. Moreover, countries should further encourage competition and intensify regional co-operation on trade in order to attract more and better foreign direct investment (i.e. Greenfield investments) since today most of FDI inflows continue to depend heavily on privatization.

## References

1. Agénor, P-R. 2001. “Benefits and Costs of International Financial Integration: Theory and Facts.” *World Bank, Policy Research Working Paper No. 2699*.
2. Berthomieu, C., Ri, A., Suleymenova, K., Syssoyeva-Masson, I. (2009), “Impacts of world economic crisis on financial sector stability and economic security of countries”, Paper presented at the II Astana Economic Forum (Kazakhstan), March 12, 2009.
3. Berthomieu, C., Briquet-Laugier, J-C, Syssoyeva-Masson, I. (2008), “Financial Sector Restructuring and Integration of Western Balkan Countries in the European Financial System”, *Financial Systems Integration of Balkan Countries in the European Financial System*, Ed. C. Berthomieu, S. Redžepagić, Institute of Economic Sciences, Belgrade, 2008.
4. Bhagwati, J. 1998. “The Capital Myth. The Difference Between Trade in Widgets and Dollars.” *Foreign Affairs*, Vol. 7, no.3, pp. 7-12.
5. Dieterich, C. (2007), “Policy Options for Managing Foreign Exchange Inflows: Lessons for Georgia from International Experiences,” IMF and the National Bank of the Republic of Kazakhstan Regional Conference on "Managing Strong Foreign Exchange Inflows in the Southern Caucasus and Central Asian Countries", <http://www.imf.org>.
6. Eichengreen, B. 2001. “Capital Liberalization: What Do Cross-Country Studies Tell Us?” *The World Bank Economic Review*, Vol 15, No. 3, pp. 341-365.
7. Feldstein, M., Horioka, C. 1980. “Domestic Savings and International Capital Flows.” *The Economic Journal*, Vol. 90, No. 358, June 1980, pp. 314-330.
8. Fischer, S. 1998. “Capital Account Liberalization and the Role of the IMF,” in “Should the IMF Pursue Capital Account Convertibility?” *Essays in International Finance, Department of Economics*. Princeton University, Vol. 207, pp. 1-10.
9. Henri, P.B. 2000. “Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices.” *Journal of Finance*, Vol 55 (April), pp. 52-64.

10. Klein, M., Olivei, G. 1999. "Capital Account Liberalization, Financial Depth, and Economic Growth." *NBER Working Paper* No. 7384.
11. Kose, M.A., Prasad, E.S., Rogoff, K., Wei, S-J. 2006. "Financial Globalization: A Reappraisal." *IMF Working Paper*. WP/06/189.
12. Levine, R. 1997. "Financial Development and Economic Growth: Views and Agenda." *Journal of Economic Literature*, Vol. 35, No. 2, p. 688–725.
13. Levine, R. 2005. "Finance and Growth: Theory and Evidence." <http://www.econ.brown.edu>.
14. Obstfeld, M., Rogoff, K. 1998. Foundations of International Macroeconomics. Cambridge, Massachusetts: MIT Press.
15. Prasad, E.S., Rogoff, K., Wei, S-J., Kose, M.A. 2003. "Effects of Financial Globalization on Developing Countries: Some Empirical Evidence." International Monetary Fund (FMI). March 17, 2003.
16. Rajan, R., Subramanian, A. (2005), "What Undermines Aid's Impact on Growth?" *IMF Working Paper No. 05/126*, International Monetary Fund.
17. Ratha, D. (2003), "Workers' Remittances: An Important and Stable Source of External Development Finance", *Global Development Finance 2003*, World Bank, <http://web.worldbank.org/>.
18. Rodrik, D. 1998. "Who Needs Capital-Account Convertibility? » <http://ksghome.harvard.edu>.
19. Stiglitz, J. 2002. Globalization and Its Discontents. New York: W.W. Norton and Company.
20. Summers, L.H. 2000. "International Financial Crises: Causes, Prevention, and Cures." *American Economic Review*, Vol. 90, No. 2, pp. 1-16.
21. Syssoyeva (Masson), I. 2008. "Capital Account Liberalization in the New Member States of the European Union and Financial Integration in the Enlarged Europe." Presented at the 1<sup>st</sup> Doctoral Meeting of Montpellier (D.M.M.), February 27<sup>th</sup>-29<sup>th</sup>, 2008, Montpellier, France, (unpublished).
22. Wei, S-J. 2006. "Connecting two views on financial globalization: Can we make further progress?" *Journal of Japanese and International Economies*, 20 (2006), pp. 459–481.
23. World Bank (2000), "The Benefits and Risks of Short-Term Borrowing", *Global Development Finance*, Vol. 1, Chapter 4, pp.77-95.

## CHALLENGES IN BANKING SECTOR IN SERBIA UNDER CONDITIONS OF FINANCIAL CRISIS<sup>1</sup>

*Isidora Beraha, Grozdana Belopavlović<sup>2</sup>*

### Abstract

*Expansion of banking sector in Serbia, the result of regulatory reforms in financial system, has been followed by increased growth of capacities, productivity and profitability. Reduction in the number of banks, strengthening of the capital base and more efficient methods of management are the main characteristics of domestic banking during the past few years. Banking sector in Serbia encountered effects of the world economic crisis which was followed by the increase in bank interest rates, all increasing difference among interest rates at which banks launched their resources and referential interest rates of the European central banks, as well as crisis in trust of the citizens in the banking sector. Reduction of domestic savings on one hand and limited and expensive sources of financing in the world on the other resulted in narrower scope of business activities and increase in prices of banking services in Serbia. In order to bring about stabilization in banking sector in Serbia, the National Bank of Serbia and the Government took over a set of measures directed mainly towards perseverance of the level of the loan activities, increase in savings and attracting foreign investments.*

*Key words:* *Banking Sector, Capacity, Bank Profitability, World Economic Crisis*

### 1. Structural characteristics of banking sector in Serbia

Modernization of domestic banking sector during the past few years is the result of regulatory reforms in financial system in Serbia. Foreign investors entered domestic bank market thus causing radical changes and leading to expansion of domestic banking. Reduction in the number of banks, strengthening of capital base and more efficient methods of management are the basic characteristics of the national banking system and direct consequence of foreign investments. National banking sector has experienced complete transformation followed by increased growth in capacities, productivity and profitability. Extremely huge growth rates refer to dynamic development of banking sector. However, final conclusions can be drawn after comparisons with neighboring countries and the EU countries.

Period of transformation of the bank system in Serbia is characterized by enlargement and consolidation of banks. Number of banks is one of the very significant indicators of the capacity of banking sector.<sup>3</sup> According to the data of the National Bank of Serbia, if compared with the year 2003

<sup>1</sup> This chapter is a part of a research project No. 159004, financed by the Ministry of Science and Technological Development of the Republic of Serbia, named: "The Integration of Serbian Economy into the EU - Planning and Financing of Regional and Rural Development and Enterprise Development Policy" and a part of a survey within a research project called "Integration of Financial Services Sector of the Balkan Countries into European Financial System." as part of interstate programme of co-operation of „Pavle Savić" between the Institute of Economic Science from Belgrade and the University of Nice - Sophia Antipolis from Nice, France.

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<sup>3</sup> European Central Bank (ECB) states the following key indicators of the capacity of banking sector: number of credit institutions, number of citizens per credit institution, number of citizens per a branch and ATM, and assets per an employee. ECB (2008), *EU Banking Structures*, p. 14

when there were 47 banks in operation, the last quarter of the year 2008 notes 34 banks. Reduction in the number of credit institutions, as the result of reforms that were taken in financial sector, was followed by spreading of their organizational network. The number of business units, affiliations, branch offices, counters, agencies and exchange offices in the last quarter of the previous year was 2.711, which indicates spreading of banks' organizational network.

Significant indicator which shows how developed banking sector is, according to the European Central Bank methodology, is represented by the number of citizens per a credit institution and affiliation. Following up stipulated indicators in time and comparing them with other countries, it is possible to evaluate development of the capacities of banking sector of the observed country. According to the data provided by the ECB in 2007, in the EU27 countries there were 59.401 citizens per a credit institution and in MU13 countries this number amounted 52.098.<sup>4</sup> In the same year, in our country there were 210.6 thousand citizens per a bank, which indicates significant drawbacks in terms of domestic banking sector capacities in comparison with developed countries. Another indicator of the capacity, the number of citizens per an affiliation, in the same year, led to almost similar conclusions. Although the number of citizens per an affiliation is reducing year in, year out, due to the increase in the number of affiliations, Serbia suffers drawbacks in comparison with developed countries. Stipulated indicators of development of the banking system in 2007 in Serbia amounted 3.027, while in the EU27 and MU13 countries it was 2.123 and 1.735 respectively.

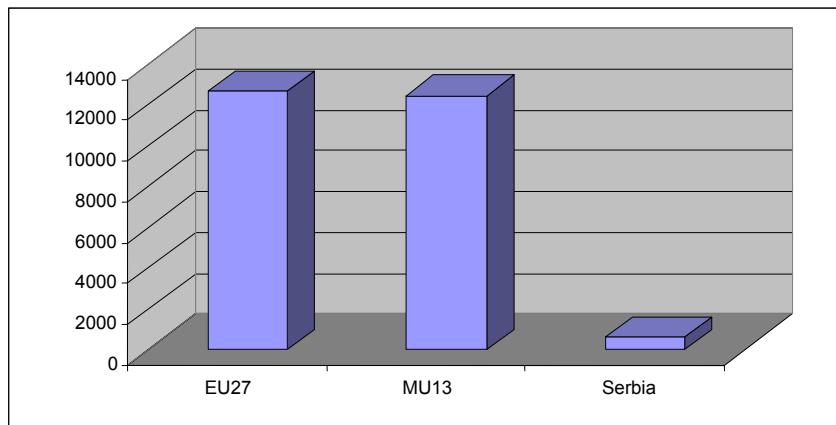
Reduction in the number of banks, as main financial institutions and faster growth of the affiliation network, was followed by the increase in employment in banking sector. Domestic banks reform meant constant growth in the number of people employed with the banks. Data provided by the National bank of Serbia indicate that the trend of growth was continued in 2008 when there were 32.342 people employed in the banking sector in Serbia.

Development of domestic banking and its position in comparison with the developed countries can be estimated according to the balance sum per an employee in banking. Assets per an employee is the basic indicator of the capacity of the banking sector and, according to the ECB methodology, it is expressed as the ration between balance sum in Euro and the total number of employees in banking. Tendency of growth of the observed indicator in domestic banking in 2003 shows increase in capacities and development of financial intermediation of domestic banks. In 2007 assets per an employee in Serbia amounted to 651.7 thousand Euro. Although growth is evident year in year out, banking sector in Serbia, according to the key indicator of capacity, shows considerable drawback in comparison with the EU27 and MU13 countries. According to the data provided by the ECB and the NBS for the year 2007, it is evident that Serbia has a considerably less assets per an employee in comparison with the developed countries, even 19 times lesser (*graph 1*).

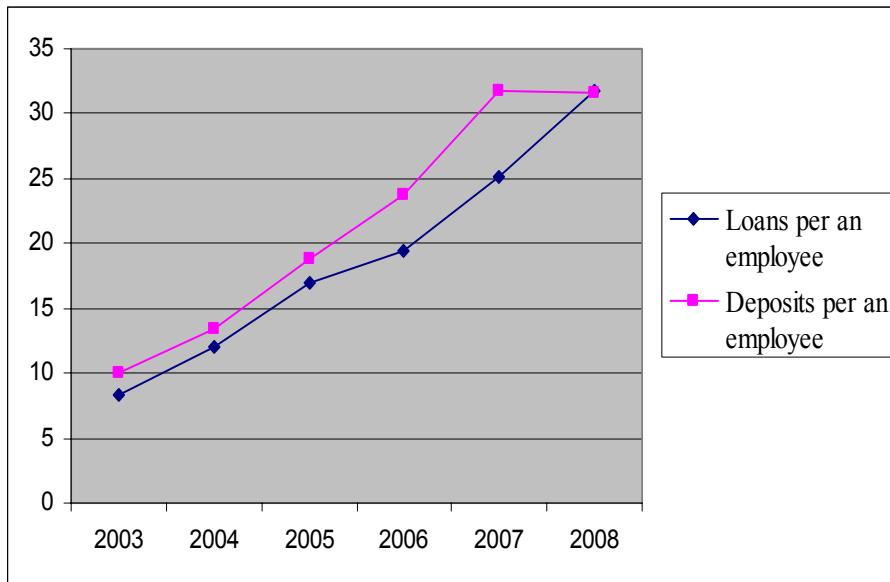
Along with the changes in terms of capacity, banking sector in Serbia went through the change in ownership structure. General feature of the domestic banking in the previous period is the domination of banks in which major owners are foreign shareholders. According to the report made by the NBS, 20 out of 34 banks which were doing business at the end of 2008 were mainly foreign banks, 6 out of 34 were the ownership of domestic natural and legal entities and 8 out of 34 whose majority owner was the Republic of Serbia. Foreign shareholders dominate not only in the number of banks in which they are majority owners but in assets they manage. In the total balance sum of the banking sector on December 31, 2008, 75.3% refers to banks with dominant foreign ownership.<sup>5</sup> Having entered domestic banking market, foreign investors made access to the world financial markets easier through their parent foreign banks.

<sup>4</sup> EU27 stands for 27 countries which are members of the EU, MU13 stands for Monetary Union – 13 countries participating in the euro area.

<sup>5</sup> Banks with major ownership of the Republic of Serbia refer to 16% of the total balance sum of the banking sector, while banks with mostly private ownership refer to 8.7%. Source: National Bank of Serbia.

**Graph 1. Assets per an employee in 2007 (in 000 EUR)**

How developed banking sector of one country is can be estimated according to different indicators of productivity. The National Bank of Serbia, in its quarterly reports on business operations of the banking sector, stipulates balance sum per an employee as an indicator of productivity, as well as total income per an employee, operating expenditures per an employee, loans per an employee and deposits per an employee.

**Graph 2. Deposits and loans per an employee in banks in Serbia (in mill dinars)**

Graph 2 shows that productivity of the domestic banking sector, observed through loans and deposits per an employee, has a growing tendency. According to the report by the NBS, loans per an employee in 2008 increased 3.8 times in comparison with the year 2003 which undoubtedly leads to the conclusion that productivity of the domestic banks have increased. Similar tendency can be seen in deposits per an employee, where increase by 3.2 times is evident in 2008 if compared with the first year. Increase in previous indicators is the result of the increased deposit potentials and credit activities of banks in the whole period that was observed. Total deposit potential of banks in the last quarter of the last year, in comparison with the third quarter, indicates growth by 41.4 bill dinar, with the remark that citizens' deposits were decreased while bank deposits were increased.

## 2. Profitability of banking sector in Serbia

Profitability of the banking sector in Serbia, observed through absolute amount of the achieved financial result, increased in the period 2005 – 2008. Domestic banks balances show that sector profit at the end of the year 2008 if compared to year 2005 increased 4.78 times (*Table 1*).<sup>6</sup>

**Table 1. Achieved financial results of banks in Serbia (in bill din)**

	31/12/2005	31/12/2006	31/12/2007	31/12/2008
Financial result	7,3	16,5	23,5	34,9

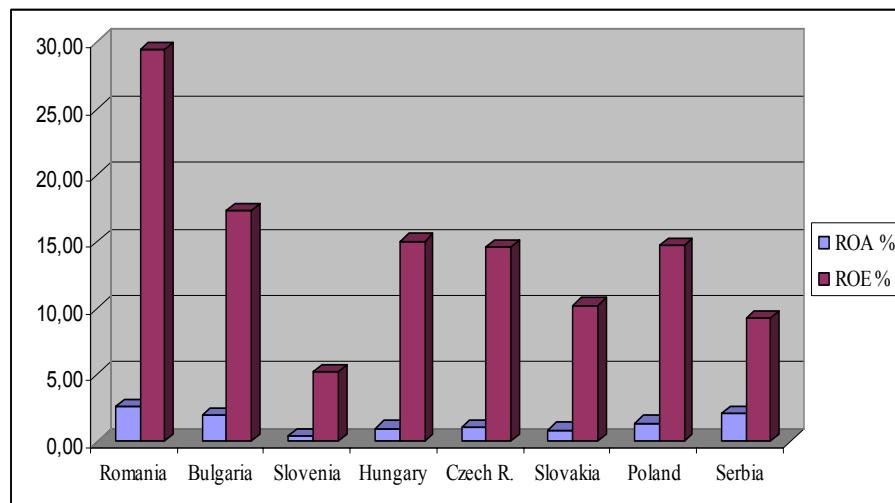
The level of the achieved sector profit represents very significant information in estimation of profitability. However, bigger informative value in estimation of banking sector profitability has the amount of the achieved profit in relation to the average state of assets and ownership capital. Return on assets gives information whether the bank was well managed, that is whether assets were usefully and effectively engaged. Return on equity measures how successful business operations are thorough information on how high gain the bank achieves using assets invested by the owner. Fluctuation of ROA and ROE indicators of profitability of banks in Serbia for the period 2005 – 2008 was given in the *table 2*.

**Table 2. ROA and ROE indicators of profitability of banks in Serbia**

	2005	2006	2007	2008
ROA (%)	1,13	1,7	1,7	2,08
ROE (%)	6,46	9,67	8,54	9,28

Return on assets shows tendency of growth in the observed period and undoubtedly proves fast growth of the sector profitability. Decrease of ROE indicator in 2007 is the consequence of lower multiplier of the capital in that year compared to the previous one – according to the data provided by the NBS, the ratio of the average assets and capital in 2007 amounted to 6.54 and in 2006 to 7.46.

**Graph 3. ROA and ROE banking sector profitability in 2008 (%)**



<sup>6</sup> [www.nbs.co.yu](http://www.nbs.co.yu).

Although ROA and ROE indicators indicate growth of profitability in banking sector in Serbia, the final evaluation of the sector profitability can be done in comparison with neighboring countries. *Graph 3* shows values of the key indicators of profitability in Serbia and countries in transition which are members of the EU.<sup>7</sup>

All observed countries members of the EU, except for Romania, in the year 2008 had lower ROA indicator of profitability than Serbia. Even though domestic banking sector has high values of ROA indicator, evaluation of sector's profitability and development of domestic banking can be given according to information on the level of return on equity. ROE indicator in Serbia in 2008 was 9.28% while in all observed countries of the EU, apart from Slovenia, that indicator was above 10%. The biggest profitability is noted in Romania where ROE indicator totals 29.49%. Return on equity depends directly on the level of capital multiplier – even the countries with low ROA indicator can achieve high ROE profitability if they achieve high leverage, that is the ratio between assets and equity.

### 3. The effects of the world financial crisis on banking sector in Serbia

World economy has faced the most severe recession since World War II, which took over character of a global crisis, being a consequence of the process of globalization. Having started at the American mortgage market at the end of the year 2007, financial crises spread quickly throughout the world, affecting not only financial but real sphere as well in most countries.

Global recession has shaken economies of the most developed countries in the world. They encountered slow economic development and reduction in gross domestic product, while already vulnerable countries in transition faced great challenges, having in mind that capital inflow from global financial market was one of the main sources of economic development. Contrary to developed countries, countries in transition suffered indirect effects of the world economic crisis which entail low liquidity, difficulties in building up and reforming financial institutions, as well as slow economic growth. Under the condition of reduced inflow of financial means from abroad through loans granted by commercial banks, countries in transition are forced to take money from international financial institutions, first of all from IMF, EBRD and European Investment Bank.

In a great deal Serbia shares destiny of other countries of the Western Balkans. The problem lies in the fact that relatively stable growth rates achieved in Serbia during the past few years are due to inflow of foreign capital through foreign direct investments, privatization, taking loans at commercial banks and spending imported goods. Having in mind that the process of privatization in Serbia has almost been finished, significant income based on that cannot be expected. Also, most developed European countries introduced the policy of financial protectionism. Government of the Republic of Serbia was forced to find alternative financial sources. As a result, loan arrangements with IMF have been renewed as well as with other financial institutions.

Inflow of a significant amount of financial means in Serbia would ease off effects of the world economic crisis on country's economy. IMF allowed Serbia a stand-by arrangement in the amount of 2.94 bill Euro until April 2011, providing a possibility to withdraw 2/3 of the granted amount in 2009 and the rest of the amount during 2010. Apart from that, inflow of financial means has been expected from the European Investment Bank in the amount of 250 mill Euro as a support to small and medium enterprises, then 338 mill Euro from the World Bank for Corridor 10, as well as 120 mil Euro as a support to projects of local self-government and education and 100 mill Euro as a support to budget from the European Union. On the other hand, additional borrowing would increase foreign debt of the country which already amounts 6.6 bill Euro.

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<sup>7</sup> ECB, (2009), *EU Banking Sector Stability*, p. 45 -47., and National Bank of Serbia.

Effects of the world financial crisis on financial sector in Serbia were first evident on the stock exchange. In comparison with stock exchanges in the region, indices of Belgrade Stock Exchange fell greatly (BELEX line 68.72% and BELEX 15 75.62%). Uncertainty among investors and withdrawal of foreign capital caused low liquidity of the capital market and considerably marked up activities on Belgrade Stock Exchange.

First effects of the world economic crisis in banking sector in Serbia were evident through increase in interest rates, ever increasing difference among interest rates by which banks granted their means and referential interest rates of the European central banks, as well as crisis in trust by the citizens in banking sector. As a result of the limited access to free capital, loan taking and re-financing has become more expensive.

Money deficiency and the increase in referential interest rate of ECB caused increase of interbank interest rate of Euribor by 1 per cent point from March till October 2008. In the period from October 2008 till April 2009 Euribor was reduced from 5.5% to 1.8%, which in the countries in transition, thus in Serbia as well, has not caused the expected reduction in active bank interest rates, due to an increased risk in investments.

Having in mind the role and the importance of the banking sector in financial system of Serbia, the National Bank of Serbia and the Government took over a set of measures in order to ease off effects of the world economic crisis, as well as to prepare banking sector to face a huge number of external challenges. One of the major challenges is the provision of the increased inflow of foreign capital and perseverance of the existing scope of the granted loans.

As a result of the effort of Serbian government and IMF to preserve macro-economic and financial stability, the so-called Vienna initiative was created, according to which signatory banks are obliged not to reduce loan making till the end of 2010 and to keep liquidity indicators and adequacy of capital at the prescribed level. In return, NBS offers a whole range of advantages to banks such as: short-term dinar loans for perseverance of liquidity up to one year, swop buying and selling of foreign currencies between the National Bank of Serbia and business banks (new borrowings do not require mandatory reserve till the end of 2010) as well as the possibility of involvement of subordinated obligations in regulatory capital up to 75% of the capital.

Adequacy of capital (capital in relation to assets quality of the bank) in Serbia amounts 28.1% which is significantly above the value which this indicator has in the neighboring countries. Such structure of the capital and high level of mandatory reserves for new foreign currency savings (40%) are the indicators of security which are ensured to the depositors in Serbia.

In October 2008, having feared for their money with lessons learned during the 90s when savings were trapped in pyramidal and some state banks, citizens started to withdraw their savings from the banks. Scenario in which citizens keep their savings at home or in safe deposit boxes has become real again. Crisis in trust has been considered as one of the very dangerous effects of the world economic crisis in Serbia, especially having in mind difficulties that accompanied the process of regaining trust of the citizens in banking sector after unpleasant experience of the 90s. Mass withdrawals of the deposits, which are estimated to approx. one bill euro, endangered the main source of loan making in Serbia. Reduction in domestic savings on one hand and limited and expensive sources of financing in the world on the other, has resulted in reduced scope of business activities of the banks and increased prices of banking services in Serbia.

At the beginning of the year 2009 banking sector in Serbia faced great challenge so as to regain trust of citizens and stimulate increase in domestic savings. Measures taken by the Central bank and the Government of the Republic of Serbia have meant huge steps towards stabilization of the banking sector. By the suggestion of the European Commission, the amount of ensured deposit has increased

from 3000 to 50 000 Euro, which yet in January this year encouraged citizens to deposit 34 mill Euro on their savings accounts.

Trust in banking system has been regained as the result of measures taken over by the Central bank, the Government and business banks. In order to increase domestic savings from January 1, 2009 income from the interest on foreign currency savings are temporarily exempt from tax, and from 2010 it is planned to start calculating this tax but in the amount of 10% instead 20% as it was before. Tax on capital gain was also temporarily abolished as well as the tax on transfer of absolute rights in securities. Tax on capital gain (20%) is paid on the difference between buying and selling of shares, while the tax on transfer of absolute rights is calculated when shares are sold (0.35%)

In order to ease off situation in which business banks found themselves, under the circumstances of limited access to finances on the world financial market, the Central bank decided not to calculate mandatory reserves on means taken abroad as of October 1, as well as to change structure of depositing mandatory foreign currency reserves.

In order to keep loan making activities, Serbian government adopted a set of measures which should help companies to get more favorable loans with the subvention of the state for liquidity and investments, as well as citizens to get cheaper consumers' loans for domestic commodity goods.

Banking sector in Serbia encounters challenges of stimulating savings. Each dinar and each Euro deposited with the bank is of a great importance. The scope of new loans and the scope of new savings are in a direct co-relation. Encouraging are the results which show that citizens bring back their deposits to banks and that the crisis in trust in banking sector has been diminishing. Savings by the Serbian citizens currently amount to 4.8 bill Euro. Interest rates on foreign currency deposits are considerably high and surpass 9% per annum, which on the other hand influence increase of interest rates on loans indexed in Euro. Dinar savings accounts are negligible in comparison with those in Euro currency, which is caused by very high referential interest rate of the National Bank, as well as by perception of the citizens about the stability of the national currency. Stability of dinar in a longer period of time would contribute to greater increase in domestic currency savings accounts.

#### **4. Conclusion**

It is generally believed that Serbia was more ready to encounter effects of the world economic crisis in comparison with other countries from the region, mainly due to restrictive monetary policy led by the National Bank of Serbia, with lessons learnt in the 90s, as well as due to preserving high levels of foreign currency reserves.

Government measures to further ease-off of the effects of the financial crisis have to be first of all directed towards increase of state income in the domain of fiscal policy and resolution of issues of over-indebtedness in the domain of monetary policy. Regular servicing of debt based on taken loans would be a kind of challenge for Serbian economy, having in mind new borrowing at IMF. Increase of liquidity of economy, perseverance of dinar stability and inflation within the planned framework would remain a priority goal of the economic policy.

Influence of the world economic crisis from financial to real sector in Serbia caused increase in capital outflow, deficiency in foreign investments and unavailability of financial resources. Capital deficiency caused increase in its value which would have negative effects on the scope of production and consequently slow down economic growth. Government of the Republic of Serbia has all but an easy task to achieve positive rate of economic growth, attracting foreign and domestic investments, stimulating exports, increasing production and employment, as well as strengthening private sector and SME sector.

Banking sector has been ready to encounter effects of the world economic crisis, although more could have been done in reducing panic spreading on the market. NBS and the Government showed responsibility and maturity and prevented with their measures realization of the most dangerous scenario for both banking sector and Serbian economy in general.

There are analyses which show that the world economic crisis reached its peak and that the world economies have already started to recover. In order to strengthen banking sector in Serbia, apart from providing liquidity, protecting savings and deposits and strengthening bank balances, the main challenge would be to regain trust in banking sector.

## References

1. European Central Bank, 2009., *EU Banking Sector Stability*
2. European Central Bank, 2008., *EU Banking Structures*
3. Mishkin, F., 2006., *The Economics of Money, Banking, and Financial Markets*, Data status, Belgrade
4. National Bank of Serbia, 2009., *Banking supervision*, Fourth Quarter Report 2008, Belgrade
5. National Bank of Serbia, 2009., *Financial stability report*, Belgrade
6. Rose, P., Hudgins, S., 2005., *Bank Management and Financial Services*, Data status, Belgrade
7. Vuković, V., 2008., *Structural Characteristics and Profitability of Banking in Selected Transition Economics*, International Scientific Conference: Challenges of Economic Sciences in the 21 century, Institute of Economic Sciences, Belgrade
8. [www.nbs.yu](http://www.nbs.yu)

# Chapter 9.

## SECURITIES CLEARING AND SETTLEMENT IN SERBIA ACCORDING TO RECOMMENDATIONS OF ECB-CESR<sup>1</sup>

*Aleksandra Bradić-Martinović<sup>2</sup>, Saša Stefanović<sup>3</sup>*

### Abstract

*The aim of this paper is to, through analysis of the clearing and settlement system within the securities market and operating of the Central Securities Depository and Clearing House-a joint-stock company, Belgrade (ser. Centralni registar, depo i kliring hartija od vrednosti a.d. Beograd, hereinafter referred to as CSD), determine by comparison, the extent to which established rules and processes are harmonized with the EU regulations. Harmonization of the legal framework based on which the CSDs function, is one of the primary goals in the segment of business regulation at financial markets that the European Union pursues within its organizations. In this respect, in May 2009 The Governing Council of the European Central Bank (ECB) and The Committee of European Securities Regulators (CESR) issued an official document entitled Recommendations for Securities Settlement Systems (Ref. CESR/09-446) containing recommendations which seek to improve competitiveness, safety and soundness of pan-European post trading arrangements, that should ultimately lead to greater confidence in securities markets and better investor protection by reducing systemic risk. Following completion of the comparative analysis of law regulations, business techniques, data protection and all the relevant parameters in work of the CSD, it was established that there is a very high degree of harmonization with the corresponding recommendations from the CESR/09-446 document, and thus, when it comes to this segment, we can conclude that the Republic of Serbia may very swiftly, and without major additional harmonization, become a part of the integral EU financial market.*

*Key words:* *Securities, Clearing, Settlement, Regulation, European Union*

### Introduction

Unlike many EU countries, which continually function according to the principles of the free financial market, the Republic of Serbia had its financial market renewed only twenty years ago. Due to a considerable delay in development, it slowly endeavors to join global and European standards, aware of the fact that they have already become an integral part of financial systems of those countries. Moreover, it has become evident that there are also important morals to be drawn from the global crisis of confidence: *regulatory approach beats deregulation*.

The harmonization of law regulations regarding the securities trading represents one of the major challenges not only for the Republic of Serbia, but for all the countries of the South Eastern Europe as

<sup>1</sup> This chapter is a part of a research project No. 159004, financed by the Ministry of Science and Technological Development of the Republic of Serbia, named: “The Integration of Serbian Economy into the EU - Planning and Financing of Regional and Rural Development and Enterprise Development Policy” and a part of a survey within a research project called “Integration of Financial Services Sector of the Balkan Countries into European Financial System.” as part of interstate programme of co-operation of „Pavle Savić” between the Institute of Economic Science from Belgrade and the University of Nice - Sophia Antipolis from Nice, France.

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well. This is precisely the reason why the work on consolidation of legal frameworks, which serve as a basis for the functioning of CSDs, constitutes one of the primary goals the European Union pursues within its organizations. In this respect, in May 2009 The Governing Council of the European Central Bank (ECB) and The Committee of European Securities Regulators (CESR) issued an official document entitled Recommendations for Securities Settlement Systems in European Union (Ref. CESR/09-446)<sup>4</sup> containing nineteen recommendations with the aim of improving competitiveness, safety and soundness of pan-European post trading arrangements, that should ultimately lead to greater confidence in securities markets and better investor protection by reducing systemic risk.

Our regulatory organs have an important task ahead of them - harmonization of the existent and adoption of new law regulations that correspond to the above-mentioned principles and standards. The Republic of Serbia has a certain privilege, since "it gets a codified set of best practices the developed European countries have to offer in the area of financial market regulation, from one single address. The adopted solutions are not only the role models that may be of use to us in the process of drafting new regulations, but represent as well a binding source of law, especially after the entry into force of the Stabilization and Association Agreement."<sup>5</sup>

If we take on the challenge and create a proactive approach of a regulator, as well as of market operator, and thereafter ensure a solid legal framework providing equally for powers, obligations and assents, along with the introduction of modern technical and technological solutions for mutual monitoring of participants, the unattainable goal may become reality in our financial market as well.

Within the scope of such a broad issue, the authors in this paper have focused on clearing and settlement harmonization as one of the key processes within the market activities.

## 1. Central Securities Depository and Clearing House Belgrade

Central Securities Depository and Clearing House (CSD) is the only institution in Republic of Serbia in the area of clearing and settlement until now and started its operations on November 19, 2001 at which time CSD's basic activity was the issuing of the FFC (Federal Foreign Currency) Bonds, the so-called blocked foreign currency savings.<sup>6</sup>

CSD was founded as an organizational part of the National bank of Serbia (NBS) and after the adoption of the Law on Securities and Other Financial Instruments<sup>7</sup>, transformation was carried out and as of December 10, 2003, CSD continued its work as an independent institution.

Today, CSD is a join-stockcompany carrying out the activities relating to unique records of legal holders securities and other financial instruments, and to the rights arising from such securities, and/or instruments, third parties' rights to securities and other financial instruments and of such third parties,

<sup>4</sup> The full title of the document is Recommendations for Securities Settlement Systems and Recommendation for Central counterparties in the European Union, and consists of two completely separate groups of recommendations. In this paper, authors have concentrated on analyzing the harmonization of the settlement systems, whereas harmonization of CCP will be the subject of the research papers to come.

<sup>5</sup> Zavišić, A. (2009): Towards a single EU financial market (U susret jedinstvenom finansijskom tržištu Evropske unije), *Banking, Association of Serbian Banks*, vol. 1-2.

<sup>6</sup> For purpose of a settlement of the public debt of the Federal Republic of Yugoslavia, which was turned into the public debts of the Republic of Serbia and the Republic of Montenegro, the state has, in compliance with the provisions of the Law on the Settlement of the public debt of the Federal Republic of Yugoslavia arising from the citizens' foreign exchange savings, been issuing bonds denominated in Euros. The bonds referred to above were issued as zero-coupon bonds for each successive year, in dematerialized form, and registered with the National Bank of Yugoslavia - the Clearing and Settlement Bureau - the Central Registry, Depository and Clearing of Securities. The State pledged to issue registered bonds that are transferable and payable either in Euros or dinars - according to a holder's request. ([www.nbs.yu/.../20/laws/settl\\_public\\_debt\\_fry\\_savings\\_2 00236.pdf](http://www.nbs.yu/.../20/laws/settl_public_debt_fry_savings_2 00236.pdf))

<sup>7</sup> Law on Securities and Other Financial Instruments ("Official Gazette of FRY", No. 65/2002 and "RS Official Gazette", No. 57/2003)

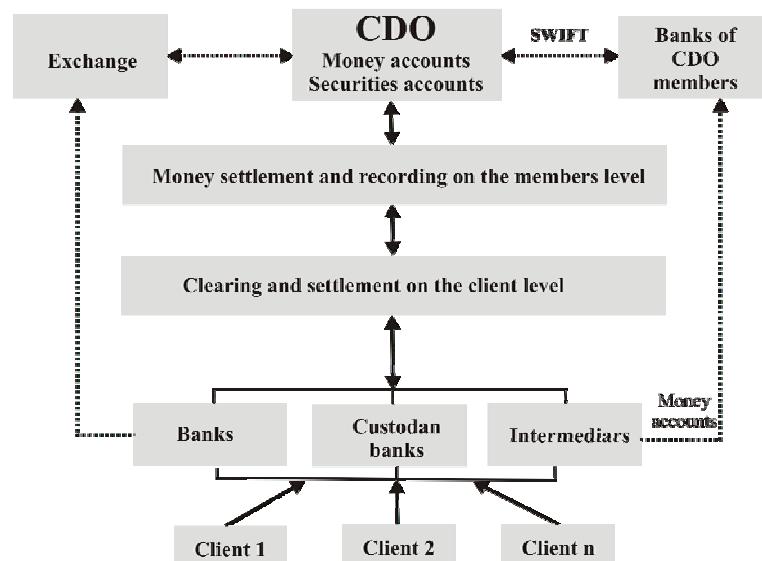
as well as the activities of clearing and settlement of cash payables and receivables arising from transactions in securities. CSD also performs other activities in accordance with the Law governing the securities and other financial instruments market, the Law governing the take-over of joint-stock companies, the Company Law, the Banking Law, the Law governing the operation of investment and pension funds, the Law governing the matter of privatization.<sup>8</sup>

Operations of the CSD include: maintaining the register of securities; maintaining the records of the securities in accounts of their respective issuers; maintaining the records of securities as well as of other accounts of CSD members and their clients; entry of third parties' rights to securities; keeping of materialized securities; maintaining cash accounts of CSD members; accounting for materialized securities in dematerialized form; performing the clearing and settlement of obligations and claims with securities and money on the basis of contracted deals in securities, and establishing the balance, obligations and claims of CSD members and their clients after the settlement of mutual obligations and claims within the term envisaged by CSD's Rules of Operation; performing the clearing and settlement of foreign securities traded in the Republic of Serbia; transferring the securities to the accounts of CSD members and legal holders of such securities; establishing and assigning the unique identification number of securities and other financial instruments; maintaining the list of codes of securities and other financial instruments; performing the activities in connection with corporate operations; calculating the tax payable on assignment of absolute rights to securities in accordance with the law governing the property tax issues; cooperation with international organizations dealing with registration, clearing and settlement of securities and money under the deals in securities; other operations in connection to securities. The following securities accounts are opened and maintained with CSD:

- (1) Securities accounts of CSD members;
- (2) Deposited securities accounts;
- (3) Issue accounts.

Members of the CSD may include: the Republic of Serbia, the National Bank of Serbia, broker-dealer companies, authorized banks, custody banks, banks, stock exchange and foreign legal entities performing the clearing and settlement of securities.<sup>9</sup>

**Figure 1. Clearing and settlement process in CSD a.d. Beograd**



Source: Dugalić, V., Štimac, M. (2006), *Osnove berzanskog poslovanja*, 2<sup>nd</sup> ed., Stubovi kulture, p. 85

<sup>8</sup> Operating rules of Central Securities Depository and Clearing House ([www.crhov.rs/.../english/operating\\_rules/operating\\_rules.pdf](http://www.crhov.rs/.../english/operating_rules/operating_rules.pdf))

<sup>9</sup> Statute of Central Securities Depository and Clearing House ([www.crhov.rs/pravnaregulativa/english/Statute.pdf](http://www.crhov.rs/pravnaregulativa/english/Statute.pdf))

Apart from performing registry-related services, the CSD is also a clearing house offering safe settlement of the concluded securities trade to all its members and their clients. Protection of all the investors investing their assets in securities is the main reason why CSD sees this business segment as an incentive for the introduction of latest international solutions in its daily work.

After the conclusion of transactions on the Stock Exchange, the CSD receives the transaction agreement based on which clearing and settling of the payables and receivables in securities and in cash is carried out. Clearing and settlement of the money side of transactions is carried out on the member level, on a net basis, whereas clearing and settlement of cash payables and receivables is carried out on the client level, on a gross basis. This is done so as to ensure that clearing members do not have to mobilize large sums of money in order to settle transactions in securities. Rather, the netting of all financial obligations and receivables for all the transactions (denominated in the same currency) settled on the same day is carried out on a clearing member level. The processes taking place within this system can be represented graphically as shown in the figure 1.

According to the Report for 2008<sup>10</sup>, the state of CSD can be showed in numbers:

- Registered over 255 issuers in the database of the Central Securities Depository (hereinafter: CSD);
- Posted over 665 issues in CSD database;
- Entered over 76 thousand new clients in CSD database;
- As at 31 December 2008, total number of shareholders was over 925 thousand;
- Total value of the securities registered with CSD exceeded the amount of EUR 26,6 billion;
- The value of the transactions realized on the Stock Exchange was worth more than EUR 870 million;
- The value of the transactions realized over-the-counter exceeded the value of EUR 796 million;
- The value of the transactions settled with treasury bills and notes was in primary sale over EUR 101 million, and over EUR 265 million in secondary sale;
- FOREX savings bonds of the Republic of Serbia for 2008 were paid when due in the amount of more than EUR 225 million;
- Removed from books 141 issuers due to the change in their legal form;
- Issued over 320 new, and renewed more than 600 smart cards to CSD service users.

As previously stated in the preface of this paper, the mode and manner of clearing and settlement activities in the Republic of Serbia market carried out within the CSD will be explained in detail through an analysis of harmonization with Recommendations for Securities Settlement Systems – ECB-CESR Document.

## 2. Process of harmonization in EU

The European Union has been endeavoring to form an integrated European financial market through maximum harmonization, that is, by establishing a centralized system of regulatory control that would be applied in every EU member state. Harmonization of regulations at the EU level is a precondition for the proper functioning of the internal market and when a country receives the status of a candidate, it must harmonize its laws and regulations with those of the EU, so as to be able to engage fully in the internal market once it becomes a full EU member.

Contemporary processes of globalization and internationalization of financial market, followed by large fluctuation in money and capital that knows no state borders, along with national restrictions, made the EU member states harmonize their law regulations in the field of global financial trading to supranational level, in conformity with the directives of the EU.

<sup>10</sup> Report for 2008, [www.crhov.rs/rezultatiposlovanja/REZIME\\_POSTIGNUTIH\\_REZULTATA\\_I\\_IZRSENIH\\_POSLOVA\\_za\\_2008\\_januar\\_decembar\\_eng.pdf](http://www.crhov.rs/rezultatiposlovanja/REZIME_POSTIGNUTIH_REZULTATA_I_IZRSENIH_POSLOVA_za_2008_januar_decembar_eng.pdf) (p. 2)

Primary legislation consists of all the founding agreements of the EU (*Treaties*), which at present act as the EU Constitution, whereas the secondary legislation consists of:

- (1) Regulations** – fully applicable in all member states, with a binding effect, and adopted by the Council and the Commission;
- (2) Directives** – binding for all member states in the spirit of the aim intended to be achieved with them, but the member states decide themselves on the manner and resources for transposing them into their national legislation, adopted by the Council or the Commission;
- (3) Decisions** – binding only for the ones addressed, since these are individual acts relating to a particular country, legal subject, individual, etc.
- (4) Recommendations and opinions** – not binding, but rather instruments for routine practice (conducts/address), are very important since they constitute a group of benchmarks in a certain area.

Creating a single financial services market is one of the main objectives of the EU, and to that effect, all the key segments of the system are covered by corresponding legal documentation, in accordance with the abovementioned levels of commitment. Clearing and settlement systems fall under a different scope.

Historically, countries (coinciding with currency area) developed their own “domestic” infrastructure for securities trading, clearing and settlement. For the Eurosystem, integration of the infrastructure means access for all users or providers. For instance, clearing and settlement costs and risks for traders in both national and other euro area/EU securities markets should be the same for the (final) investor.

*Efficient and safe securities clearing and settlement systems are essential for integrated capital markets.* The Eurosystem supports this process because it promotes the sound execution of monetary policy, the smooth functioning of payment system and the preservation of financial stability, and ultimately, increases economic growth potential.

The Eurosystem supports the integration process by: (1) contributing to the removal of obstacles to integration (by cooperating with both the private sector and public authorities); (2) setting standards for securities settlement systems – as users – for Eurosystem credit operations; (3) promoting the cross-border use of collateral; (4) enhancing the integration of the regulatory and oversight framework; and (5) promoting financial market integration, for example by evaluating opportunities to provide efficient settlement services for securities transactions in central bank money (TARGET2-Securities<sup>11</sup>).<sup>12</sup>

In 2001 the Governing Council of the European Central Bank (ECB) and the Committee of European Securities Regulators (CESR) agreed to work together in the field of securities clearing and settlement. In particular, they agreed to set up a Working Group composed of representatives of the ECB, the national central banks (NCBs) of the European Union (EU) and the securities commissions which are members of CESR. The preparations of this work was to a large extent based upon work conducted by the Committee on Payment and Settlement Systems (CPSS) of the central banks of the Group of Ten countries and the Technical Committee of the International Organization of Securities Commissions (IOSCO), notably their reports: Recommendations for Securities Settlement Systems (RSSS, November 2001), Assessment methodology for RSSSs (November 2002), and Recommendations for Central Counterparties (RCCPs, November 2004).

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<sup>11</sup> TARGET2 Securities is a project of the Eurosystem launched in 2006 aimed at creating a single IT platform for the settlement of securities in euro central bank money. The settlement platform would be operated by the European Central Bank (ECB) with the objective of reducing the cost of cross-border securities settlement within the euro area.

<sup>12</sup> ECB (2007), *Payment and securities settlement systems in the European Union: euro area countries*, p. 61

Most of the stakeholders in this area were of the opinion that finalization of the work by ESCB-CESR would be of *added value and complementary to other public and private sector initiatives in maintaining and improving safety and soundness in clearing and settlement.*

Group agreed to deepen and adapt to the European context some of the CPSS-IOSCO Recommendations with the following set of objectives: (a) to increase confidence in the EU markets by providing clear and effective Recommendations; (b) to foster the protection of investors and, in particular, retail investors; (c) to promote and sustain the integration, competitiveness and, where needed, harmonization of European securities markets by encouraging efficient structures and market-led responses to developments; (d) to ensure the efficient functioning of securities markets and the cost-effective clearing and settlement of their transactions; (e) to further limit and manage systemic risk and to enhance the safety, soundness and efficiency of CSDs and CCPs operations and (f) to provide a single set of Recommendations for CCPs, CSDs and other relevant securities service providers in the EU, applied in a consistent manner without the imposition of undue costs.<sup>13</sup>

The document<sup>14</sup> consists of nineteen recommendations about:

- (1) Legal framework,
- (2) Trade confirmation and settlement matching,
- (3) Settlement cycles and operating times,
- (4) Central counterparties (CCPs),
- (5) Securities lending,
- (6) Central securities depositories (CSDS),
- (7) Delivery versus Payment (DVP),
- (8) Timing of settlement finality,
- (9) CSD risk controls to address participants failures to settle,
- (10) Cash settlement assets,
- (11) Operational risk,
- (12) Protection of customers' securities,
- (13) Governance,
- (14) Access,
- (15) Efficiency,
- (16) Communication procedures, messaging standards and straight-through processing (STP),
- (17) Transparency,
- (18) Regulation, supervision and oversight, and
- (19) Risks in cross-system links or interoperable systems.

### 3. Harmonization of the CSD with the ECB-CESR Recommendations

If we follow the recommendations of the EU in order as they appear in the Document CESR/09-446, and analyze the current situation in the CSD<sup>15</sup>, we shall be able to determine the level of compliance of clearing and settlement system in the Republic of Serbia with systems functioning within the EU.<sup>16</sup>

Laws, regulations and procedures related to the Securities Settlement system are clearly defined, public and well-founded for all the users. The basic document on which the work of CSD relies upon are the *Operating Rules of the CSD*,<sup>17</sup> along with the Law on the share fund, Law on foreign exchange

<sup>13</sup> ECB-CESR (2009): Recommendations for Securities Settlement Systems, Ref. CESR/09-446

<sup>14</sup> The document can be downloaded on URL: [www.cesr-eu.org/popup2.php?id=5775](http://www.cesr-eu.org/popup2.php?id=5775)

<sup>15</sup> It is clear that the analysis of CDS is enough, because it is the only institution in Serbia that exist in this field.

<sup>16</sup> We should point out that the certain related recommendations have been abridged by authors of this paper with the aim to describe the overall level of harmonization more clearly.

<sup>17</sup> Operating Rules of the Central Securities Depository and Clearing House, RS Official Gazette, No. 113/2006, 24/2008, 38/2008 and 17/2009, and this document can be downloaded on URL:

[http://www.crhov.rs/pravnaregulativa/english/operating\\_rules/operating\\_rules.pdf](http://www.crhov.rs/pravnaregulativa/english/operating_rules/operating_rules.pdf).

operations, Law on the market of securities and other financial instruments<sup>18</sup>, and Law on privatization. By far the most important in this sphere of business is the Law on the market of securities and other financial instruments, already being partially surpassed and the new draft version of the Law on Securities has been compiled and it should be included in the procedure of adoption. The new Law should enable overcoming of many deficiencies of the previous one being applied since 2006.<sup>19</sup>

*The settlement procedures consist of the rolling settlement (T+3) which is based on multilateral netting.* Matched trades are reported to the CSD and Clearing house of Serbia by the Belgrade Stock exchange at the end of each trading day via electronic messaging. The CSD executes the multilateral netting and reports positions to participants on the same day T+0. In order to execute transactions, securities sellers must provide sufficient securities balances on their securities settlement account by T+3 in the case of Stock exchange transactions. Securities buyers must have sufficient funds on their cash account with the CSD of Serbia by T+3.<sup>20</sup>

The settlement cycle for OTC trades - Republic of Serbia Treasury bills, repo transactions and bonds of the Republic of Serbia: T+0 for OTC trades, the settlement instructions are submitted directly by the participants to the CSD of Serbia. The CSD executes the matching of trades and checks securities and cash balances. The CSD of Serbia settles the trade on the same day (T+0) and sends electronic messages to all interested participants.<sup>21</sup> The settlement of transactions is possible both in domestic currency and in EUR which represents a comparative advantage of the CSD over the similar institutions within the region.

Recommendations suggest a possibility of securities lending without limitation and with the least amount of risk, *and although the securities lending in the Republic of Serbia market is both legal and possible, it is not encountered in practice.* The main reason for this is the impossibility of short selling. Furthermore, the procedure is extremely complicated and controls are rigorous. The only form of borrowing that can be realized is that of under bilateral arrangements on the OTC (Over the Counter Market).

*In CSD are recorded all securities issued in the territory of the Republic of Serbia: RS bonds, NBS treasury bills, RS Treasury bills, bonds of legal entities, and shares, and thus the condition requiring to have in place a unique register for all securities issued in the local territory is met. From the day of its inception and organization, the securities in CSD have been issued in electronic form only, thus allowing for the application of all the contemporary methods in the clearing and settlement process with no additional costs whatsoever. The securities are assigned single identification markers: the CFI code and the ISIN number.* Accounting system has been clearly set up, in accordance with international standards, and in the process the rights of participants and issuers have been met to their fullest.

*With regard to risk, the CSD established a Guarantee Fund for all its participants.* All CSD members, except the Republic of Serbia and the National Bank of Serbia, pay assets into the CSD Guarantee Fund in order to have the assets provided for the meeting of obligations should CSD not timely ensure the securities or money for the concluded transactions with securities. The amount of assets paid into the CSD Guarantee Fund is EUR 40.000. They are paid to CSD account with the National Bank of Serbia, according to CSD payment instructions as set forth in CSD User's Instruction. CSD cannot invest or place on term deposit the assets paid into the Guarantee Fund, but may only keep them as a demand deposit with the National Bank

<sup>18</sup> Law on the market of securities and other financial instruments ("RS Official Gazette", No.47/2006)

<sup>19</sup> A public discussion on this law was held on July 3, 2009, in Belgrade Chamber of Commerce premises, where Ministry of Finance, Securities Commission of the Republic of Serbia, Belgrade Stock Exchange and Free Market Center representatives, along with the representatives of the financial services sector, presented their position.

<sup>20</sup> The settlement can be performing in shorter period, for instance T+0, but CSD will do that only if client insist on that. In practice, these situations are extremely rare, and they can be found when the both side of transaction are known in the beginning or in the situations of block transactions of big packets. The additional demand of CSD is to complete whole documentations before 3 p.m, so CSD can perform all process during the next day.

<sup>21</sup> [www.promoney.rs/maj/Centralni%20register.pdf](http://www.promoney.rs/maj/Centralni%20register.pdf)

of Serbia. CSD keeps the assets paid in the Guarantee Fund in the currency in which a member made the payment. Apart from the Guarantee Fund assets, CSD member gives bills of exchange as collateral for timely settlement of the securities and money, for the concluded transactions with securities.<sup>22</sup> Still, even with all the precautionary and risk protection measures taken, the real risk is estimated to be higher than the collateral.

Recommendation no. 7 addresses the ways of delivery and payment and suggests that the technical, legal and contractual framework should be based on Delivery Versus Payment (DVP) principle.

CSD transfers the securities from one account to another with simultaneous payment (DVP principle) on the basis of the securities transfer order and cash payments orders received through CSD members (securities and money depositories of the contracting parties in a transaction), within the term indicated in the orders, and in accordance with the Rules of CSD Term Schedule. A market organizer submits to CSD an electronic file with the data relating to the concluded securities transactions (contract notes). On the basis of the received contract notes CSD forwards electronic messages to CSD members maintaining securities and cash accounts of the sellers and buyers. CSD members confirm the messages by sending electronic messages to CSD. So, we can conclude, to that effect, on the basis of the application and the documents supplied, CSD forms electronic messages that are forwarded by it to the parties participating in the transaction, CSD members maintaining the securities accounts of buyers and sellers - issuers. CSD members confirm the messages, while *CSD clears the securities and money and does the settlement according to the DVP principle, in accordance with the Rules of CSD Term Schedule.*<sup>23</sup>

*In terms of operational risks, the CSD monitors and defines the possible situations that may cause problems within the system to arise.* The electronic system is well set and modern methods of data protection, as well as backup procedures, are applied. During the course of last year, EMC Documentum platforms<sup>24</sup> for the electronic archiving of documents and business process automation, as well as the purchase and testing of new telecommunication and server equipment for DR (Disaster Recovery) location<sup>25</sup>, were implemented. System users have different access levels and, according to the level given, are allowed to use the corresponding privileges within the system. As far as system halts are concerned, occasionally encountered in practice are halts announced in advance, but so far these were limited solely to situations where something was being changed or updated within the system. Since the day the CSD started its operations no significant halts or failures of the system have been recorded. In accordance with that, rules and procedures are relatively rarely reviewed, once a year the most.

Recommendation no. 12 addresses safety and protection of securities. *In the case of CSD, this form of protection comes down to the protection of electronic data because book-entry procedure is applied to all the securities kept by the CSD.* The law recognizes dematerialized form of securities because the entire system, legal, operational and technical, was built simultaneously. The biggest problem that could be encountered in this segment is forgery of user accounts, but that risk is being partially overcome by the use of SMART cards for system access. It is necessary to point out that the question of security has been placed rather high on priority list of CSD, and to that extent, the rules have been very clearly set and much attention has been given to division of users into different levels.

Managing bodies of the CSD are: the Meeting and the Managing Board. The Government through authorized representatives exercises the authorities of the CSD Meeting. The Managing Board has a

<sup>22</sup> Operating Rules of the CSD, [www.crhov.rs/pravnaregulativa/english/operating\\_rules/operating\\_rules.pdf](http://www.crhov.rs/pravnaregulativa/english/operating_rules/operating_rules.pdf)

<sup>23</sup> [www.crhov.co.yu/pravnaregulativa/english/Term\\_Schedule.pdf](http://www.crhov.co.yu/pravnaregulativa/english/Term_Schedule.pdf)

<sup>24</sup> EMC Documentum is a leading enterprise content management technology platform that helps enterprises to streamline the capture, processing, and distribution of business information including documents, records, e-mails, web content, images, reports, and digital assets. It can also automate entire business processes in accordance with business rules.

<sup>25</sup> Replication of data to an off-site location, which overcomes the need to restore the data (only the systems then need to be restored or synced).

president, deputy president and three members. The term of office of the Managing Board members is four years; provided, however, that the same persons may be reelected and/or reappointed. Regarding ownership, *the law states that at least 51% of the CSD shares must be owned by the Republic of Serbia and, at the present time, they are entirely owned by it. Through management analysis the impression is given of the CSD being harmonized with recommendations and experience of the countries with developed financial market, in this segment as well.*

Recommendation no. 15 addresses the efficiency of clearing and settlement system itself. To this effect, *CSD has cost control, as well as developed procedures, that enable harmonization of price levels with operational costs. All the fees that the CSD charges for its services are transparent and publicly accessible*<sup>26</sup>. CSD revises its services so as to improve the quality, but there are no interactive communication procedures with system users; instead, complaints can be filed *ad hoc*.

Participants are given the possibility of clearing and settlement in accordance with international communication procedures, as well as those standards that are in compliance with recommendations regarding message safety, thus, we can conclude a high degree of harmonization with recommendation no. 16.

In terms of transparency, a high degree of harmonization with recommendations of the EU had also been achieved as all the important information concerning the operations of the CSD were made available at the web presentation ([www.crhov.rs](http://www.crhov.rs)), both in English and Serbian.

In addition to that, CSD has a high degree of transparency in terms of regulation, supervision and oversight as well. Still, the accountability of regulatory bodies is not clearly defined, thus allowing for the possibility of overlapping of responsibilities with the Republic of Serbia Securities Commission, but that should be taken care of with the adoption of the new Law.

The last directive addresses the question of operational links of CSDs to other systems, and in case of the CSD, this primarily refers to its link with the Belgrade Stock Exchange. There is a clearly defined protocol on electronic data exchange in this segment, including the application of latest achievements of modern technology that ensures speed and safety.

## Conclusion

Considering the fact that the CSD in Serbia is a relatively young institution, it had an opportunity to use experiences and best practice of the most developed world and European financial markets and institutions and apply the best solutions in the process of construction of clearing and settlement system. Completion of the comparative analysis of law regulations, business techniques, data protection and all the relevant parameters in work of the CSD, showed a very high degree of harmonization with the corresponding recommendations from the CESR/09-446 document, and thus, when it comes to this segment, we can conclude that the Republic of Serbia may very swiftly, and without major additional harmonization, become a part of the integral EU financial market.

The key problem arising in this area is insufficiently developed securities market in the Republic of Serbia, thus, the situation can very plastically be compared to “perfectly constructed traffic arteries with no cars on them.”

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<sup>26</sup> Tariff Rates Rules, [www.crhov.rs/pravnaregulativa/english/tariff\\_rates\\_rules/tariff\\_rates\\_rules.pdf](http://www.crhov.rs/pravnaregulativa/english/tariff_rates_rules/tariff_rates_rules.pdf)

## References

1. Dugalić, V., Štimac, M. (2006), *Osnove berzanskog poslovanja*, Stubovi kulture, Beograd
2. ECB (2007), *Payment and securities settlement systems in the European Union: euro area countries*
3. ECB-CESR (2009), Recommendations for Securities Settlement Systems and Recommendation for Central Counterparties in the European Union, Ref. CESR/09-446
4. *Rules of CSD Term Schedule*
5. Pravila poslovanja Centralnog registra, depoa i kliringa hartija od vrednosti od vrednosti
6. Statut Centralnog registra, depoa i kliringa hartija od vrednosti
7. Zavišić, A. (2009), „U susret jedinstvenom finansijskom tržištu Evropske Unije“, *Bankarstvo*, Udruženje banka Srbije, vol. 1-2
8. [www.crhov.rs](http://www.crhov.rs) (Central Securities Depository and Clearing House of Serbia website)

# Chapter 10.

## AT CROSSROADS OF CRISIS TOWARDS THE NEW EMERGING WORLD<sup>1</sup>

*Slavenko Grgurević<sup>2</sup>*

### Abstract

*Detrimental global financial crisis had devastated world financial system. The year of 2008 was the hardest for stock exchange since the 1931, and 1931, 1937 and 2008 are the hardest years for stock exchange during the last two centuries. Negative international monetary circumstances have not been recorded since the beginning of the crisis of 30-ies during the last century. This also imposed the new numerous dilemmas with the view to future trends in the world economy. One thing is certain, finances are one of the most sensitive areas in economic life. Absence of their regulation removes all barriers in front of unrestrained flows of capital of the global economy and has devastating impact on all spheres of life. Mankind, and not only economic science and practice, have found themselves at the historical turning point.*

### 1. Introduction

At the doorstep of the Third millennium the world came within the sight of drastic changes – inciting and dangerous oppositions. Uncertainty is essential designation of the presence and vision of the future which will be extremely dynamic, full of difficulties and multidimensional.

The speed of changes will be blinding, all-present and it will influence all forms of life. Enormous strengthening of apparently unconnected forces will directly influence everything – from the way of life, work to individual and collective safety. New risks of terrorism and global economic disturbances will bring the change in all forms of life. This will demand tendencies and institutions in national and international relations to be drastically harmonized – fast adjustment to expected radical changes. And inciting surprises, sometimes even hard to imagine, will become part of everyday life, often confronting, at first sight, to any sense and logic. New technology of knowledge and awareness of holistic nature of information is the only factor which can be controlled in expected circumstances. Quality, and not quantum of information and the widest possible information network are and will be the only relevant factor in the process of successful decision making (vision, strategy and efficient realization).

Globalization is the epicenter of the mentioned issues. It implies new synthesis of ideas, financial flows, trade, communication and cooperation which should lead towards future global progress and new possibilities. Its ultimate goal is connecting national economies into strong, progressive and mutually connected global economic network. However, the biggest resistance to globalization lies in

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poor countries where poverty, as global force of destruction, pulls to opposite direction. Statement that every globalization will solve problems of nondevelopment including poor ones and provide them with higher standard – is not without a basis. An old proverb says: “The coming tide raises all watercrafts”. However, in such circumstances a more complete and more concrete vision of the future is necessary, like Marshal’s plan for reconstruction of the Europe after the World War II. Therefore, it is more than certain that globalization of financial flows and its influence on regional development and cooperation becomes more and more dominant factor against exploitation and poverty. Otherwise, globalization can be taken also as a symbol of rich countries’ narcissism.

## 2. Globalization, liberalism and (neo) mercantilism

“Even though the states will probably not disappear from the political scene, and although they can still take central place, it seems that they will become sensitive and powerless (Rosenau, 1998).“ This brings the question: can states, in which the sovereignty still seems intact, still keep exclusive control over what is happening within their territorial boundaries? The notion of national state as self-governed, autonomous unit looks more and more like normative claim than description.

With change of world policy of XXI century under influence of global trends comes the question whether the state can deal with present challenges. Auguste Compte, French political philosopher from XIX century claimed that societies form institutions in order to solve problems and satisfy human needs. When institutions are no longer capable to perform these functions they disappear. Today, when governing abilities of the state do not cause confidence it is completely realistic the question: do the states have the future?

What was a quarter of the century ago called interdependence – globalization today represents the peak of that projection. Possibility of mutual harming diminished autonomy of the states by narrowing their ability to govern their own national destiny. Globalization has eradicated traditional differences between national and international, between private and public, and between domestic and foreign. However, what remains as fear is that irreversible process of globalization can jeopardize transnational cooperation by creating new competition between states (isolation, lifting commercial barriers and other transactions).

This is supported by main disputes in international political economy which are reduced to concrete doctrines: liberalism and (neo) mercantilism, which represent “Essentially different..., concepts of relation between society, state and market” (Gilpin, 2001). These two opinion traditions are hard to be brought into balance, i.e. to conciliate them. Theory and practice of commercial, financial liberalization has a lot of roots and variations, and it is based on the practice that promotion of free international trade and finances is the road towards development, liberation from poverty and liberation of political freedoms. It is certain that free market and minimal intervention of state lead towards prosperity whose source is in evolution of market. Contrary to this, mercantilists believe that not everybody on market can be winner, because the profit gained by one side will be at disadvantage of the other. “Logical absurd of the fact that all governments seek at the same time to make surplus, was not seen as a problem. On the market where the total score is at the end always zero, i.e. where one and other side of the equation neutralize each other, there must be winners and losers “ (Mayall, 2001). Therefore, for mercantilists the relative profit is more important than the absolute one. Namely, the question of relative profit witnesses about difficulties to reach international cooperation in anarchic conditions. At the same time this explains why certain actors on the market are categorically against open international economy in spite of evidences that liberalization of trade and finances induce economic growth. Those are the roots of neomercantilism, modern vision of classical mercantilism that stands up for support of domestic production and surplus in balance of payment – thanks to subventions for export and changes of customs and non-customs related barriers in order to reduce import.

It is paradox that powerful states, so-called hegemons in international relations, even though they are promoters of liberalism that induces and spreads their domination over the international market – are often prone to measures of protectionism. However, with inevitable turns in international distribution of economic (and military) power – the capacity is being reduced, i.e. the capability of the hegemons to keep up such a system. Thus, hegemons, the biggest promoters of liberalism, become its victims. More and more frequent anarchic financial flows show that states (hegemons) cannot always adjust in accordance with their strength and influence over international market and institutions (World Bank, IMF, WTO), because their success is hard to be sustained without stable and predictable method of calculation of sales' and foreign investments' value (transactions become too risky, which causes reduction of trade and investments).

Period of turbulences which are being repeated on financial market during last more than ten years (1997, 1998 in Asia, Russia and Brazil, than in Turkey, Argentina) which are partly result of anarchic and risky management of financial flows – with development of new world economy was a signal for many experts about coming global financial crisis with devastating consequences. Therefore, opinion that success of international trade and market reforms depends on health of global financial system prevails more and more in leading financial institutions (World Bank).

However, “Today there is no one institution that is globally responsible for regulation of the capital flows (even though there exists the whole series of principles of standards and rules of relatively universal dimensions)” (Berthelot, 2001). The newest devastating financial crisis has drastically showed that further absence of thorough reform of global financial architecture poses a threat of complete crash in control over speculative capital, money laundry, recourse used by centrals of organized crime and terrorist groups.

### **3. Towards reform of global financial system in conditions of crisis**

States cannot always trade the way they would want to. Export and import depend on many factors, particularly on changes in global demand and prices of goods and services offered by national companies to global market. Mechanisms for determination of foreign exchange rates largely influence international trade. This even more since protection of the value of domestic currency is not their only ambition: by making interventions on currency markets the governments try to protect the value of domestic currency on international plan also. However, unlike profiteers, governments made commitments not to manipulate with exchange rates for the purpose of gaining unjust advantage, because the reputation of the state as the keeper of monetary stability is important. However, regardless of ethicality and ambitions of individual states – the basic question that comes up is whether the governments can influence at all on the value of their currencies confronted to transnational movement of the capital. Thus the second important issue comes up: real value of currency of some country compared to any other currency. In the world of movable capital, instability of capital flows threatens to end further development of world economic growth, in the absence of international financial regulations. “Majority of literature about international relations which deals with outlooks of international monetary reform can be interpreted as a quest for alternative to hegemony as a basis of international monetary stability “ (Eichengreen, 2000). Namely, the need for reformed system greatly results from failure of USA to adjust its politics so it could continue being hegemonic stabilizing force in international finances and unilaterally regulate international monetary issues.

Leaving Bretton Woods system and acknowledgement of force of force and not of intervention of governments (swimming exchange rates) did not fulfill the expectations. Financial crisis are particularly often throughout the world as a consequence of inability of states to manage their debts, inflation, interest rates and incomes in unstable monetary system that is exposed to wild fluctuations of exchange rates. During last thirty years, starting from the end of 70-ies of the last century, there has been real escalation of growing wave of financial crisis both in exchange rates and in banking. These crises were followed by massive bankruptcies of countries that were no longer capable to pay their

debts – a chronicle problem which led international monetary system to the edge of disaster. The number of countries (over 40) which have today foreign debt bigger than 10 billion US \$ is growing bigger and bigger. Even the most powerful USA is in this dangerous zone with the huge foreign deficit which is larger than 4% of their GDP. The burden is so big that USA will have to pay every day to foreigners, only for interest rates, close to 2 billion US\$ (Economist, April 27, 2002).

All this only confirms the fact that globalization of finances and removing obstacles from the road of moving capital over the borders expose national economies to hits and there is no much hope that this instability and uncertainty will disappear.

There are numerous proposals for reform of international monetary system in order to neutralize instabilities which are consequence of fast movement of investment funds from one country to another. This caused ups and downs, as it was the case with debt crisis of Latin America of 1980ies or with global crisis that came up with escape of capital from Asia in period 1987-1998. In the middle of these and other proposals is effort to make mechanisms which will enable establishing financial stability and flexibility on which depends economic prosperity and which the existing system did not manage to establish. However, there is no much accordance about how to get to these reforms.

Today the money streams throughout the world because of the general acceptance of the attitude that the growth will be bigger if capital can freely circulate and find on its own the places with the highest rate of return. There are numerous proposals for reform of the very IMF, and in such a way that this institution gets directed towards impeding and diminishing of financial crisis, particularly of liquidity crisis, and such tasks as poverty alleviation to be left to World Bank... And during all these, it is very disturbing that global exchange rate regime is unstable and that there is no efficient mechanism of exchange which would enable bringing into accord and adjustment – because it causes many disturbances on the global market where state economies are integrated to a large extent. As long as cross border trade expands, there is a big possibility that monetary dilemmas that mankind is facing will only grow bigger. Fluctuation of exchange rates and monetary instability are actually root of all difficulties. There is no single system of exchange of foreign currencies that would be perfect. The problem will appear as it drastically showed up in the latest devastating global financial crisis – regardless of whether the countries will opt for fixed or for swimming exchange rate.

In the meantime, one option, that is at disposal to the countries, appears more and more, and that is the choice between “dollarization and regionalization” as a way to solve monetary and debt crisis.

This conclusion is underlined also in “solution” to currency problem which is accepted by 12 European countries in 2002 by which dependence upon American dollar is decreased and regional currency union is accepted. European Union has created for 305 million of its citizens the unique currency – Euro – hoping that this will stabilize extremely unstable exchange rates and create conditions for EU market to stay unique and motivating.

However, as much as introduction of Euro seems innovative, it can and does not have to represent model for other countries and regions. Euro is still controversial even in the very EU (Britain, Denmark, Sweden). The new common currency is much more than just mere economic change and contains ambitious idea about forming EU as supranational institution that erases individuality, economical and political sovereignty of European states. The prevailing opinion is that, for now, integration of currency in Europe can only be understood as an answer to USA domination in global economy, where the dollar preserved the primacy as a global currency for balancing international accounts. Therefore a lot of people interpret globalization as “dollarization” of international political economy. With continuation of American economic and military supremacy the numerous ideas about reform of global financial system will remain in the shadow of hope that today’s free movement of mechanisms of foreign currencies’ exchange which is expressed in dollars will be replaced with formation of new global institutions with supranational management.

The latest devastating global economic crisis is the last warning to big and small, rich and poor – to the world in whole that the future of mankind directly depends on all of us who live on our planet and particularly on the consciousness of those who took the responsibility to rule over the human destinies. Because, one old Latin proverb says: “Salvation of all – the best salvation”.

#### **4. Instead of conclusion**

1. Western Balkans and Southeast Europe are amongst the most unstable regions in the world. Diverse social landscape, abundance of cultures and interests, disaffection for understanding other people's value formulas, along with imposing own and other people's interest, were and remained to be the permanent source of conflicts, which hindered development of trade and finances which was the historic constant for all the nations and cultures in this region. Therefore, the stabilization of circumstances in the region implies creation of concrete institutional conditions, methods and models for promotion of regional economic cooperation and openness of this region for global forms of Euro-Atlantic and other cooperation.

The market of 65 million people, big disproportions of development levels, general poverty and criminal are the elements that indicate more limitations than potential amenities for foreign investors and promotion of intraregional cooperation and entrepreneurial initiative which are condition for future development of this Region. For this reason, the creation of conditions for harmonic development of business milieu through models of regional political and economic integration (regional, monetary union...), development of entrepreneurial initiative, cooperation between public and private sector and promotion of total infrastructure are for this Region the way out of the state of insecurity and poverty. Simultaneously this will be the strong incentive for development of business cooperation in this area, which until now was not in accordance with the possibilities.

Alleviation of devastating consequences of the world financial crisis on economies of the countries from the Region is possible, above all, through strengthening intraregional business cooperation and promotion of institutional and other mechanisms which are necessary for creation of encouraging business milieu and normalization of overall situation in the Region. This will create conditions for coming of foreign investors who, within the latest circumstances, find it particularly difficult to decide to invest into risky regions and uncertain business initiatives.

It is certain that the global financial crisis will influence directly – proportionally less poor countries, which is at the same time chance to have their future development projected on new basis, where investing into people, and not only into material goods, will be a starting point in these new projections of development.

2. Apart from extremely unhealthy development in international financial system, industrial nations have to additionally fight against more of dangerous economic mega-trends. On one side – opposed to generally ruling deflation tendencies – oil, sources of energy and raw materials are more and more expensive day after day. This trend – even though oscillations are possible – will continue over the next ten years, because newly industrialized countries, China above all, demand for themselves their part of world resources. “Old” industrial nations will have to fight with long-lasting fall of prices for their industrial products and with – related to that – the fall of their purchase power, as well as with rising prices, at the same time, of raw materials. But that is not all: all industrial nations are confronting the problem of aging population as well as fall of natality. This burdens these economies not only regarding pension insurance, but on one much more important level. People going to pension avoid economic risks, which in a perceivable way slows down economic activities. The case of Japan, country in which this problem has gone furthest, shows what can happen to other countries of the West. All this together shows that economic activities will decline over a longer period, stock exchange rates will crash, and unemployment will explode. Loss of confidence will be huge. Credit approving will break down, so much that only companies and individuals of particular trust will succeed in getting

credits. Companies and job seekers will fight for their future that is not even close to certainty. Fear of losing job leads to reduction of expenses which will influence investment policy of company. That is the reason why economy is breaking down and why it has new dismissals of workers as a consequence. So, the consequences of devastating global financial crisis can be just the same bad if not worse than in 1929. Global economic crisis has like then started in USA. If American economy will suffer seriously, then Europe, Japan or China can hardly do anything against it. On the contrary, it is possible, just like in 1929, to have economic pandemic. What remains is the hope that global leaders and hegemon states will recognize reality and not worsen devastating consequences of global crisis with their actions (Otte, 2006).

3. The latest huge economic crisis worldwide that affected the most develop countries and in the analytical circles in the world compared with the Huge Economic Crisis in the 30s of the past century, indicated that the world as a whole found itself as the crossroads and that fundamental values of western civilization embodied during centuries through material growth, and the other hand interpreted as the essence of progress – are not any more appropriate sources of general satisfaction and hope, even in the most develop countries. In searching for these and other answers to the latest challenges, the whole intellectual world has found itself in a real whirl of contradictory, confusing and cacophonic ideas. The whole world has found itself in a state of creative confusion, and conflicting views offer a new dynamism and the level of social responsibility unprecedent up till now that accepts, but less and less appreciates the argument of material wealth, power and balance of forces in achieving the sustainability of the same. The primordial significance and the destiny of an individual and its potentials, limitations and distress are opposing to that more and more – since the society that is morally, politically and culturally humiliated cannot be a progressive society. This is supported by more and more pronounced phenomena of voluntary simplicity and peculiar spiritual catharsis in the most develop countries where the conflict between external wealth and internal poverty is more and more pronounced and that conflict cannot be solved on the fondations of classical values of mechanic (materialistic) epistemology. In that sense, announcement of conceptual dilemmas regarding sustainable market influence, that is state intervention, are the dilemmas in the sphere of mechanism of the economic policy, which is the consequence and not the cause of overall social „swinging“ in which the humanity has found itself at the threshold of the third millennium.

Similar visions and new social reality in the developed countries fraught with social tensions, contradictory value judgments and quandaries make up an outline of the future social map of the world where the countries of the developed part of mankind as the main countries in transition on the threshold of the third millennium. Such a turnabout will, according to many, not affect the developing countries: by starting from a much lower developmental level without any mortgage on values and experience of the developed world- the poor (part of the) world will be developing on new foundations.

## References

1. (Berthelot, 2001.) Berthelot, Yves „The International Financial Architecture - Plans for Reform“, International Social Science Journal 170 (December) 586-596.
2. (Eichengreen, 2000.) Eichengreen, Barry „Hegemonic stability theories of the international monetary system“, pp 220-244 in Jeffy A. Fridmen and David A. Lake (eds.), International Political Economy, Boston: Betford/St.Martin's
3. (Gilpin, 2001) Gilpin, Robert „Three Ideologies of Political Economy“, The Global Agenda, 6th ed. Boston: McGrow- Hill, pp 269-286.
4. (Mayall 2001) Mayall, James „ Mercantilism“, The Oxford Companion to Politics of the World, 2nd ed. New York: Oxford University Press, pp 535 and 540.
5. (Otte, 2006.) Max , Otte, „Der Crash kommt“, Ullstein Bucherverlage GmbH, Berlin 2006/Econ Verlag
6. (Rosenau 1998.) Rosenau, James „Disorder and Order in a Turbulent World: The Evolution of Globalization Spaces“, The Global Agenda, 5<sup>th</sup> ed. New York: McGrow-Hill, pp 145-169.

# Chapter 11.

## DO INVESTORS HERD DURING EXTREME PERIODS IN THIN MARKETS? EVIDENCE FROM BANJA LUKA<sup>1</sup>

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### Abstract

*A large amount of studies has attempted to trace the presence of herding during extreme periods at the cross-sectional level by associating herding with the reduction in the cross-sectional dispersion of returns around the market average. In this paper we address the issue of whether the estimation of herding on the premises of such frameworks is robust to the thin trading bias whose presence is particularly prevalent in emerging markets. Our study is undertaken in the context of the Banja Luka stock exchange which is one of the world's most recently established markets. Results indicate that herding is insignificant during extreme return periods with its insignificance persisting even after controlling for thin trading.*

*Key words:* Herding, Thin Trading, Extreme Markets, Banja Luka

### 1. Introduction

The issue of whether extreme market periods are characterized by herd behavior has been at the forefront of considerable research. Originally motivated by the popular Finance literature (Galbraith 1994) which illustrated the “animal instincts” in traders’ behavior during major episodes in financial history, several studies have developed empirical frameworks, both linear as well as non-linear, aiming at addressing this issue. The key feature of these studies is their belief that herding can be reflected in the cross-section of asset returns, in the sense that a lower (cross-sectional) dispersion of returns would indicate that assets herd towards the market average. The development of such models led to a series of researches conducted on the premises of both developed as well as developing capital markets with evidence on the existence of herding being rather mixed.

The present study contributes to the extant literature on the subject by examining herding during extreme periods in the context of one of the world’s youngest stock exchanges, that of Banja Luka. Contrary to most studies in the field that restrict their scope in the demonstration of whether or not herding is significant during extreme markets, we extend the scope of our investigation by trying to

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establish whether the significance of the estimated herding remains robust to the thin trading bias. We believe this issue to be a serious one, more so since thin trading has been found to exert an effect over empirical estimations in emerging markets which are normally characterized by lower liquidity levels relative to their mature counterparts (Antoniou et al 1997).

The rest of the paper is organized as follows: section 2 provides an overview of the herding literature, while section 3 delineates the evolution of the Banja Luka capital market; section 4 discusses the data (4.1), the methodology employed (4.2) and presents some descriptive statistics (4.3). Section 5 discusses the results and concludes.

## 2. Herd behaviour

Individuals form herds when they align their behaviour to a mode of collective conduct following the “interactive observation” of the *actions* and the *payoffs* (arising from those actions) of their peers (Hirshleifer and Teoh 2003). Behavioural finance has associated herding with the intentional sidelining of investors’ private information in favor of the observable “consensus” irrespective of fundamentals (Hwang and Salmon 2004). From a behavioural perspective, several psychological biases have been found to contribute to herd behaviour, including conformity (Hirshleifer 2001), congruity and cognitive dissonance (Prast 2000), the home-bias (Feng and Seasholes 2004) and rumour (Buckner 1965). On the rational side, investors may well choose to herd if they perceive herding as a means of extracting informational payoffs (Devenow and Welch 1996). An investor, for example, who is uninformed, or who believes others to be better informed may decide to imitate others’ actions if she deems them to be informative. Such a situation has been found to be particularly relevant to finance professionals (e.g. fund managers or financial analysts) whose performance is subject to periodic evaluation on a relative basis, i.e. their performance is compared to that of their peers. Under these circumstances, it is reasonable to assume that principal-agent issues arise, since their professional prospects are heavily dependent upon their employers’ assessment of their performance and it is precisely in the above that herding comes into play. As Scharfstein and Stein (1990) and Trueman (1994) have noted, low ability/reputation professionals have every interest in copying the behaviour of their “good” peers in order to improve their professional image, thus “jamming” the assessment process.

Irrespective of the sources (rational; psychological) underlying herding, if many investors decide to ignore their private signals and free-ride on the informational content of others’ actions, this is expected to foster the creation of informational cascades (Banerjee 1992; Bikhchandani et al 1992) that can hamper a market’s informational efficiency (since imitation tends to slow down the incorporation of individuals’ private information in the public information pool) and potentially lead to wild deviations of prices from fundamentals. The latter has constituted a key argument featuring in the popular Finance literature which has widely preoccupied itself with the interpretation of major financial episodes in history by invoking investors’ “animal instincts” (e.g. Galbraith 1994).

Academic researchers have only recently embarked during the last two decades in a voluminous effort to delineate investors’ behaviour around major financial events. Using transactions-data they have managed to anatomize the behaviour of investors at the micro-level in the context of well-known financial crises, such as the 1997 Asian one (e.g. Choe et al 1999; Kim and Wei 2002a, 2002b). The difficulty, however, in obtaining micro-data (due to their proprietary and sensitive nature) led other researchers to pursue the relationship between herding and extreme market returns on the premises of aggregate data. This strand of research identified herding at the market-wide level with the reduction of the cross-sectional dispersion of stock returns during “extreme” periods and culminated in an equally prolific output of studies (e.g. Caporale et al 2008; Caparelli et al 2004; Chang et al 2000; Christie and Huang 1995; Demirer and Kutan 2006; Gleason et al 2003; Gleason et al 2004; Henker et al 2006) employing both linear as well as nonlinear frameworks.

Our study contributes to the extant literature on the empirical identification of herd behaviour during extreme periods at the aggregate level by investigating the issue in the context of the Banja Luka stock exchange which is one of the most recently founded markets in the world and has never before been the focus of academic research. A key distinguishing feature of our work relates to it considering the effect of thin trading over herding estimations. Emerging markets are typified by relatively lower liquidity compared to their developed counterparts, a fact that can be ascribed to factors curtailing investors' participation in such markets, including entry restrictions (e.g. for foreign investors), trading restrictions (e.g. margin trading and short-sales' constraints), market frictions (e.g. high transaction costs) as well as overall macroeconomic conditions (e.g. when the country's average income is low). As the matching (and, hence execution) of orders becomes slower under these conditions, order-imbalances develop on either the buy- or the sell-side, thus interfering with the trading process that is now characterized by thinner volumes and stale prices (Kim and Rhee 1997). Although thin trading has been found to bear serious implications over empirical estimations in a series of emerging markets' studies (Antoniou et al 1997; Siriopoulos et al 2001), its impact over herding estimates during extreme market states has been widely overlooked and, in view of this, we believe our study to fill an important gap in the relevant literature.

### **3. The Banja Luka Stock Exchange**

Both entities (Federation of Bosnia and Herzegovina; Serb Republic of Bosnia) in Bosnia and Herzegovina have created their own modern capital market infrastructure with separate stock exchanges in Sarajevo (SASE) and Banja Luka (BLSE), respectively. The two exchanges have similar histories and represent good intentions towards the creation of financial markets in Bosnia and Herzegovina. The Banja Luka Stock Exchange (BLSE) was established in May 2001 following an *ad hoc* agreement among eight banks and one brokerage house and its evolution has been strongly linked to the privatization process in the Serb Republic of Bosnia. Socio-economic trends in the region were characterized by the active role of the government in implementing reforms necessary to step up the transition process towards a market economy and it is through this prism that the establishment of modern stock market infrastructure has to be viewed. The Banja Luka Stock Exchange started trading in March 2002 and it has experienced a meteoric growth, with the number of listed companies rising from 48 (March 2002) to almost a thousand by 2009. Following a period of initial tranquillity, the market's activity surged during 2006, catapulting the main index (BIRS) to over 5200 points in mid-April 2007 (from an all-time low until then of 898 points in July 2002). Although its turnover documented a noteworthy increase from Bosnian Marka or BAM7 million (\$5 million) in 2002 to a record high of BAM742 million (\$ 558 million) in 2007, the market itself is notably thin as evidenced by its very low turnover ratio (4.21 percent). The high concentration of trading activity further contributes to the thinness of the market, as the volume of trade is frequently dominated by a few major stocks. In 2009, for example, *Telekom Srpske* and *AD Bosanski Brod* dominated investors' interest accounting for 14.6 and 6.7 percent, respectively, of the turnover.

### **4. Data and methodology**

#### **4.1. Data**

Our data includes daily closing prices of the historical constituents of the BIRS index which is the main index of the Banja Luka Stock Exchange. The data covers the period beginning 17 May 2004 when the BIRS was launched and ending 9 June 2009 and was obtained from the Banja Luka Stock Exchange website (<http://www.blberza.com>). The BIRS currently (July 2009) accommodates 30 stocks in its composition, while according to its historical revisions obtained from the market's website, the total number of stocks that have been included at any point during that period (including the July-composition) in the index equals 39.

## 4.2. Methodology

We shall now introduce the empirical designs upon which the examination of herd behaviour during extreme periods has been based. The crux of the argument there was the identification of herding with the level of dispersion of stock returns from the market average. Put it this way, a low dispersion would indicate that assets converged to their cross-sectional mean, i.e. herded towards some sort of market consensus. To test for herding during extreme periods on the basis of this context, researchers had to devise empirical frameworks that would allow for the formalization of the relationship between herding and market returns.

In the seminal paper on the subject, Christie and Huang (1995) proposed the following linear specification:

$$CSSD_t = a_0 + a_1 D_t^{UP} + a_2 D_t^{DOWN} + \varepsilon_t \quad (1)$$

CSSD here denoted the cross-sectional standard deviation of individual stock returns around their cross-sectional average which was calculated as  $\sqrt{\frac{\sum_{i=1}^n (r_{i,t} - \bar{r}_t)^2}{n-1}}$ , where  $r_{i,t}$  is the return of security  $i$  at period  $t$  and  $\bar{r}_t$  the cross-sectional average of  $n$ -stocks' returns during period  $t$ . The two dummies in regression (1) were employed as proxies for "extreme" periods and corresponded to the tails of the market-return distribution. More specifically,  $D_t^{UP} = 1$ , if the market return on day  $t$  falls in the extreme upper tail, zero otherwise; and  $D_t^{DOWN} = 1$ , if the market return on day  $t$  falls in the extreme lower tail, zero otherwise. Since herding was taken to be reflected in a decline of the returns' dispersion, the presence of herding during "extreme" positive or negative markets would be indicated by the coefficients of the dummies ( $a_1, a_2$ ) assuming negative signs. In the present context, we shall define as "extreme" the observations lying one, two and three standard deviations from the market average, in line with Christie and Huang (1995).

Chang et al (2000) argued that in the presence of herding, the relationship between the cross-sectional return-dispersion and market returns during extreme periods can assume a nonlinear form and proposed the following test:

$$CSAD_t^{UP} = \alpha + \gamma_1^{UP} |R_{m,t}^{UP}| + \gamma_2^{UP} (R_{m,t}^{UP})^2 + \varepsilon_t \quad (2)$$

$$CSAD_t^{DOWN} = \alpha + \gamma_1^{DOWN} |R_{m,t}^{DOWN}| + \gamma_2^{DOWN} (R_{m,t}^{DOWN})^2 + \varepsilon_t \quad (3)$$

In the above set of regressions, the CSAD is the cross-sectional absolute deviation of returns calculated as  $\frac{1}{N} \sum_{i=1}^N |\beta_i - \beta_p| |r_{i,t} - r_f|$ , where  $\beta_i$  represents the systematic risk of the individual security  $i$ ,  $\beta_p$  reflects the systematic risk of the market portfolio,  $r_{i,t}$  is the return of the individual security  $i$  at time  $t$ ,  $r_f$  is the risk free rate, and  $N$  is the number of securities in the market portfolio. As Henker et al (2006) illustrated, the CSAD can equivalently be expressed as  $\frac{1}{N} \sum_{i=1}^N |r_{i,t} - r_{p,t}|$ , where  $r_{i,t}$  is the return of the individual security  $i$  at time  $t$ ,  $r_{p,t}$  is the return of the market portfolio at time  $t$  and  $N$  is the number of securities in the market portfolio. Finally, the  $R_{m,t}$  in equations (2) and (3) is the equal-weighted market portfolio return and the UP/DOWN superscripts denote up/down market days. As herding is assumed here to be related to market nonlinearities, we are particularly interested in the  $\gamma_2$ -coefficient. In view of what we mentioned above, a negative and statistically significant estimate for  $\gamma_2$  would be suggestive of the presence of significant herding. The reasoning

behind the Chang et al (2000) specification draws upon the concept of “directional asymmetry” introduced by McQueen et al (1996). According to this, the arrival of bad macroeconomic news in the market leads all stocks to react *in tandem*; conversely, when good macroeconomic news hits the market, larger stocks tend to respond first with smaller stocks following them with a lag. In the presence of directional asymmetry, the dispersion of returns around the market average would be expected to be smaller during down-markets as opposed to up-markets.

In this study we employ both the Christie and Huang (1995) and the Chang et al (2000) models to gauge the presence of herding during extreme market periods. However, the fact that the Banja Luka stock exchange is an emerging one, raises the issue of thin trading that typifies such markets and introduces biases in empirical estimations conducted on their premises (e.g. Antoniou et al, 1997). To that end, we extend the existing work in the literature by undertaking two *ad hoc* robustness tests. The first one is based on an established method which was developed by Miller et al (1994), who demonstrated that the correction for thin trading can be accomplished using an AR (1) process, as follows:

$$R_t = a_1 + a_2 R_{t-1} + e_t \quad (4)$$

where  $R_t$  is the individual stock return at time  $t$ ;  $R_{t-1}$  is the individual stock return at time  $t-1$  and  $e_t$  is the error term. Realized returns can then be adjusted as follows:

$$R_t^{adj} = \frac{e_t}{(1 - a_2)} \quad (5)$$

where  $R_t^{adj}$  is the return at time  $t$  after thin trading has been taken into account. Antoniou et al. (1997) pointed out that an assumption underlying the Miller et al. (1994) approach is that the adjustment for thin trading is taken to be constant throughout time. They argued that this assumption may be inappropriate when dealing with emerging markets as they may well accommodate substantial windows of trading inertia. As this is the case with the Banja Luka market, equation (4) is estimated recursively. Once returns are adjusted for thin trading, they are used to re-estimate herding in the Christie and Huang (1995) and Chang et al (2000) models. The second approach aims at estimating the presence of herding taking into account trading inactivity. In the presence of thin trading, stocks fail to trade every consecutive day, thus leading their prices to exhibit pockets of inertia. As a result, when daily returns are calculated, one comes across multiple zero observations in their time series. To counter the impact of this over our estimates, we repeat our herding estimations excluding from our sample all zero-return observations, so that our estimates will now be based upon actually traded stocks only. As table 1 shows, the average number of active stocks per day equals 7.3, yet the average number of total stocks (active and inactive) per day in the BIRS is almost 19 during our sample period. In other words, little over a third of the BIRS-stocks are actively traded each day.

### 4.3. Descriptive statistics

Table 1 presents some descriptive statistics related to the cross-sectional standard (CSSD) and absolute (CSAD) dispersions of returns when raw returns are used, when returns are adjusted for thin trading and when trading inactivity is taken into account. As the table shows, both the CSAD and CSSD assume their lowest values for their sample mean and standard deviation before returns have been corrected for thin trading and before trading inactivity has been taken into account. This is something perhaps to be expected as in a market as thinly traded as the Banja Luka one, individual stocks’ series would include a number of zero-observations, thus rendering the dispersion of stocks’ returns around their mean smaller and (as a result) its average and standard deviation to appear reduced. An interesting pattern is revealed as regards the average daily number of stocks prior to after

controlling for market inactivity. Although the average daily number of stocks calculated on the premises of the full composition of the BIRS during our sample period equals almost 19, it drops abruptly to 7 once actively traded stocks are taken into consideration, thus being reflective of the illiquid conditions surrounding the Banja Luka market. The near-zero (less than -0.01 percent) BIRS-average return is again indicative of the course of the market during the 17/5/2004 – 9/6/2009 period (see Figure 1), as the BIRS skyrocketed from around 1100 points in May 2004 to over 5000 in December 2007 only to begin its descending course enter 2008 and reach below 1000 points in early June 2009.

## 5. Results – Concluding remarks

We begin the discussion of our results with the presentation of our estimations from the Christie and Huang (1995) model. Table 2 presents the results when extreme returns are taken to lie one (Panel A), two (Panel B) or three (Panel C) standard deviations from the BIRS-average of our sample period. As table 2 indicates, the intercept term ( $\alpha_0$ ) reflective of the average CSSD in a stagnant market remains significantly (1 percent level) positive throughout all our results, with its estimates however assuming higher values when returns have been adjusted for thin trading and when trading inactivity has been taken into account. Regarding the estimates of the dummy variables' coefficients, they are suggestive of the absence of herding, as they are all found to be positive (with the exception of  $\alpha_2$  in Panel C when returns are adjusted for thin trading), while their significance appears robust (1 percent level) before adjusting returns for thin trading or taking trading inactivity into account. Adjusting returns for thin trading leads the  $\alpha_1, \alpha_2$  coefficients to become insignificant (with the sole exception of  $\alpha_1$  in panel B), while taking trading inactivity into account renders the  $\alpha_2$  coefficient insignificant in panels B and C. Perhaps more interestingly, the values of  $\alpha_1$  appear to be consistently higher compared to  $\alpha_2$  (with the exception of Panel A prior to adjusting for thin trading or taking trading inactivity into account). This implies that although the dispersion of returns around their mean increases during both upside and downside extreme periods, this increase is lower for extreme downside returns, which indicates a greater similarity in the behaviour of returns during extreme negative periods compared to extreme positive ones.

Table 3 presents the estimates obtained for the Chang et al. (2000) model. Much like with the results from the Christie and Huang (1995) model, the intercept is found to be significantly (1 percent level) positive for all estimations with its value rising dramatically when returns have been adjusted for thin trading and when trading inactivity has been taken into account. Regarding the  $\gamma_1$  coefficient, it is also found to be significantly (1 percent level) positive for all tests, thus being suggestive of a positive linear relationship between the cross-sectional absolute dispersion and the absolute value of the BIRS-average. An interesting feature of our results relates to the fact that adjusting for thin trading and taking trading inactivity into account leads to consistently lower  $\gamma_1$  estimates, thus indicating that the above documented positive linear relationship between the cross-sectional absolute dispersion and the  $R_{m,t}$  becomes weaker (i.e. the dispersion increases at a decreasing rate) when controlling for market illiquidity. Contrary to the directional asymmetry argument of McQueen et al (1996), we notice that there seems to be a general trend for  $\gamma_1^{DOWN}$  to be greater than  $\gamma_1^{UP}$ . This means that dispersions increase at a lower rate during periods of market upswings compared to periods of negative market returns; the  $F_1$  test statistic used to test the null hypothesis  $\gamma_1^{UP} = \gamma_1^{DOWN}$  shows that the null hypothesis is indeed rejected at the 1 percent level of significance with the exception of the case where returns are adjusted for thin trading. With regards to  $\gamma_2$ , it is found to exhibit consistency in its pattern during up versus down markets; more specifically,  $\gamma_2^{UP}$  is found to be always positive while the sign of  $\gamma_2^{DOWN}$  appears always negative. The above are reflective of a positive (negative) nonlinear relationship between the cross-sectional absolute dispersion and the  $R_{m,t}$  during market upswings (slumps) whose significance

(1 percent level) appears more pronounced during market upswings (the significance of  $\gamma_2^{DOWN}$  is manifested only once trading inactivity has been taken into account, which is where we find the sole estimate in our results indicative of herding significance). It is further interesting to observe that correcting for thin trading or taking trading inactivity into account leads to a substantial depression of the  $\gamma_2$  coefficient's values in absolute terms, thus indicating that any nonlinearities documented in the relationship between the cross-sectional absolute dispersion and the  $R_{m,t}$  tend to evaporate when controlling for market illiquidity. The  $F_2$  test statistic used to test the null hypothesis  $\gamma_2^{UP} = \gamma_2^{DOWN}$  shows that the null hypothesis is indeed rejected at the 1 percent level of significance with the exception of the case where returns are adjusted for thin trading. The fact that both  $\gamma_1$  and  $\gamma_2$  appear notably depressed once returns have been adjusted for thin trading and once trading inactivity has been taken into account brings forth the issue of the impact of thin trading over linear and nonlinear estimations. Evidence from the literature indicates that thin trading tends to amplify both linear (Antoniou et al 1997; Siriopoulos et al 2001) and nonlinear dynamics (Solibakke 2001, 2005) in the return-generation process thus introducing biases into empirical estimations that tend to be reduced once adjustments for thin trading are implemented and this is precisely what we are witnessing in table 3. All in all, as our results from table 3 show, the herding hypothesis is largely refuted on the premises of the Chang et al (2000) approach.

It is evident from the empirical evidence depicted thus far that extreme return-periods (as defined in the two models employed above) do not accommodate significant herding in the context of the BIRS-portfolio in the Banja Luka market. We believe that the absence of herding here should be viewed by taking the conditions of the market itself into consideration. Since a herd's significance is a function of the accrued participation it attracts (Bikhchandani et al 1992), it is reasonable to assume that the significance of herding at the market-wide level will be a straight function of the market's overall trading activity. With about a third of the BIRS stocks being actively traded every day on average, it is obvious that investors' participation in the Banja Luka stock exchange is unable to reach levels high enough to generate the turnover necessary to move prices market-wide. This reality is further exacerbated by the fact that the Serb Republic of Bosnia bears a low average income that inhibits the wider involvement of retail traders in their country's stock market. From a herding perspective, the manifestation of herding under such circumstances will depend upon the ability/opportunity to trade, since if a herd is to develop, for example, on the buy-side, it will be able to express itself in the market only when there are enough traders on the sell-side to allow the buy-herd members to transact. Thus, even if herding does indeed exist in the market, its actual magnitude will fail to be revealed due to the order-matching difficulties induced by thin trading and this will naturally bear an adverse effect over its significance. However, it could well be the case that even if only about a third of all BIRS-stocks are actively traded each day, those that are actively traded do in fact exhibit co-movement in their behaviour. To explore this possibility, we split the actively traded stocks each day into "winners" and "losers" contingent upon whether their daily return is positive or negative. Results are reported in table 1 and provide us with no evidence in support of any systematic co-movement, since as the table indicates, the average daily number of winners is 3.5 and that of losers is 3.8. Concurrently, it appears that on average the number of stocks advancing each day is more or less similar to the number of stocks declining, thus providing an additional argument in support of the herding insignificance at the market-wide level reported in our empirical findings. If indeed herding exists under these circumstances, it will have to be traced at the individual stock level using investors' transaction-data, which unfortunately are not available here. The robustness of herding absence to thin trading during extreme markets constitutes a key contribution of the present paper to research. Using two established herding specifications we demonstrated that extreme periods need not necessarily accommodate market-wide herding in an illiquid market setting; indeed, it may well be the case that the "extremities" observed in such market's indices are the byproduct of the extreme movements of a few individual stocks with sufficient interest from both sides (buy/sell) of the market rather than the market as a whole.

## References

1. Antoniou, A., N. Ergul and P.R. Holmes (1997), 'Market Efficiency, Thin Trading and Non-linear Behaviour: Evidence from an Emerging Market', *European Financial Management*, 3 (2): 175-190.
2. Banerjee, A. V. (1992), 'A Simple Model of Herd Behavior', *Quarterly Journal of Economics*, 107 (3): 797-817.
3. Bikhchandani, S., D. Hirshleifer and I. Welch (1992), 'A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades', *Journal of Political Economy*, 100 (5): 992-1026.
4. Buckner, H.T. (1965), 'A Theory of Rumor Transmission', *Public Opinion Quarterly*, 29 (1): 54-70.
5. Caparrelli, F., A.M. D'Arcangelis and A. Cassuto (2004), 'Herding in the Italian Stock Market: A Case of Behavioral Finance', *Journal of Behavioral Finance*, 5 (4): 222-230.
6. Caporale, G.M., F. Economou, and N. Philippas (2008), 'Herd Behaviour in Extreme Market Conditions: Evidence from the Athens Stock Exchange', *Economics Bulletin*, 7 (17): 1-13.
7. Chang, E.C., J.W. Cheng and A. Khorana (2000), 'An Examination of Herd Behaviour in Equity Markets: An International Perspective', *Journal of Banking and Finance*, 24 (10): 1651-1679.
8. Choe, H., B.-C. Kho and R. M. Stulz (1999), 'Do Foreign Investors Destabilize Stock Markets? The Korean Experience in 1997', *Journal of Financial Economics*, 54 (2): 227-264.
9. Christie, W.G. and R.D. Huang (1995), 'Following the Pied Piper: Do Individual Returns Herd Around the Market?', *Financial Analysts Journal*, 7-8/95 (4): 31-37.
10. Demirer, R. and A. Kutan (2006), 'Does Herding Behavior Exist in Chinese Stock Markets?', *Journal of International Financial Markets, Institutions and Money*, 16 (2): 123-142.
11. Devenow, A. and I. Welch (1996), 'Rational Herding in Financial Economics', *European Economic Review*, 40 (3-5): 603-615.
12. Feng, L. and M.S. Seasholes (2004), 'Correlated Trading and Location', *Journal of Finance*, LIX (5): 2117-2144.
13. Galbraith, J. K. (1994), 'A Short History of Financial Euphoria', Livanis Publications (Greek Edition).
14. Gilmour, S. and E. Smit (2002), 'Institutional Herding: Evidence from the South African Unit Trust Industry', *Investment Analysts Journal*, 55 (2): 14-26.
15. Gleason, K.C., C.I. Lee and I. Mathur (2003), 'Herding Behavior in European Futures Markets', *Finance Letters*, 1: 5-8.
16. Gleason, K. C., I. Mathur and M. A. Peterson (2004), 'Analysis of Intraday Herding Behaviour Among the Sector ETFs', *Journal of Empirical Finance*, 11 (5): 681-94.
17. Henker, J., T. Henker and A. Mitsios (2006), 'Do Investors Herd Intraday in Australian Equities?', *International Journal of Managerial Finance*, 2 (3): 196-219.
18. Hirshleifer, D. (2001), 'Investor Psychology and Asset Pricing', *Journal of Finance*, 56 (4): 1533-1598.
19. Hirshleifer, D. and S.T. Teoh (2003), 'Herd Behaviour and Cascading in Capital Markets: A Review and Synthesis', *European Financial Management*, 9 (1): 25-66.
20. Hwang, S. and M. Salmon (2004) 'Market stress and herding', *Journal of Empirical Finance*, 11 (4): 585-616.
21. Kim, W. and S-J. Wei (2002a), 'Offshore Investment Funds: Monsters in Emerging Markets?', *Journal of Development Economics*, 68 (1): 205-224.
22. Kim, W. and S-J. Wei (2002b), 'Foreign Portfolio Investors Before and During a Crisis', *Journal of International Economics*, 56 (1): 77-96.
23. Lobao, J. and A.P. Serra (2006), 'Herding Behaviour: Evidence from Portuguese Mutual Funds' in 'Mutual Funds: An International Perspective', John Wiley and Sons, Edited by Greg N. Gregoriou.
24. McQueen, G., M.A. Pinegar and S. Thorley (1996), 'Delayed reaction to good news and the cross autocorrelation of portfolio returns', *Journal of Finance*, 51 (3): 889-919.

25. Miller, M.H., J. Muthuswamy and R.E. Whaley (1994), 'Mean Reversion of Standard and Poor 500 Index Basis Changes: Arbitrage-Induced or Statistical Illusion?', *Journal of Finance*, 49 (2): 479-513.

26. Prast, H.M. (2000), 'Herding and Financial Panics: A Role for Cognitive

27. Siriopoulos, C., R. Tsotsos and S. Karagianni (2001), 'The Impact of Non Linearities, Thin Trading and Regulatory Changes in the Efficiency of an Emerging Capital Market'. *The Journal of Applied Business Research* 17 (4): 81-92.

28. Solibakke, P.B. (2005), 'Non-linear Dependence and Conditional Heteroscedasticity in Stock Returns. Evidence from the Norwegian Thinly Traded Equity Market', *European Journal of Finance*, 11 (2): 111-136.

29. Trueman, B. (1994), 'Analyst Forecasts and Herding Behaviour', *Review of Financial Studies*, 7 (1): 97-124.

## Appendix

**Figure 1. BIRS-chart (17/5/2004 – 9/6/2009).**



**Table 1. Sample Descriptive Statistics (sample period: 17/5/2004 – 9/6/2009).**

	Raw returns		Returns adjusted for thin trading		Accounting for trading inactivity	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
CSAD	0.0193	0.0135	0.0369	0.0247	1.2901	0.9539
CSSD	0.0282	0.0219	2.8136	1.9500	0.0444	0.0353
Average daily number of stocks	18.9		18.9		7.3	
Average daily number of winners			3.5			
Average daily number of losers			3.8			
BIRS average return			-0.000075			

**Table 2. Regression results for the Christie and Huang (1995) model.**

	$\alpha_0$	$\alpha_1$	$\alpha_2$	Adjusted R <sup>2</sup>
Panel A: $\pm 1$ standard deviation from average				
Raw returns	0.02838	0.0125	0.0126	0.063
	(40.48)*	(6.50)*	(6.44)*	
Returns adjusted for thin trading	1.2610	0.0956	0.0347	0.001
	(62.76)*	(1.73)	(0.62)	
Accounting for trading inactivity	0.0468	0.0108	0.0097	0.015
	(40.12)*	(3.36)*	(3.03)*	
Panel B: $\pm 2$ standard deviations from average				
Raw returns	0.0301	0.0225	0.0179	0.051
	(47.18)*	(6.09)*	(4.92)*	
Returns adjusted for thin trading	1.2656	0.3281	0.0473	0.007
	(69.94)*	(3.08)*	(0.46)	
Accounting for trading inactivity	0.0483	0.0210	0.0095	0.011
	(45.70)*	(3.42)*	(1.57)	
Panel C: $\pm 3$ standard deviations from average				
Raw returns	0.0307	0.0421	0.0196	0.046
	(49.04)*	(6.83)*	(2.71)*	
Returns adjusted for thin trading	1.2752	0.1201	-0.0254	-0.001
	(71.65)*	(0.69)	(-0.12)	
Accounting for trading inactivity	0.0486	0.0538	0.0110	0.025
	(47.25)*	(5.31)*	(0.93)	

This table reports the estimated coefficients of the following regression (t-statistics in brackets; \* = indicates significance at the 1 percent level):  $CSSD_t = \alpha_0 + \alpha_1 D_t^{UP} + \alpha_2 D_t^{DOWN} + \varepsilon_t$

**Table 3. Regression results for the Chang et al. (2000) model.**

	Up-market model				Down-market model				Test statistics	
	$\alpha$	$\gamma_1^{UP}$	$\gamma_2^{UP}$	Adjusted R <sup>2</sup>	$\alpha$	$\gamma_1^{DOWN}$	$\gamma_2^{DOWN}$	Adjusted R <sup>2</sup>	F <sub>1</sub>	F <sub>2</sub>
Raw returns	0.0099 (14.36)*	1.0022 (10.39)*	7.5608 (3.19)*	0.645	0.0082 (14.26)*	1.2943 (15.09)*	-2.8705 (-1.44)	0.616	11.30	27.22
Returns adjusted for thin trading	0.4522 (16.96)*	0.9983 (24.39)*	0.0144 (1.47)	0.827	0.5475 (21.09)*	1.0104 (24.42)*	-0.0109 (-0.99)	0.820	1.31	$4.26 \times 10^{-16}$
Accounting for trading inactivity	0.0279 (17.31)*	0.2316 (2.85)*	4.0744 (6.74)*	0.414	0.0241 (15.04)*	0.5999 (7.48)*	-1.8310 (-2.62)*	0.169	21.07	71.15

This table reports the estimated coefficients of the following set of regressions (t-statistics in brackets):

$$CSAD_t^{UP} = \alpha + \gamma_1^{UP} |R_{m,t}^{UP}| + \gamma_2^{UP} (R_{m,t}^{UP})^2 + \varepsilon_t$$

$$CSAD_t^{DOWN} = \alpha + \gamma_1^{DOWN} |R_{m,t}^{DOWN}| + \gamma_2^{DOWN} (R_{m,t}^{DOWN})^2 + \varepsilon_t$$

F<sub>1</sub> and F<sub>2</sub> statistics test respectively the following null hypotheses:  $\gamma_1^{UP} = \gamma_1^{DOWN}$  and  $\gamma_2^{UP} = \gamma_2^{DOWN}$ ; \* = indicates significance at the 1 percent level.

# Chapter 12.

## BANKING AND SME FINANCING, A DIFFICULT RELATIONSHIP: LESSONS FROM A SURVEY INTO TUNISIAN BANKS

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### Abstract

*SMEs financing is a major challenge that most developed as well developing or in transition countries have to taken up. In the case of Tunisia, this type of firms forms the backbone of the economy and provides undoubtedly a key role in its development. However, these SMEs suffer from underfunding, lacking of own resources; and therefore, they are prime candidates to demand bank loans. In this paper, through a questionnaire survey conducted among Tunisian banks, we highlight and analyze the behavior of these banks facing these small firms seeking financial sources for their investment.*

*Key words:* SMEs Financing, Bank Loans, Tunisian Banks

The universe of small and medium enterprises is very diverse, which explains the absence of a universal definition of SMEs. In Tunisia, there is no official definition of them but a suitable definition has been proposed by the Fund for the Promotion of Industrial Decentralization (FOPRODI) which considers that, in the industrial and service sectors, a SME is a firm with a stock of total investment less than 2.7 million Euros<sup>2</sup>. Even if this amount seems to low, the very large number of SMEs, in Tunisia, provides more than 80% of the Gross National Product and they could be the main basis of the country's economic development if their financing were easy, but is it not the case (Section 1); therefore, the role of Tunisian banks in financing the economy, and SMEs in particular, has to be analyzed (Section 2); however, in Tunisia like in many other countries, banks are reluctant to finance SMEs and, in order to understand this behavior, a questionnaire survey has been held into the main Tunisian banks ; Section 3 presents and summarizes the main results oh this survey. To conclude, a list of banks recommendations stemming from this survey is given.

### 1. SMEs financing, banks and economic development

SMEs do not have the same financial capacity than large firms and, in small countries, where they produce the main part of national product, they face high difficulties to enlarge their capital<sup>3</sup>. SME's own funds are insufficient to finance their investments whereas their access to bank loans remains, which is the case in a country like Tunisia, where bank's financing is the only means of SME's financing, given the narrowness of the national financial market. The difficulty of obtaining bank credit is mainly attributed to the risks that characterize such firms.

Following the OECD observer, "SMEs form the backbone of all economies and are a vital source of economic growth, dynamism and flexibility in both advanced industrialized countries than in

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<sup>2</sup> If we consider a Euro is equal to 1.85 Tunisian Dinar.

<sup>3</sup> EL OUARDANI H., (2002), "Contribution to the theoretical analysis of the attractiveness of FDI: The Case of Tunisia through the experience of multinational SMEs", Ph.D. Thesis in Economics, University of NICE Sophia Antipolis, CEMAFI.

emerging economies and developing countries<sup>4</sup>", and they occupy an important place particularly in the industrial and services activities. Indeed, their importance is justified by the fact that they stimulate the spread of private ownership and entrepreneurship development; they are also flexible and can adapt quickly to market changes; so a competitive SME's sector is considered as one of the conditions for a stable economic development in the context of globalization. They generate also employment, and thus contribute to reduce poverty and unemployment, including self-employment of individual entrepreneurs, especially in disadvantaged communities; they contribute to the diversification of economic activity and significantly to trade, particularly the international trade; last but not least, they contribute significantly to local and regional development in a country like Tunisia and also to development of border regions and facilitate intercultural exchange with neighboring countries.

In the context of economic integration, SMEs occupy a strategic position favored by their structure, their size, their reactivity and, therefore, this type of firm is vital for any economy especially that of developing countries. Some studies have highlighted their role in growth. Indeed, Ayyagari and Beck (2003)<sup>5</sup> showed that greater importance of SMEs in total employment is associated with a higher GDP per head and higher annual growth of this one.

As in most countries, the importance of SMEs in the productive sector of Tunisia continues to grow. Indeed, SMEs are the main source of employment, of entrepreneurial skills, improving value-added innovations and also economic and social cohesion within the nation.

Then, for the Tunisian government, it is important to promote this kind of entrepreneurship and to improve the SMEs' environment to enable them to face the challenges of today's "globalized" economy.

To prepare the national industry and the business sphere to face more fierce competition after the WTO agreement's signing, the Tunisian government has adopted several support measures and programs to help SMEs, particularly those operating in manufacturing sectors, in order they withstand competition and ensure their economic sustainability both nationally and globally.

The production structure in Tunisia is constituted by 99.6% of SMEs<sup>6</sup> with only 12% of them operating in the industrial sector and 88% in services activities<sup>7</sup>. These SMEs are involved in job<sup>8</sup> creation up to 70% and cover 50% of industry's exports. However, "if the company assumes no doubt a key role in the development of the Maghreb economies, and particularly of the Tunisian economy, companies and SMEs in particular are for the most part, family businesses, small size, under-capitalized, and do not have enough resources in the long term to finance their investments properly"<sup>9</sup>. The lack of transparency in management is an unfortunately widespread feature in Tunisian companies, which often have bad information systems that do not allow obtaining comprehensive and reliable financial information. Situation from which one concludes that this lack of transparency and reliable information is a source of risk for lenders, whereas these small firms need money for their basic businesses. Therefore, faced with this situation characterized by insufficiency of capital and lack of financial transparency, the financial system is obliged to limit its funds contribution and, even if certain financing institutions turn "blind eye" to this situation, they require significant guarantees.

Now, banks are institutions that facilitate transactions, collect financial resources and manage risk diversification. The banking system's ability to provide risk diversification ensures economic growth

<sup>4</sup> The OECD Observer, February 2007, p.1.

<sup>5</sup> Ayyagari and Beck (2003), "Small and medium enterprises across the globe: a new database", *World Bank WPS 3127*

<sup>6</sup> Statistical data collected from the Agency for Promotion of Industry (API), June 2009.

<sup>7</sup> Business, real estate, tourism, transports and telecommunications.

<sup>8</sup> Berthomieu C, H. El Ouardani and C. Inoulli (2006), "Liberalization, upgrading of the banking and financing sector TH in Tunisia," Working Paper No. 2006/10, CEMAFI.

<sup>9</sup> Cf. Seminar on the theme "Transparency of Enterprises in Maghreb countries", (2006) May 24, the House Corporate Headquarters and the Arab Institute for Entrepreneurs, Ministry for Industry, Energy and SMEs.

in the long term by altering resource allocation and savings rates. On an intuitive way, investors do not prefer risk, when high return projects tend to be more risky than projects with low returns. Therefore, facilitating the diversification of risk, banks tend to favor the allocation of resources to projects with higher expected returns. This conclusion has been demonstrated by Saint-Paul (1992)<sup>10</sup>, Devreux and Smith (1994)<sup>11</sup> and others. A large division of risks and a better allocation of resources have theoretically ambiguous effect on savings rates. In addition to the link between risk diversification and capital accumulation, risk diversification is facilitated by technological change coupled with the increasing search for new financial instruments. Indeed, officials are still trying to develop advanced technologies to position themselves in new niches. Similarly, innovations accelerate technological change and in fact they increase the risk. The ability to hold diversified portfolios of innovative projects help in theory to reduce risk and to promote investment in new activities. Therefore, the banking system which facilitates risk diversification can accelerate technological change and improve the effectiveness of sectoral activities, boosting thereby economic growth.

## 2. The role of Tunisian bank in financing the economy and SMEs in particular

The Tunisian banking system has grown steadily in response to environmental changes and this, through the reform of capital markets, reshaping of the banking industry and restructuring of banks to consolidate the sector and improve asset quality, etc.

The Tunisian banking sector has experienced since the late ninety, a change in its structure due to movements of regulation and liberalization initiated. The restructuring of the banking sector, liberalization and financial globalization have been the source of a reorganization that has affected the structure of the Tunisian banking system, which has registered, therefore, a qualitative<sup>12</sup> and quantitative development.

Like banking systems in major industrialized countries, the Tunisian one has experienced a period of increased competition following the various financial reforms. Indeed, financial globalization was responsible for creating:

- new financial products to hedge risks of exchange and interest rates;
- new markets such as the granting of consumer credit;
- new business (financial engineering);
- new actors and financing to increase competition vis-à-vis the banking system in various markets. However, even if the bank credit constitutes the principal source of financing of the Tunisian economy, the banks are conscious that they cannot finance the "good companies", even if they are far from numerous, because these firms profit from other possibilities of less expensive financing

The restructuring of some banks revived the takeovers within the sector. The participation of foreign investors in the capital of banks has been encouraged by the government; then, the number of private banks dominated the composition of the banking system. The constitution of banking groupings aims at the consolidation and the reorganization of this system so that it can cope with competition.

### 2.1. Bank financing of the Tunisian economy

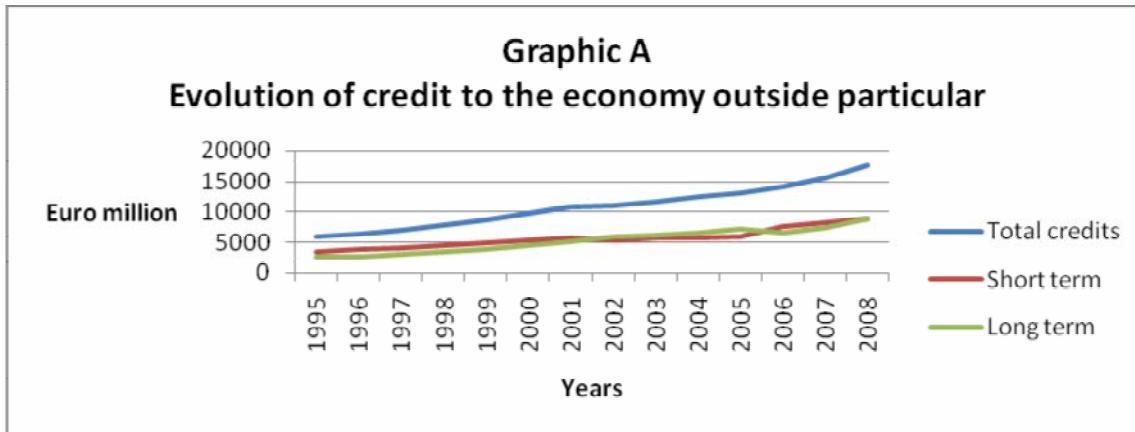
The Tunisian banking structure plays a decisive role in the financing of the economy. So, the loans authorized by the Tunisian banking sector to the private sector represented, in 2008, 65.4% of the GDP.

<sup>10</sup> Saint-Paul G., (1992], "Technological Choice, Financial Markets and Economic Development", *European Economic Review* 36, pp.763-781.

<sup>11</sup> Devereux, B & Smith, G. W, (1994), "International Risk Sharing and Economic Growth," *International Economic Review*.

<sup>12</sup> Mergers and acquisitions, for example, that between STB, BNTD and BDET; change the status of TQB, BTKD and BTEI in 2004 to become universal banks, the acquisition of UIB and BS by foreign banks.

The analysis of the amounts of the credits granted to the economy (except private individuals) show that they not cease increasing throughout the period chosen for our study, the period subsequent to the signature of the free trade agreement between Tunisia and European Union, in July 1995 (graph A).



Sources: *Reports of the BCT (1995-2008)*

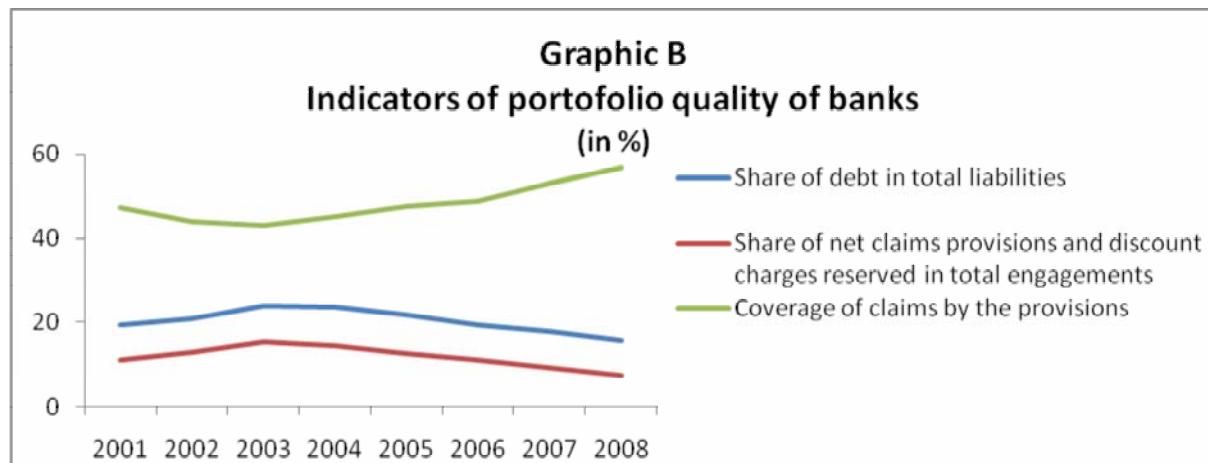
At the end of the year 2008, the share of the public companies in the volume of the credits offered by the banking structure was reinforced moving from 5,4%, in 2007, to 6,9% and, consequently and taking into account a quasi-stagnation of that of the private individuals, the share of the private companies returned from 72,6% to 70,9% during the same period.

## 2.2. The financial situation of Tunisian banks

In accordance with the objectives of the BCT and of the XI<sup>th</sup> Plan of development to carry the provisions' rate of the banking sector to 70%, in 2009, and, in order to prepare the banks for adopting the Basle II<sup>d</sup> standards, banks continued their effort on the matter, thus carrying an amount for provisions from 2.406 MDT, in 2008, that is to say a progression of 16,7%. The basic idea is that the non transparency of the firm's accountancy is expensive and this, in multiple ways: difficult and more expensive financings, higher frauds.

The financial situation of the sector was marked, on the one hand, by a continued improvement of the quality of its portfolio with a fall of the classified credits' share of approximately 3 points of percentage, drooping to 11,4% and, on the other hand, by the consolidation of the cover of these credits by provisions and agios, to account for 77,8% at the end of 2008; it has been the consequences of the effect of the adoption of more rigorous rules with the abandonment, by certain financial institutions, of taking into account guarantees (on the financed projects or outside from any projects); the reinforcement of the effort for recovering the credits and of the control of additional risk, and the recourse by these financial institutions to techniques of bad loans radiation had also a positive effect in this consolidation (see graphic B).

As far as the portfolio's quality is concerned, the year 2008 was marked by the continuation of the risks control and a dynamic treatment of the credits classified by the banks, which resulted in the fall of the credits classified part in the total of engagements from 2,1 points of percentage, to slide down to 15,5%, compared to 17,6%, at the end of 2007; this share, net from provisions and reserved agios, amounts to 7,4%, compared to 9,1% at the end of 2007. Then, it remains very important to note that the financial situation of the Tunisian banks seems to be favorable for doing their job, as bankers, in very good conditions to funding companies need financing, especially SMEs



Sources: Reports of the BCT (1995-2008)

However, what is the economic reality for Tunisian SMEs, when they want to find credit from Tunisian banks? In order to be able to answer this question, we have initiated an inquiry into the Tunisian bank behavior concerning their business relations with SMEs.

### 3. Banks and SMEs in Tunisia: a Survey Analysis

This survey was conducted by the means of a large questionnaire submitted to the ten largest Tunisian banks and it has been completed through interviews with banks' officials from the SMEs credit department of these banks.

The objective of this survey is to analyze the nature of the relationships between Tunisian banks and SMEs; our approach aims at verifying the hypothesis of the existence of credit rationing for SMEs in the country and our intention was to evaluate the role of asymmetric information in the bank's decision to grant credit for SMEs.

#### 3.1. The constitution of the sample

The Tunisian banking sector consists of twenty universal banks<sup>13</sup> including the four largest accounting for 55% of total banking assets, the six medium accounting for 37% of these assets and the ten smaller banks accounting for only 8% of the bank assets. For that reason, we focused our investigation to the ten largest banks whose assets constitute 92% of the total assets of banks.

Among the largest banks, we find three public banks (STB, the BNA and BH<sup>14</sup>) whose total assets represent 41.2% of total assets of banks, in 2008, and the competition of these banks are allocated mainly on the basis of government guarantees.

#### 3.2. Analysis of the questionnaire survey results

The main lessons from the survey can be summarized as follows:

1. The private or public banks prospect the old companies which are already re-elected on the market whereas it is not the case for the young companies in the course of creation, independently of their size.

<sup>13</sup> A universal bank is a bank which can do everything, i.e. which can choose to exert, in a free and not regulated way, the businesses of the financing of the investments, council, assistance and intervention on the financial markets, including insurance trades. Universal banks in Tunisia are : STB – BIAT – UIB – Amen Bank – BNA – Attijari Bank – BTK – TQB – BT – BLT – STUDI Bank – BTS – BTE – CITI Bank – ATB – UBCI – BH – BFPME – BTS.

<sup>14</sup> The fourth bank is closed BIAT.

Concerning public banks, they finance in priority public companies and answer at the requests of SMEs and other firms, once the application files are complete and fulfil the bankers' requirements. In the case of private banks, they compete with the public ones as regards the market share for financing public borrowings because of their creditworthiness and of the weak risk incurred, despite the importance of borrowing

**2.** When the company appears risky or when information misses, the bankers do not give credit even if this firm is a usual client and, in best case, they claim a rewriting of the borrowing file by specifying information that it is necessary to provide, by requiring a better quality and a more significant quantity of information in order to reduce "the information asymmetry" and that, in order to reduce the risk and to select the most profitable projects as well as possible.<sup>15</sup>

**3.** The banker, facing a credit application for a project operating within an industry considered at risk, generally refuses to lend and proceeds to credit rationing with regard to a non-client SME in spite of the fact that this firm can have the assets to succeed. The behavior of the banker may take another look against a client company of the bank and the banker proceeds to a revision of the interest rate in spite of the fact that the spread of interest is very limited since interest rates are regulated by the Central bank.

**4.** Concerning the elaboration of the credit contracts, Tunisian commercial banks very often proceed to restrictive clauses. Indeed, as far as a former customer is concerned, the bank requires usual guarantees such as house, ground, car,..., whereas, when the borrower is a small and a new one enterprise, additional guarantees are imposed such as a participation of the BFPME (the public Bank specialised for SME financing) and/or the guarantee of the SOTUGAR (a State guaranty Agency) etc. If the project deals with real estate promotions, the banker requires personal and all usual guarantees.

It is also important to note that, even if the manager of the SME affords all the required guarantees, the negotiation of the interest rate remains very limited. Indeed, for the public banks, the risk premium is a function of the size of the company, of the duration of the credit and of the branch of industry, whereas, for private banks, this allowance for risk does not depend on the duration of the credit but, primarily, of the size of the company, its stock exchange quotation and its branch of industry. And in no case, the global economic situation can act on this margin. However, according to the present international crisis<sup>16</sup> and as far as the morose prospects for world economic growth as advanced by the International Monetary Fund (IMF) and their repercussions on the national economy are concerned, the Board of the BCT (Central Bank of Tunisia) decided to lower the prime rate of 75 basic points to bring back this rate from 5,25% to 4,5%<sup>17</sup>.

**5.** The questioned bankers underline the existence of a failure on the level of the ethics of the contractors, primarily from a moral hazard type; according to certain private banks, between 15 % and 20% of the files are dishonest and impunity encourages contractors to adopt a cheating behaviour based on the presentation of false balance-sheets and false financial statements. Consequently, the transparency of the companies is considered to be bad by the bank clerks in charge of the credit supply to SMEs and the bank is obliged to re-elaborate and to reconstitute the balance-sheets of these firms.

**6.** According to the theory of the credit rationing, in the case of information asymmetry, the banker exerts control on the company once that an effective non-payment took place. In the case of Tunisian banks, a follow-up of the funds allowance, once the credit is granted, is quasi automatic through the control of the movements in the accounts of the company and of its financial statement, and also through targeted visits for expertises and the reports written after these visits.

<sup>15</sup> Cf. Fasano, M. and T. Gfeller (2003) and Shepherd and Udell (1998).

<sup>16</sup> Even if the so-called worldwide "subprime crisis" does not impact, until now, the Tunisian financial and banking system.

<sup>17</sup> Notice of the Board of Directors of the BCT meeting February 17, 2009, Report of the BCT 2008, P. 193.

Banks require intermediate accounting book only at the time of one management credit renewal. Public banks generally contact the companies to follow the routing of the granted funds; indeed, if, during the exploitation, the banker periodically contacts SME (three times usually per annum or more), on the other hand, when the company is in the course of its creation, the number of these contacts between firm and bank depends on the progress report on the financed project. Private banks usually contact the companies either when they seek to encourage them to contract another credit, in a pure commercial logic, or when there are unpaid bills; this behaviour is in conformity with the credit rationing theory.

Control, in this case, appears like a means impossible to circumvent to detect the early signs of failure of the SME, which will make it possible the bank to evaluate the possibility of viability of the project and, consequently, to evaluate the risk of non solvency of SME in order to intervene at the good time and to ensure the refunding of the credit.

**7.** All the questioned bankers in our survey estimate that the financial capitalization of the company is very significant, owing to the fact that it makes possible to evaluate the own financial capital of the firm (indicator of risk management) and it bears information on the firm's solvency (FP/total assessment), on its working capital (adequacy of the financing, etc), on its rate of debt, its cash flows, etc.

**8.** Bankers have internal grids of analysis<sup>18</sup> to decide if they can or not grant a credit to a company. In their decision, they give a great importance to the financial standing of the company and its profitability and this through the analysis of a battery of countable indicators (group accounts for the groups), the existence of incidents of payment or doubtful debts, of possible legal procedures against the company and/or to its leaders, as well as any significant element of the environment of the company.

Indeed, the totality (100%) of the questioned bankers confirms that the degree of implication of the managing director or from his partners, which appears in the capitalization of the company, is very significant in the decision of the credit granting. In the same way, 90% of the bankers are favourable to the presence, in the authorized capital of the company, of a capital risks company or of a reputed company on the market. But this can be unfavourable because, on the one hand, this means a lack of availability of the firm own capital stocks and, on the other hand, that the associated company does not have enough importance in the branch of industry in question.

**9.** In the same way all the questioned bankers answered that they were very favourable to the presence of a large company in the authorized capital of the SME because such a large company goes bail for the SME which asks for a credit

**10.** Seventy percent of bankers believe that the certification of SMEs to a standard international standard such as ISO has a very positive impact on the trial and the bank's decision to grant credit or not.

**11.** The bankers surveyed judge that the project co-financing by the BFPME and its active participation in the financing and the development of the company supports its financing if the project is classified in the same basket as other projects not co-financed, and this because of the division of the risk and the sustainability of the relationship with the SME.

**12.** The questioned bankers judge that the presence of public funds to support SME financing is very effective, because such funds make it possible to take part in the achievement of the economic and

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<sup>18</sup> Unfortunately we could not reach this grid because, according to the questioned banks, each bank works out its own grid, whereas in France, for the French banks, the Bank of France installed a scale of classification of the companies used by all the banks.

political objectives of the State, and this as regards regional development, jobs creation, sector development, etc. These incentives touch very broad fields of activity: metallurgical and electric industries, tourism... but 20% of the bankers surveyed criticize the effectiveness of the SME managers, who profited today from these funds and who supported, in their managerial strategies, profit maximization and thus supported the short term with the detriment of development and long-term growth of the firm.

## Conclusion

The Tunisian financial system is not enough efficient for SMEs financing, is spite of the fact that it enjoys a lot of money liquidity; therefore it is very useful to propose some recommendations inferred from our banks survey, which can be summarized as follows:

- 1** - Bankers wish that SME managers choose innovating and profitable projects and be ready to rather adopt a vision of long term, by supporting the development of the firm rather than the immediate profit;
- 2** - Bankers wish that, in the university diplomas, formations be introduced having for object the enterprise (culture of enterprise), and based on practical case studies;
- 3** - They also wish that new SME promoters had the opportunity to get experience in existing companies before even assembling their own project;
- 4** - They ask that new SME promoters endeavour to present new innovating projects adapted to the national and international economic environment;
- 5**. They ask that the structure of SME financing be consolidated by a structure of solid shareholding in term of financing and experiment;
- 6** - They ask for a better juridical effectiveness for the settlement of contentious situations;
- 7** - They wish more transparency as regards financial information (published activity report certified by an independent Auditor) and better SME governance;
- 8** - They ask that SMEs ensure better workers' qualification, more formation, a more adequate information system, more tenacity, more presence, more technicalities, all factors contributing to ensure the success of their projects.

## References

1. Ayyagari Mr. Beck and TH. (2003), "Small and medium enterprises across the globe: a new database", *World Bank WPS 3127*.
2. Beck, T. and A. Demirguc-Kunt (2006), "Small and medium size enterprises: access to finance a growth constraint," *Journal of Banking & Finance*, Vol. 30, No. 11, p. 2931-2943.
3. Berger and Udell (2002), "Small firms and relationship lending: the importance of bank organizational structure", *Journal of Financial Economy*, Vol. 50, pp 187-229.
4. Cieply S. et M. Grondin (1999), « Expertise et contrôle des risques -PME par le chargé de clientèle entreprises : une alternative au rationnement », *Revue d'Economie Financière* n° 54, pp 59-78.
5. Cherif M. (1995), « Asymétrie d'information et financement des PME innovantes par le capital-risque», *Revue d'Economie Financière*, n°54, pp. 163-178.
6. Belletante B., N. Levratto et B. Paranque (2001), *Diversité économique et mode de financement des PME*, Edition Harmattan.

7. Berthomieu C., H. El Ouardani et C. Inoubli (2006), « Libéralisation, mise à niveau du secteur bancaire et financement du secteur Textile-Habillement en Tunisie », Travail de Recherche, n° 2006-10, CEMAFI.
8. Devereux, M. & Smith, G. W, (1994), "International Risk Sharing and Economic Growth," *International Economic Review*
9. Eber N. (2001), « Les relations bancaires de long terme : une revue de la littérature », *Revue d'Economie Politique*, vol. 111 (2), mars-avril, pp 195-246.
10. El Ouardani H., (2007), « Les PME et le financement bancaire», Communication au XIème Rencontre Euro-méditerranéennes, Université de Nice Sophia Antipolis, CEMAFI, novembre.
11. EL Ouardani H., (2002), *Contribution à l'analyse théorique de l'attractivité des IDE : le cas de la Tunisie à travers l'expérience des PME multinationales*, Thèse pour l'obtention du Doctorat en Sciences Economiques, Université de Nice Sophia Antipolis, CEMAFI.
12. Fasano, M. and T. Gfeller, (2003), «*The challenges of dialogue between SMEs and the bank s' SME*», Foundation Switzerland and Swiss Banking.
13. Minister of Industry, Energy and SMEs (2006), Seminar under the theme: «*Transparency in Enterprises in the Maghreb*», the House Corporate Headquarters and the Arab Institute for Entrepreneurs, May 24
14. Observatoire européen des PME (2003), «*L'accès au financement pour les PME*».
15. Pettit, R.R. and R.F. Singer (1985), «Small business finance: a research agenda», *Financial Management*, Vol.14, No.3, pp.47-60.
16. Saint-Paul G., [1992], « Technological Choice, Financial Markets and Economic Development», *European Economic Review*, 36, pp.763-781.
17. Saint-Pierre, J. (1999), *La gestion financière des PME. Théorie et pratique*, Québec, Presses de l'Université du Québec.
18. Stiglitz J. and A. Weiss ( 1981), « Credit rationing in markets with imperfect information » *The American Economic Review*, vol. 71, n°3, pp. 93-410.
19. Wynant, L. and J. Hatch (1991), *Bank and small business borrowers*. The Western Business School, the University of Western Ontario, London.

# Chapter 13.

## INFLUENCE OF THE CORRUPTION ON THE FDI LEVEL, CASE OF SERBIA

*Damien Bazin<sup>1</sup>, Marko Danon<sup>2</sup>*

### Abstract

*In this text we will show a connection between the level of corruption and the level of the FDI entering an economy. We are focusing the institutional efficiency and institutions as regulating organisms. After presenting the theoretic approach, we will approach our theoretic conclusions on the case study of Serbia. Principal results of the study are deeper understanding of the process by which the corruption transmits its effects thru the economy, in this case, on the FDI.*

*Key words: Corruption, FDI, Institutions, Transition, Institutional Efficiency*

### 1. Introduction

During the past decades, the corruption has become one of the major problems of the transition economies. Not only that the corruption widens the gap between the social classes, but it also raises suspicions of the foreign investors. Importance of the studying the relation between the foreign direct investments (FDI) and the corruption comes from the crucial role of the FDI for the transition countries. This role is crucial for the FDI speed up the development, technology transfer, commerce, etc.

There are numerous definitions of the corruption. According to the Transparency International ([www.transparency.org](http://www.transparency.org)), we can define the corruption as: "Corruption is commonly considered as the misuse of public power for private benefit, thus affecting all the society, in special the less well-off stratus, and, in a well-known way, hampers business activity and economic development.". We can always state that the corruption has a hazard of decomposing the social tissue, its institutions, its economic efficiency, even its moral codes. It is also possible to perceive that the corruption is a game of three players – bribe offering agent, bribe receiving agent and the victim. A company makes an IDE when it takes hold of at least 10% of the actions in a foreign company. An IDE can take several forms: acquisitions, privatizations, Greenfield investments. The latter are crucial for the transition economies, for they imply creating new enterprises *ex nihilo*. Companies choose the destination of their investment according to a multitude of criterion. Generally, we can state that the size of the receptive country (with the size of its national market), salary level, natural resources level, macroeconomic and political stability are one of the most important causes. The investors are motivated by the augmentation of the profit, either by penetrating the market of the receptive country or a market of a third country (by exporting the goods or services from the receptive country). Governments attract the investors by different stimulus – fiscal and monetary politics or by other politics and regulations. Their interests are even more numerous than they are in case of companies – stabilizing the current account, technology transfer, unemployment reduction, limiting the regional disparities, enhancing the political

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relations with the investor's home country. Apart from the stimulus, the country disposes with certain advantages, such as the general literacy, productivity, stability or overall attraction. It is important to concentrate on the corruption as a dominant constant, the one that diminishes the total efficiency of the all factors by reducing the power of the country's institutions. Corruption is thus a corrosive element which reduces the certitude and deprives the agents of information; with the rise of the incertitude, the transaction costs rise as well; as the transaction costs rise, the profits fall. It is a very simple calculus, but these are only superficial costs. Corruption is not always directly connected with the FDI, but by three mechanisms – thru dissemination of asymmetric information, thru rise of the transactions costs and thru tarnishing the attraction perception. In our paper, we shall try to show that the high corruption countries have in general a low attraction for the investors. A different question we will try to open is that whether the rise of the FDI provokes a decline of the corruption level, or does the fall of the corruption leads to the rise of the FDI. We shall also try to answer how it is possible that some countries managed to attract notable investments with having a high level of corruption.

## 2. Consequence of the institutional imperfections on the level of the FDI, the case of Serbia

There are many schools of thought relating to this problem, but two are particularly important for the issue. These two schools differ on the question whether the corruption is a "sand or grease", that is, whether the corruption up to a certain point may be favorable for the investments. Two theories agree that the corruption is generally unfavorable, but the latter school claims that the corruption up to some point can be favorable if the institutional system is too rigid<sup>3</sup>. Wei (1997) has empirically shown, on a range of data, that the rise of the corruption level in a host country has a negative effect on the influx of the FDI. Egger and Winner (2005), show that the corruption is hurting the foreign investors by raising the transaction costs and bribery. Before we start studying the consequences of the institutional imperfections on the level of the FDI, we should first imagine of the perfect system properties, or, the system with perfect institutions. According to Cartier - Bresson<sup>4</sup>, roots of the corruption are to be found in five categories:

1. Information asymmetry
2. Monopoly vested to the functionaries
3. Absence of the sense for the responsibilities
4. Powerless system of sanctions
5. Size of the public rents.

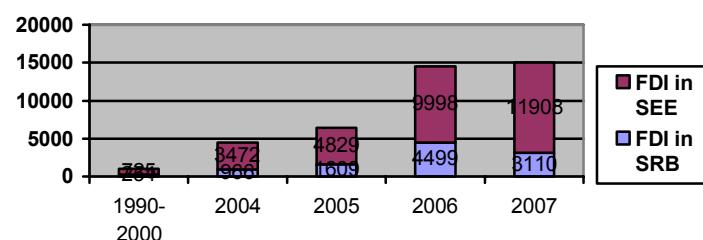
This means that a perfect system should dispose with totally perfect information symmetry, combined with the absence of the monopoly vested to the functionaries, with a rigorous moral code, an omnipotent judiciary system. Of course, such system has never existed; however, the distance of one society from this state is a reflection of its corruption level. If we follow this logic, it is easy to perceive the connection between the corruption and the FDI. We can imagine that in a perfect system, all the companies, be it foreign or domestic, do not have any barriers for doing business. Once that any of these conditions disappear, system becomes vulnerable to the corruption. It is so, the health of the institutions that possesses a dominant force of attraction for the foreign investors; as the institutions can emit the information in a substantial quantity and quality in order to augment the transparency. Institutional health also means that the institutional size should not be too large. The more one state wants to regulate, the more it exposes itself to the menace of the corruption, as more regulations demands more procedures and more functionaries, which can create a situation wholly opposed to the desired one.

<sup>3</sup> Al Alvaro Cuervo-Cazurra (2008), "Better the devil you don't know: Types of corruption and FDI in transition economies", *Journal of International Management*, vol.14, pp.12–27

<sup>4</sup> Jean Cartier Bresson, (2008), *Economie politique de la corruption et de la gouvernance*, L'Harmattan, Paris, 246 p.

After the fall of the former regime and its institutions, east European transition countries had to create new institutions, based on the new rules of the market economy. In most of these countries the role of the state became to shift to a citizen service, rather than to an omnipotent regulatory body. As these countries had no experience, and as the state apparatus was brand new, the new institutions were inefficient. Serbia is not usual, as unlike the other countries in the region, it has not fully finished with its old institutions during the 90's, and it hasn't really started producing the new ones. It is why Serbia had an institutional vacuum, a crisis harder than in the most of comparable countries. Only in the year 2000, Serbia actually started a reformation. The same year, the first significant FDI came flowing in the country. After 2000, the FDI level has risen significantly, but on the negative side the FDI structure is not favorable for the development. This means that the investments are almost exclusively related to the privatizations, much less in the form of Greenfield investments. Even within the Greenfield investments, the most of them are focused to the non industrial sector. Industrial Greenfield investments, as the east European experience shows, demand a highly stable political and macroeconomic situation. For us it is important to cite a part of the study of the CMI (Chr. Michelsen Institute, Norway)<sup>5</sup> on the corruption in Serbia: Corruption as a perceived problem for doing business was worse in Serbia than in the rest of the region... (Judiciary) 27% of respondents named the judiciary as the biggest problem... (Imports and exports) 20% of 2005 respondents stated that bribery to customs was frequent... (Legal framework) The 2005 survey found that regulatory uncertainty was a problem for 80% of businesses in 2005.... (Taxation) 60% having a problem with the tax administration. Over 20% of respondents reported having to pay bribes to tax inspectors... (Privatization) ... allegations of corruption surrounding a number of privatization deals, in particular when they involved companies that were competitive, and therefore attractive to investors. The allegations involved deliberately undervaluing state property for the benefit of potential buyers, the leaking of information to select competitors, and the intimidation of potential bidders. A recurring concern is that the privatization process is used to legitimize illicitly obtained money. Managers are known to strip off assets of the socially-owned companies they are in charge of, by selling parts to private buyers, despite being aware that such sales will be annulled by the Privatization Agency. The character of the reforms in Serbia is also well shown in the study of the UNCTAD (UN conference on Trade and Development): In the western Balkans, political insecurity, the fragmentation of markets and hesitant market reforms hindered economic development and kept away foreign investors during most of the 1990s... Consumption increased while production stagnated; the current account gap was financed by foreign aid. FDI came in the form of smaller ventures mainly supporting the import and distribution of consumer goods.

**Chart 1. FDI in Serbia and in the SEE, millions of USD<sup>6</sup>**



It is interesting to compare these results with the information concerning the ease of doing business and the perception of the corruption by the foreign investors. Here we have used the information of the World Bank<sup>7</sup>. The information is collected from the enterprises active in the region.

<sup>5</sup> CMI, (2007), "Corruption and doing business in Serbia", number 11, September

<sup>6</sup> Source:UNCTAD, [www.unctad.org](http://www.unctad.org)

<sup>7</sup> International bank for reconstruction and development (2009), "Doing business 2010 – Serbia".

**Table 2. The Doing business grades for 2010<sup>8</sup>**

<b>Factor</b>	<b>Rank</b>	<b>Factor</b>	<b>Rank</b>
Ease of Doing Business	88	Trading Across Borders	69
Starting a Business	73	Enforcing Contracts	97
Dealing with Construction Permits	174	Closing a Business	102
Protecting Investors	73	Registering Property	105
Paying Taxes	137	Getting credit	4

Each of the countries in the world is associated with a grade which is a combination of several other particular grades, concerning a specific field of interest for the foreign investors. According to the table, Serbia is evaluated with a very low overall grade, and even lower in some particular notes. Serbia has a particularly low grade with dealing with construction permits and paying taxes domains, one of the lowest grades in the world. This data correspond with the research of the Chr. Michelsen Institute. All the other notes are low, except for the getting credit, where Serbia is one of the most advanced in the world. Despite an absolute rise in the global ranking, Serbia is still situated very low – at ranking of 88, Serbia is far behind the regional competitors – Slovakia, Bulgaria, Hungary and Romania have the ranks of 42, 44, 47, 55 respectively. This difference may be a result of the fact that Serbia has started its transition in the year 2000, whereas all the others have started around 1989.

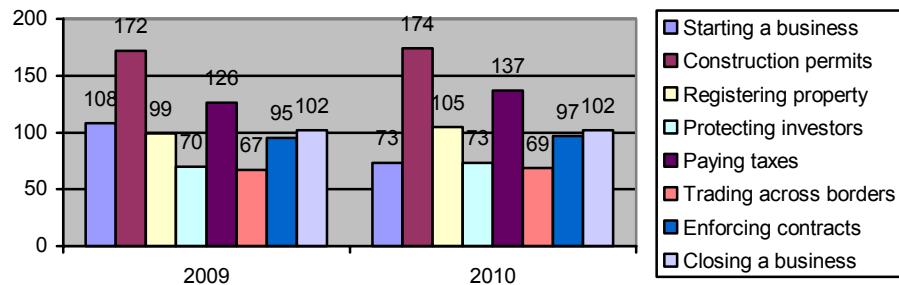
**Table 2. Important factors for doing business<sup>9</sup>**

<b>Factor</b>	<b>Procedures</b>	<b>Time days</b>	<b>Cost</b>
Starting a business	7	13	7,1 (%income per capita)
Construction permits	20	279	1907
Registering property	6	111	2,8 (% of property value)
Enforcing contracts	36	635	28,9 (% of claim)
<b>Factor</b>	<b>Extent of disclosure (1-10)</b>	<b>Extent of director liability index (1-10)</b>	<b>Strength of investor protection index (1- 10)</b>
Protecting investors	7	6	5,3
<b>Factor</b>	<b>Documents to export/import</b>	<b>Time to export/import (days)</b>	<b>Cost to export/import (USD/container)</b>
Trading across borders	6/6	12/14	1398/1559

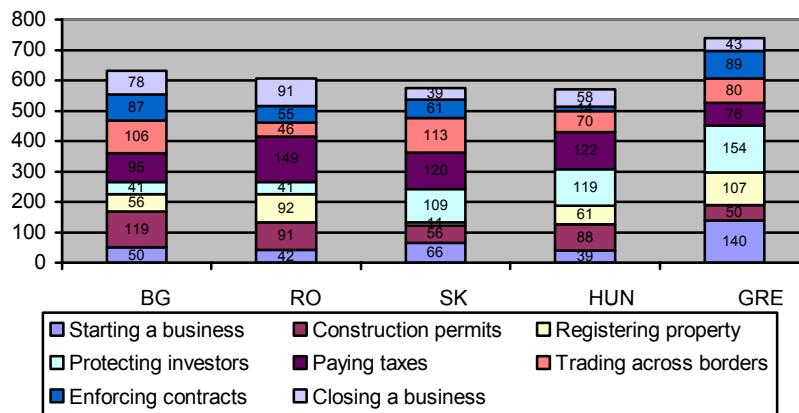
At this table we show the complexity of the problem for the foreign investors in Serbia. All the costs here imply the size of the transaction costs. For instance, in order to obtain a construction permit, it takes 279 days in Serbia, whereas the OECD average is only 157 days. In order to register property it takes 111 days in Serbia, and the OECD average is 25 days. In Serbia, companies pay different taxes 66 times a year, whereas the OECD average is 12, 8. Transaction costs lower the overall attraction of the country, but it also raises the corruption level. In a situation where the transaction costs are so high, a number of bribe offering and receiving agents is also on the rise.

We are going to present the dynamics of the selected number of factors that we find important, in a two year horizon.

<sup>8</sup> Ibid.<sup>9</sup> Ibid.

**Chart 2. Doing business, dynamic perspective<sup>10</sup>**

These factors are the source of the institutional corruption. Multiplication of the procedures and prolongation of their processing generate a possibility for the bribe offering and bribe demanding agents to do business. At the diagram it is possible to see the advance that Serbia has had at the domain of starting business, but stagnation at all the other fields. Again it is important to compare Serbian results to the results of the competing economies. At the following chart, we present these factors for a number of selected comparative economies.

**Chart 3. Doing business, comparison with the comparative economies<sup>11</sup>**

The presented data are an excellent example of the consequence of the institutional imperfection in Serbia. Institutional structure in Serbia is not solid, which provokes unfavorable business climate and a very fertile ground for the corruption. For instance, a “long queue” for getting a construction permit may be avoided by bribing an official who may have such power to exempt certain companies from the rule. So, not only that the bad system creates bad climate, but it also raises chances of the apparition of corruption.

The second group of data we use, however, is directly connected with the corruption. We used the research of Transparency International (TI), concerning the level of the perceived corruption. The TI used the information collected from different agencies and economic agents, be it residents or non residents. We present the data concerning Serbia and its comparative economies, but also the benchmark economies (the worst and the best one).

<sup>10</sup> Ibid.

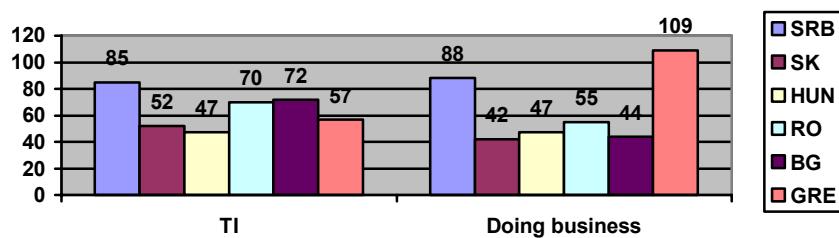
<sup>11</sup> Ibid.

**Table 3. Perceived level of corruption in 2008<sup>12</sup>**

Rank	Country	2008 CPI Score	Surveys Used	Standard Deviation	High-Low Range	Confidence range
1	Denmark	9,3	6	0,2	8,9 - 9,6	9,1 - 9,4
47	Hungary	5,1	8	0,6	4,2 - 5,9	4,8 - 5,4
52	Slovakia	5,0	8	0,7	3,5 - 5,9	4,5 - 5,3
57	Greece	4,7	6	0,6	3,5 - 5,3	4,2 - 5,0
62	Croatia	4,4	8	0,7	3,5 - 5,3	4,0 - 4,8
70	Romania	3,8	8	0,8	2,7 - 4,9	3,4 - 4,2
72	Bulgaria	3,6	8	1,1	2,4 - 5,6	3,0 - 4,3
85	Albania	3,4	5	0,1	3,2 - 3,5	3,3 - 3,4
<b>85</b>	<b>Serbia</b>	<b>3,4</b>	<b>6</b>	<b>0,8</b>	<b>2,7 - 4,9</b>	<b>3,0 - 4,0</b>
92	Bosnia and Herzegovina	3,2	7	0,6	2,6 - 3,9	2,9 - 3,5
180	Somalia	1,0	4	0,6	0,3 - 1,8	0,5 - 1,4

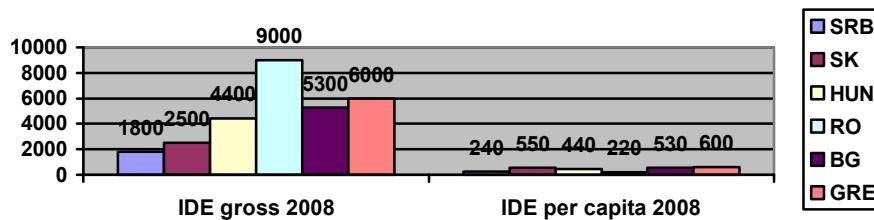
Once again we see that Serbia is not efficient in cutting down the corruption. In despite to a standard deviation almost equal to zero, and to a wide gap between the results, Serbian result is not favorable. Even if we take the most optimistic mark, 4,9, this is still a bad note (that would correspond to a global ranking of 54). Hi – low range from 2,7 to 4,9 signifies a difference between the best and the worst note. Standard deviation signifies the difference between the sources. Standard deviation of 0,5 signifies the general agreement, interval 0,51 – 0,9 signifies the more or less agreement, and values above 0,91 signify disagreement. Confidence range provides a range of possible values of the CPI score. This reflects how a country's score may vary, depending on measurement precision. In case of Serbia, some 80% of the notes vary from 3 to 4, which is a very low grade. High level of agreement implies that the vision of the institution efficiency and corruption is shared; low level implies the lack of that vision. If there is a strong disagreement on whether the corruption is low or not, than we can suppose that the quality of institutions is very erratic, which is exactly the case of Serbia. Unreliable institutions provoke possibility for corruption within the system. For instance, 90% of answers for Slovakia vary from 4,5 to 5,3; in the same country, economic agents have a strong agreement on perception of corruption.

If we put two previous groups of data and again take six selected economies as example, their combination would look like this:

**Charts 4 and 5. Six selected economies, according to the TI and World Bank data, and their FDI level, gross and per capita<sup>13</sup>**

<sup>12</sup> Source: Transparency International, 2008. See [www.transparency.org](http://www.transparency.org)

<sup>13</sup> [www.sofiaecho.com](http://www.sofiaecho.com), [www.investingreece.gov.gr](http://www.investingreece.gov.gr), [www.arisinvest.ro](http://www.arisinvest.ro), [www.sario.sk](http://www.sario.sk), [www.itdh.com](http://www.itdh.com), [www.nbs.rs](http://www.nbs.rs), FDI are in millions of EUR



We can see here the connection between the corruption perception and institution quality on one side and the actual level of FDI on the other side. As the Serbian institutions are rated worse from its competitors (the World Bank – doing business study) and as its corruption perception level is the highest, Serbia is lagging behind in the level of the FDI. This is expected, because the causes – low transparency and low quality institutions – provoke high transaction costs, high uncertainty and a bad image. These three consequences directly reduce the FDI.

### 3. Conclusion

We have shown on the case of Serbia the dangerous role of the corruption. In absence of econometric methodology, it is not easy to find an evident connection between the corruption and the FDI. In our paper, we have opted for a methodology based on the interpretation of the information collected by various international credible organizations, such as the World Bank or the Transparency International.

We think that the mechanism by which the corruption transmits its consequences is based on three pillars: transparency (information asymmetry), high transaction costs and unfavorable perception of corruption. As the institutional system is weakened by the corruption, the institutions can no longer provide transparency or the regulation; it is why some agents are in an *institutional fog*, where the rules of the game are either not clear or even nonexistent. Second group of conclusions is concentrated on the Serbian case study. We can state that, in Serbian case, the corruption is the highest obstacle for the foreign investments.

When it comes to solutions, there are several tools at disposal. We think that the authorities should concentrate on three points: low transparency, unfavorable business climate and a very bad corruption perception. There exists already an agency – SIEPA, which stimulates the investments and exports by various lobbying, marketing, consulting activities. Apart from the SIEPA, there are numerous state agencies that have for objective either to reduce corruption or to improve the FDI. However there is no central system that would have the exclusive role of managing the investment policies. We think that only one ministry or government organization should assume full responsibility for managing the investment attraction. On the other side, root of the problem still survives within the institutional inefficiency. So it is the institutional efficiency that should be elevated, in order to achieve a better business climate and a higher transparency.

### References

1. Jean Cartier Bresson, (2008), *Economie politique de la corruption et de la gouvernance*, L'Harmattan, Paris, 246 p.
2. Alvaro Cuervo-Cazurra, (2008), Better the devil you don't know: Types of corruption and FDI in transition economies, *Journal of International Management*, vol. 14, pp.12–27.
3. Johann Graf Lambsdorff, (1999), Corruption in Empirical Research - A Review, *Transparency International Working Paper*, Passau, pp. 1 – 17
4. Felipe Larraín, Jose Tavares, (2004), Does foreign direct investment decrease corruption, *Cuadernos de economía*, vol. 41, pp. 217 - 230

5. Beata K. Smarzynska and Shang-Jin Wei, (2002), Corruption and Cross-Border Investment: Firm-Level Evidence, *William Davidson Institute*, pp. 1 – 4
6. Corruption and doing business in Serbia, (2007), *Chr. Michelsen Institute*, Oslo, vol. 11, pp. 1 – 4
7. Doing business 2010 – Serbia, (2009), *International bank for reconstruction and development*, Washington DC, pp. 2- 48

# Chapter 14.

## EUROPEAN FINANCIAL SYSTEM AND INTEGRATION OF SERBIAN AND MACEDONIAN BANKING SECTOR IN IT<sup>1</sup>

*Srdjan Redžepagić<sup>2</sup>, Jovan Zafiroski<sup>3</sup>, Djuro Djurić<sup>4</sup>*

### Abstract

*In the process of preparation for membership of the European Union (EU) Western Balkans countries are obliged to harmonize their legal system with the EU law and with the rules providing the functioning of the EU internal market. The provisions regulating the banking sector are highly important for the European economy for the reason that most of the financial resources for the companies and citizens are provided by the banks in their role as financial intermediaries. The integration process in the EU banking sector depends on three community freedoms: movement of capital, freedom of establishment and freedom to provide services. They are all interdependent and without any of these freedoms the integration of the banking sector will not be achieved. This text presents the EU legal framework relating to the banking sector and analyses the process of preparation in the banking sectors of the Republic of Serbia and the Republic of Macedonia for complying with the respectable EU rules.*

*Key words:* European Union, Banking Sector, Serbia, Macedonia, Stabilization and Association Agreement

### 1. Introduction

The banking sector is crucial for the European economy for the reason that most of the financial resources for the companies and citizens are provided by the banks in their role as financial intermediaries. For that reason, the White Paper on the *Completion of the Internal Market* includes measures providing free operations of the European banks on the territory of all the Member states. It proposes a single banking license, home country control and mutual recognition<sup>5</sup>.

They are all interdependent and without any of these freedoms the integration of the banking sector will not be achieved.

<sup>1</sup> This chapter is a part of a research project No. 159004, financed by the Ministry of Science and Technological Development of the Republic of Serbia, named: “The Integration of Serbian Economy into the EU - Planning and Financing of Regional and Rural Development and Enterprise Development Policy” and a part of a survey within a research project called “Integration of Financial Services Sector of the Balkan Countries into European Financial System.” as part of interstate programme of co-operation of „Pavle Savić” between the Institute of Economic Science from Belgrade and the University of Nice - Sophia Antipolis from Nice, France.

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<sup>5</sup> For the process of European banking integration see more: Jean Dermine, European Banking Integration: Don't Put the Cart before the Horse, *Financial markets, institutions & instruments*, Blackwell Publishing, Vol. 15 No.2, 2006, pp.57-106

The free movement of capital is essential not only for the banking sector but also for the internal market in general. All the others community freedoms are useless without the free movement of capital<sup>6</sup>. That is why most of the provisions regulating the free movement of capital within the European Union (EU) and between the EU member states and third countries are included in the Treaty establishing the European Community, to be more precise, in articles 56- 60<sup>7</sup>.

The right of establishment and freedom to provide services in the banking sector are regulated by EU secondary legislation i.e. by Council directives. The EU legal framework relating to the banking sector consist two main directives. The first is the Directive 2006/48/EC of 14 June 2006 which regulates the taking up and pursuit of the business of credit institutions and constitutes an essential instrument for the achievement of the internal market from the point of view of both the freedom of establishment and the freedom to provide financial services, in the field of credit institutions<sup>8</sup>. The second, is the Directive 2006/49/EC of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast). Both directives have transposed into Community law the Basel II rules on measuring own funds and capital requirements. Thus, according to the first directive a credit institution authorized and supervised by a competent authority of one Member State may undertake financial activities covered by the directive within the territories of all the Member States either by establishment of a branch or by the way of the provision of services. The supervision of these institutions is the authority of the home Member State. The harmonization of national legal systems is to extant providing a mutual recognition of authorization and of prudential supervision systems which will assure the principle of single license recognized throughout the Community and the application of the principle of home Member State prudential supervision<sup>9</sup>.

From 2004 Serbia adopted few hundred laws harmonizing its legislation with European Union legal system. In economic sector great reform is performed by adopting new Commercial Companies Code<sup>10</sup> in 2004. This reform was followed by the set of legal acts on Registration of Business and Companies, State Agencies in economic and financial sector, on Insolvency procedure, on bankruptcy and liquidation of banks and insurance companies etc.

Particularly, in financial sector two important laws were adopted in 2005 and 2006: Banking law<sup>11</sup> and Law on the Market of Securities and other Financial Instruments<sup>12</sup>. New legislation generally followed instructions and regulations prescribed in EU legislation.

Today, there are 34 foreign and domestic banks in Serbia with balance sheet assets of 1.859.576.327.000 RSD<sup>13</sup>. (1 EUR = 93,1643 RSD; on the day 23.08.2009)

From its side, the National bank of Serbia, as a central monetary institution, made efforts to modify its overall supervisory role for the purpose of complying with the Core Principles for efficient banking supervision of the Basel Banking Supervision Committee. It has, therefore, become an institution

<sup>6</sup> For the free movement of capital see more: Redžepagić Srdjan, Zafiroski Jovan , The European Integrations: Free Movement of the Capital under SAA“, in *The New Economy: Challenges, Opportunities and Choices*, Editors: Mirjana Radovic Markovic, Dejan Eric, Hasan Hanic, Srdjan Redzepagic, Ivan Stosic, ISBN: 8189617788, India and USA , 2009, pp. 105-121

<sup>7</sup> OJ of the European Union C 321 E/37

<sup>8</sup> On the basic principles on the community freedoms affecting the baking sector see more : Thierry Bonneau, Droit bancaire, 7<sup>e</sup> edition, Montchrestien, 2007, pp. 153- 157

<sup>9</sup> Recite 7 of the Directive

<sup>10</sup> Commercial Company Law “Official Gazette of the Republic of Serbia” N°125/04

<sup>11</sup> Banking Law “Official Gazette of the Republic of Serbia” N°107/05

<sup>12</sup> Law on the market of securities and other financial instruments “Official Gazette of the Republic of Serbia” N°47/06

<sup>13</sup> Official web page of the National bank of Serbia, [www.nbs.rs](http://www.nbs.rs), 23.08.2009.

monitoring the way in which banks manage the risks they are exposed to and their risk management systems, rather than a watchdog simply focusing on the compliance criteria<sup>14</sup>.

## 2. Legal framework of establishment of banks in Serbia

Serbian legislator prescribes that the bank is founded as a joint stock company. It has its headquarter in the Republic of Serbia. To start operating a license has to be granted by the National Bank of Serbia. Every bank may perform deposit and credit activities and may perform other activities in compliance with the law<sup>15</sup>. Banks may also perform the insurance agency activities with the prior consent granted by the National Bank of Serbia. Considering custody bank activities, a bank may conduct them if it obtains a license from the Securities commission. Also it has to be the Central Registry member and must have separate organizational unit with staff and technical capacities to conduct custody bank activities. On the contrary, a custody bank may not conduct the broker-dealer company activities.

The bank may be established by domestic or foreign, legal or physical persons (founders). It may also have one or more founders<sup>16</sup>. The Banking Law established a minimum capital for a newly founded bank - EUR 10 million in dinar equivalent. In cases where the capital is paid in foreign currency, the share capital is defined in the national currency and is subject to any negative effects of its future devaluation. They may have organizational parts such as branch and representative office. Each bank must have a part from founding act its articles of association.

Bank establishing takes four steps: Preliminary Approval, Operating License, Founding Assembly and Registration. Once approval granted, the most important step is the bank's founding assembly meeting. It votes, by two thirds majority of the bank founders, the Articles of Association of the bank have to be rendered, the president and members of executive board and board of directors elected, program of activities of the bank for the period of 3 years adopted, as well as the business policy of the bank, and the decision regarding the first share issue made. All decisions adopted by the bank's founding assembly have to be granted the consent of the National Bank of Serbia.

## 3. Supervisory function by the National Bank of Serbia

National Bank of Serbia is authorized to supervise and control in particularly participation in a bank and to grant consent regarding acquisition of ownership. Serbian legislator distinguishes two types of ownership: direct and indirect. Indirect ownership exists when a person not having direct ownership in a legal entity has the ability in fact to realize ownership rights in such entity using ownership that another person directly has in such legal entity. The Banking law prescribes that participation also a notion of qualified, significant and controlling participation. Without the prior consent granted by the National Bank of Serbia, no person may acquire direct or indirect ownership in the bank which provides 5% to 20%, over 20% to 33%, over 33% to 50% and over 50% of voting rights. The National Bank of Serbia has to make a decision on the request for consent within 60 days following the day when the complete request was received. To prevent abuses, the legislator prescribed also when persons acquiring ownership is presumed to be acting as a single acquirer. This is a case when a legal entity and persons participating in management of such legal entity or its subordinated company, or legal entity and persons directly appointed and removed by a management or governance body of such legal entity or its subordinated company, or legal entity and representatives and liquidation

<sup>14</sup> White Book, Foreign Investors Council, Proposals for Improvement of the Investment Climate in Serbia, Foreign Investors Council, Belgrade, 2006, p.59.

<sup>15</sup> Mirko Vasiljevic, *Kompanijsko pravo*, Pravni fakultet Univerziteta u Beogradu i Sluzbeni glasnik Republike Srbije, 2<sup>nd</sup> edition, Beograd, 2007, p.455.

<sup>16</sup> Supra 2, Zakon o bankama: The Banking law does not prescribes it expressly, but it may be concluded by interpreting the Article 13 regulating the founding act, which allows not only a contract but also a decision of foundation, id est an unilateral act.

administrators of such legal entity or of its subordinated company, or in the case of family members. The applicant of the request for granting consent has to inform the National Bank of Serbia of the acquisition of ownership for which the consent has been granted within 15 days from the day of such acquisition. If the person who acquired ownership without prior consent of the National Bank of Serbia fail to perform the disposal of ownership in the manner and within the time period determined by the National Bank of Serbia, the legal transaction on the basis of which such ownership has been acquired shall be null and void.

To prevent money laundering Serbian legislator established the Administration for the Prevention of Money Laundering<sup>17</sup> as an administrative body within the ministry competent for finance. The Administration is managed by the Director, appointed and relieved of duty by the Government of the Republic of Serbia, at the proposal of the minister competent for finance.

#### **4. Supervision of safety and soundness and legal compliance of bank's business activities**

The National Bank of Serbia exercises supervision of safety and soundness and legal compliance of activities of banks. It performs supervision especially by supervision of reports and other documentation that the bank submits, and other data on operations of the bank which possesses, and on-site – by inspection of business books and other documentation of the bank.

Commercial banks in Serbia have to maintain their share capital above the minimum requirements in their operations (EUR 10 million in dinar equivalent), at the middle rate of exchange, for the purpose of stable and safe business activities and/or fulfillment of obligations to its creditors.

The Banking Law prescribes that each bank has to identify, measure and assess risks it is exposed to in its business activities and manages such risks and to adjust risk management to the size and organizational structure of the bank, to the volume of operations, and types of activities performed by the bank. For this purpose, each bank forms a special organizational unit the competence of which includes risk management<sup>18</sup>. The National Bank of Serbia has to prescribe total of all large exposures of a bank, which may not be less than 400% nor may be more than 800% of the bank's capital. Considering that the current rating of Serbia is still inadequate, possible guarantees provided by mother banks can make a significant factor for locally promoted credit activities. In addition, mother banks of the subsidiaries in Serbia are, in most cases, rated much higher than required by the National bank of Serbia<sup>19</sup>.

In its relationship with clients, each bank is free to decide on the choice of clients. It have to provide to the client the right to access all the data which, according to provisions of law, must be accessible to them, and a bank is obliged to provide this access at the client's request. A bank has to make general operating conditions, as well as their amendments and additions, clearly visible in its business premises, not later than 15 days prior to their implementation. Their implementation is ensured by a written contract concluded between a bank and a client. A bank is bound to provide the client, upon their request, with information regarding balance of their credit, and/or deposit account, as well as other information related to business relationship between a client and a bank. The clients may file a

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<sup>17</sup> Law on the prevention of money laundering and financing terrorism, "Official Gazette of the Republic of Serbia" №20/09, Art. 52; formerly Law on the prevention of money laundering, "Official Gazette of the Republic of Serbia" №107/05 and 117/05.

<sup>18</sup> Mirko Vasiljevic, *Kompanijsko pravo*, Pravni fakultet Univerziteta u Beogradu i Sluzbeni glasnik Republike Srbije, 2<sup>nd</sup> edition, Beograd, 2007, p.457;

<sup>19</sup> White Book, Foreign Investors Council, Proposals for Improvement of the Investment Climate in Serbia, Foreign Investors Council, Belgrade, 2006, p. 52.

complaint regarding the bank's actions to the manager of the bank's organizational unit or competent body of the bank.

In order to conduct annual audit of its financial reports, each bank, banking group and bank holding company has to hire, annually, an external auditor (audit firm) and notify the National Bank of Serbia on appointment of external auditor<sup>20</sup> within 15 days. Numerous restrictions are prescribed for the appointment of the external auditor (such as income from auditing the same bank, three consecutive annual financial statements audits of the same bank, providing consulting services in the same year). In banking groups an annual audit of financial reports has to be performed on a consolidated basis. If a bank is founded by merger, it has to submit to the National Bank of Serbia an opinion of the external auditor on truthfulness and objectivity of its opening balance sheet on the day of merger. With a view to improvement of its own operations and harmonization of its activities, banks may establish business associations provided by a legal entity.

## 5. Organization of banks and manner of bank management

According to the Banking Law each bank has its Assembly, Board of Directors and Executive Board of a Bank. Board of directors and executive board of a bank are management bodies of a bank. It is obliged also establish the committee for monitoring business activities of the bank (audit committee), credit committee and committee for managing assets and liabilities, but may establish other committees as well.

The bank's assembly consists of the bank's shareholders. The Law protects minor shareholders, so Articles of association of the bank may not preclude direct exercising of voting rights of shareholders holding 1% or more of voting shares. The bank's assembly may not transfer the competence for rendering the decisions prescribed as its competence to any other body of the bank<sup>21</sup>. The bank's assembly is held at least once a year, according to the manner stipulated in the bank's articles of association. Extraordinary meeting of the bank's assembly may be called upon the request of the authorized person. The National Bank of Serbia may require that particular items be included in the agenda of the regular meeting of the assembly. Also, a representative of the National Bank of Serbia may attend the bank's assembly meeting, and address the shareholders.

The board of directors and executive board of a bank take measures for preventing illegal or inappropriate activities and impacts which are detrimental or are not in the best interest of the bank and its shareholders, which are performed by persons holding significant or controlling participation in such bank. A bank's board of directors is responsible for business operations of the bank to be in compliance with the law, regulations and enactments of the National Bank of Serbia as well as enactments and other procedures established by the bank's bodies<sup>22</sup>.

A bank's board of directors is responsible for implementation and supervision of the unique system of risk management in the bank<sup>23</sup>, and it also ensures that the bank's executive board identifies risks which the bank is exposed to, as well as to control these risks, in compliance with the approved policies and procedures. Board of directors of a bank consists of not less than five members, including the president. At least one-third of members of the board of directors of a bank have to be persons independent of the bank. A person not holding direct or indirect ownership in the bank and in a member of the bank's banking group shall be considered as a person independent of a bank. Members

<sup>20</sup> To find more: Marijana Dukic-Mijatovic, "Harmonizacija bankarskog zakonodavstva Republike Srbije u svetu uticaja na razvoj hipotekarnog i finansijskog trzista", *Pravo i privreda*, 5-8, 2009, Beograd, p. 125.

<sup>21</sup> Stevan Sogorov, *Bankarsko pravo*, 2<sup>nd</sup> edition, Poslovni biro SB, 2005, Novi Sad, 60-61.

<sup>22</sup> Marijana Dukic-Mijatovic, "Harmonizacija bankarskog zakonodavstva Republike Srbije u svetu uticaja na razvoj hipotekarnog i finansijskog trzista", *Pravo i privreda*, 5-8, 2009, Beograd, p. 123.

<sup>23</sup> Vojin Bjelica, *Bankarstvo, U teoriji i praksi*, Stylos, Novi Sad, 2005, p.178.

of the bank's board of directors must have the appropriate business reputation and qualifications, which are prescribed by the National Bank of Serbia. At least three members of the bank's board of directors must have the appropriate experience in the field of finance. At least one member of the bank's board of directors must be fluent in Serbian language and have permanent residence in the Republic of Serbia. This imperative requirement has been criticized by foreign investors as unnecessary and as an issue falling within the exclusive authority of shareholders, having in this problem in constituting the Board of Directors<sup>24</sup>. Each bank shall submit to the National Bank of Serbia a request for granting prior consent regarding appointment of a member of the board of directors of the bank.

The bank's executive board shall organize business activities of the bank and supervise the activities of the bank's employees on a daily basis. Executive board of a bank shall consist of not less than two members, including the president. The president of the bank's executive board shall represent and act on behalf of the bank. On the occasion of undertaking legal transactions in the name and for the bank, the president of the executive board shall provide signature of one member of the executive board.

The members of the executive board are full time permanent employees of the bank. The members of the bank's board of directors must have good business reputation and appropriate qualifications, which are prescribed by the National Bank of Serbia. At least one member of the bank's executive board must be fluent in Serbian language, and have permanent residence in the Republic of Serbia, and all members of the executive board must have residence in the Republic of Serbia. Provisions of this Law relating to the appointment of the members of the bank's board of directors shall be accordingly applied to the appointment of the members of the bank's executive board.

Each bank have to establish the organizational unit the competence of which shall include internal audit to give independent and objective opinion to the bank's board of directors on issues which are subject to audit, to perform advisory activity aimed at the advancement of the existing system of internal controls and business activities of the bank, and to provide assistance to the bank's board of directors in accomplishment if its aims, specifically through application of systematic, disciplined and documented approach to the evaluation and advancement of the existing manner of risk management, manner of control and manner of management of processes.

## 6. Corrective and Enforcement Measures by the National Bank of Serbia

Corrective and Enforcement Measures are to be performed over an undercapitalized bank, significantly undercapitalized bank and critically undercapitalized bank. If in its supervision, it is determined that a bank acted in breach of provisions of law, regulations of the National Bank of Serbia and other regulations, as well as standards of prudent banking activities, and/or in any other way which jeopardizes its safety and soundness, the National Bank of Serbia takes measures over a bank. Possible measures are sending of a written warning, sending of an ordering letter, declaration of orders and measures for eliminating the established irregularities, introducing of receivership and revocation of the operating license.

In the worst case, bankruptcy proceedings may be undertaken over a bank, whose operating license has been revoked by the National Bank of Serbia, in conformity with the Law governing banks and other financial organizations, as well as over an insurance company. Also, bankruptcy proceedings may be undertaken over a bank if it is determined that it has been illiquid for 15 days continually, or whose liabilities exceed its assets. Bankruptcy proceedings may also be undertaken upon the request of a liquidation administrator, determining that liquidation debtors' assets are not sufficient to settle all creditors' claims. In the bankruptcy proceedings undertaken, the agency for deposit insurance performs the function of the bankruptcy administrator. A bank under the bankruptcy proceedings can

<sup>24</sup> White Book, Foreign Investors Council, Proposals for Improvement of the Investment Climate in Serbia, Foreign Investors Council, Belgrade, 2006, p.51.

not be re-organized or sold in accordance to the Law governing the bankruptcy of economic entities<sup>25</sup>. All deposits are insured to the amount of 50.000 EUR<sup>26</sup>.

A part from bankruptcy proceedings, a bank's operating license might cease to be valid by revocation of the operating license, by voluntary cessation of the bank's activities, by status change of the bank, if the bank's founding assembly meeting is not held in the time period prescribed by law, and if the bank fails to submit the request for entering in the register of economic entities within the deadline.

## 7. Banking sector in Macedonia toward EU integration

As in the EU economies the banking sector in Macedonia is the most important part of the financial system with more than 90% of the financial resources in the financial system. The banking sector is composed of 18 banks and 11 saving houses<sup>27</sup>.

Taking into account the importance of the banking sector for the Macedonian economy, since its independence in 1991, Macedonian banking sector is under continuous reform. There were several reasons for starting a reform on banking sector in Macedonia. Firstly, the banking sector is dominant in the financial sector and it is crucial for the economy. Secondly, by creating a modern banking system based on rules comparable to those on the EU Macedonia creates sound basis for attracting foreign direct investments in the banking sector which will provide more resources for financing the economic activities in the country and what is more important will foster the competition in this sector. Thirdly, as a candidate country for becoming a member of the EU Macedonia has an obligation to adjust its financial system with that of the Union.

The key step forward in the legal alignment on the Macedonian legal system relating to the banking sector was made with the adoption on the new Banking law<sup>28</sup>. It was adopted in 2007 and the main principles of the European legal framework relating to the banking sector were implemented, notably the provisions of the Directive 2006/48/EC relating to the taking up and pursuit of the business of credit institutions.

As defined by its first article, the new Banking law regulates the founding, operations, supervision and termination of operations of banks and of branches of foreign banks and opening and operations of banks from the EU member states. The harmonization with the EU legislation might be analyzed from three aspects: terminology and definitions, establishment and supervision.

The terminology and definitions used for defining terms used in the law are harmonized with the Directive. The law defines bank as a legal entity, established in accordance with the provisions of this Law and is licensed by the Governor of the National Bank of the Republic of Macedonia. Its principal activity is to accept deposits and other repayable sources of funds from the public and to extend credits on its own behalf and for its own account. The list of financial activities of the banks regulated by this law complies with the list of financial activities which according to Annex I of the Directive are subject of mutual recognition.

The provisions of the banking law relating to the establishment of a bank are compatible with the requirement for access to taking up and pursuit the business of credit institutions posed by the Directive 2006:48/EC. The requirement concerns the existence of separate own funds, initial capital,

<sup>25</sup> Law on bankruptcy and liquidation of banks and insurance companies "Official Gazette of the Republic of Serbia" N°61/05, Art. 2

<sup>26</sup> Law on deposit insurance "Official Gazette of the Republic of Serbia" N°61/05 and 116/08, Art. 2.

<sup>27</sup> Source : Ministry of finance of the Republic of Macedonia,

[http://www.finance.gov.mk/files/u11/institucii\\_bankarski\\_sistem\\_0.pdf](http://www.finance.gov.mk/files/u11/institucii_bankarski_sistem_0.pdf)

<sup>28</sup> Banking law, Official Gazzete of RM No.67/07

identities of the shareholders and the qualifications of the person that will take the management activities. In this respect, according to the new banking law, a bank might be established only as a joint stock company in which the total nominal amount of preference shares without voting right does not exceed 10% of the total amount of the bank's total shares. Its initial capital is 5 million euro. A shareholder might be domestic and foreign legal entity and natural person. A shareholder with qualified holding may not be a person, or legal entity controlled by a person sentenced to imprisonment for crime in the area of finances and banking, against whom a bankruptcy proceeding is initiated and in other cases provided by the law. For starting up banking activities a license issued by the Governor of the National Bank of the Republic of Macedonia (NBRM) for founding and operating a bank is required. Besides the banks established by this procedure financial activities might be carried out by credit institutions established in the EU and in third countries. In this point, the new Macedonian banking law makes its legal framework compatible with the principles of the European banking legal framework. Namely, by virtue of article 28 of the law through is branch in the Republic of Macedonia a bank from the EU member state may perform the financial activities for which it is authorized in the home country. The branch acts on behalf and for the account of the bank from the EU and it is entitled to acquire rights and assume obligations but it is the EU bank that is liable for the liabilities of the branch in Macedonia. The branch does not need license from the Governor of the NBRM, it will start the financial activities after the NBRM receives notification from the competent authority of the home country. The notification includes: plan of activities of the branch, address of the branch, amount of own funds of the bank's capital adequacy ratio, description of the deposit guarantee scheme in the home country and a list of financial activities the bank is authorized to perform. By these provisions the new banking law makes the Macedonian legislation fully compatible with the conditions for the establishment and for providing of services in the banking sector required by the EU law. It worth be noted that these provisions will enter into force on the day on Macedonia's accession in the EU. Nevertheless, until that date, the branches of the banks from the EU will be treated as foreign bank branches.

A foreign bank may through a branch in the Republic of Macedonia perform financial activities for which it is authorized in the country of its head office. The bank is liable with all its property for the liabilities of its branch in Macedonia. The branch has not a status of a legal person and works respecting the Macedonian laws. For start of the operations the branch needs to obtain a license issued by the Governor. For being able to open a branch in the Republic of Macedonia the bank should prove that is assigned at least BBB rating according to the rating of Standard & Poor's, Fitch IBCA or Thompson Bank Watch or Baa2 according to the Moody's rating.

The supervision is another important issue in the banking integration for the reason that the countries may differ in their treatment on certain question relating to financial activities. Thus, in order banking integration to be achieved certain level of harmonization in the field of supervision is required. In this respect, the banking law provides that the NBRM is the authority responsible for licensing and supervision of banks and saving houses in the Republic of Macedonia. By its supervisory function it provides safe banking system and protects the investors and depositors. The legal framework for the supervision consists the Law on the National Bank of the Republic of Macedonia<sup>29</sup> and the Banking Law. As regards the supervision both laws are based on the international standards and principles set by the Basel Committee on Banking Supervision. In the European banking regulation supervision on the banks having financial activities in another member state is dedicated to the home institution, as explained above, it is one of the basic principles of the banking acquis. The new banking law accepts this principle by providing that the supervision on branches of banks from EU Member states is conducted by the competent authority of the home country. On request of the competent authority of the home country NBRM assist or conduct supervision in the branch.

<sup>29</sup> Law on the National Bank of the Republic of Macedonia, Official Gazzete of RM No.3/02, 51/03, 85/03, 40/04, 61/05 and 129/06

From the analysis on the provisions of the new banking law one may conclude that as far as legal framework is concerned Macedonian banking system is to a great extent compatible with the banking sector of the EU. Many efforts are done in the process of reforms and solid institutional support by the EU institutions and the Macedonian Government is provided. There is a permanent department in the Ministry of finance that monitors and proposes actions in the banking sector.

The good progress in the banking system reform was confirmed by the European Commission. Namely, in its latest report on the progress made by Macedonia in preparing for EU membership the European Commission considers that the new banking law is approximated to the EU banking directives in the areas of risk management, exposure limits, reporting and audit requirements and capital adequacy. The European Commission indicates that further efforts should be done for fully alignment on the Macedonian legal system with the EU banking aquis and the emphasize is made on Capital requirements directive.<sup>30</sup>

## References

1. Jean Dermine, European Banking Integration: Don't Put the Cart before the Horse, *Financial markets, institutions & instruments*, Blackwell Publishing, Vol. 15 No.2, 2006
2. Redžepagić Srdjan, Zafiroski Jovan, The European Integrations: Free Movement of the Capital under SAA“, in *The New Economy: Challenges, Opportunities and Choices*, Editors: Mirjana Radovic Markovic, Dejan Eric, Hasan Hanic, Srdjan Redzepagic, Ivan Stosic, ISBN: 8189617788, India and USA , 2009
3. Thierry Bonneau, Droit bancaire, 7<sup>e</sup> edition, Montchrestien, 2007
4. Banking law, Official Gazzete of RM No.67/07
5. Consolidated version of the Treaty Establishing the European Community, OJ of the European Union C 321 E/37
6. Commission report, Macedonia, 2008 COM(2008) 674
7. Law on the National Bank of the Republic of Macedonia, Official Gazzete of RM No.3/02, 51/03, 85/03, 40/04, 61/05 and 129/06
8. Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (recast), OJ L 177, 30.6.2006, p. 1–200
9. Directive 2006/49/EC of the European Parliament and of the Council of 14 June 2006 on the capital adequacy of investment firms and credit institutions (recast), OJ L 177, 30.6.2006, p. 201–255
10. Mirko Vasiljevic, *Kompanijsko pravo*, Pravni fakultet Univerziteta u Beogradu i Sluzbeni glasnik Republike Srbije, 2<sup>nd</sup> edition, Beograd, 2007
11. Stevan Sogorov, *Bankarsko pravo*, 2<sup>nd</sup> edition, Poslovni biro SB, 2005, Novi Sad
12. Vojin Bjelica, *Bankarstvo, U teoriji i praksi*, Stylos, Novi Sad, 2005
13. Marijana Dukic-Mijatovic, “Harmonizacija bankarskog zakonodavstva Republike Srbije u svetlu uticaja na razvoj hipotekarnog i finansijskog trzista”, *Pravo i privreda*, 5-8, 2009, Beograd, p. 118.
14. White Book, Foreign Investors Council, Proposals for Improvement of the Investment Climate in Serbia, Foreign Investors Council, Belgrade, 2006
15. Zakon o bankama, “Official Gazette of the Republic of Serbia” N°107/05
16. Zakon o trzistu hartija od vrednosti i drugih finansijskih instrumenata, “Official Gazette of the Republic of Serbia” N°47/06

<sup>30</sup> Commission report, Macedonia, 2008 COM(2008) 674, pg. 39

# Chapter 15.

## BANKING SECTOR EFFICIENCY: THE CASES OF CROATIA, SERBIA AND SLOVENIA

*Anastasia Ri<sup>1</sup>, Kamilya Suleymenova<sup>2</sup>*

### Abstract

*This paper studies relative banking efficiency in three Balkan countries: Croatia, Serbia and Slovenia. Firstly, we analyze different financial transition paths which account for present situation and have an impact on efficiency. We equally go through some macro- and micro- economic indicators to make some hypothesis concerning the relative efficiency in the studied countries. Secondly, we use the Stochastic Frontier Approach (SFA) to compare banking sector efficiency. The cost efficiency is analyzed while taking into account the ownership structure. We find that Slovenian banks are globally more efficient than those of Croatia and Serbia. Finally, we demonstrate that state owned banks are generally less efficient than private banks, both foreign and domestic.*

*Key words:* *Banking Sector, Cost Efficiency, Stochastic Frontier Approach, Croatia, Serbia, Slovenia, Transition Economies*

### 1. Introduction

Transition economies, and especially countries emerged from the Socialist Federal Republic of Yugoslavia (SFRY), offer an interesting opportunity to observe financial sector changes, their comparative efficiency and their resistance to different kind of shocks.

This study follows Ri et al. (2009) continuing the analysis of the financial sector of Balkan countries. On the example of three Balkan countries: Serbia, Croatia and Slovenia, we will try to draw some first conclusions based on the comparison of the evolution and the relative efficiency of their financial sectors.

Due to different degree of closeness of the relationship of these countries with the “developed” neighbour – European Union – we will have to carefully analyse the potential impact of foreign (that we find mostly European) banks on the financial sector of the considered countries. One of the major factors which had influence on the efficiency of Balkans banks is the transformation and issues that ensued from the planning system of the SFRY. Section 2 is thus presenting these issues. In Section 3, we use the Stochastic Frontier Approach to analyze relative cost efficiency of banking sectors in Croatia, Serbia and Slovenia. Finally, we make some conclusions as for relative efficiency of banks belonging to different ownership types.

### 2. The evolution of banking systems in Croatia, Serbia and Slovenia

As it was stated, for example, in Bonin and Wachtel (2003), the financial sector of the studied countries is bank-oriented due mostly to historical reasons. In comparison with other transition

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countries (such as Former Soviet-Union countries), the specificity of FSU Yugoslavia system is that, from the beginning of the 1950s, Yugoslavia had a two-tier banking system with universal banks engaged in the entire range of banking activities. Each republic, except for Serbia, had only one main bank. In Slovenia, for example, Ljubljanska Banka operated 13 of the 16 banks accounting for 83% of banking assets in the 1980s.<sup>3</sup> Moreover, all three countries had to face the difficulties that arose due to the disintegration of the former common financial system at the beginning of the transition period.

After the common shared path, Serbia, Croatia and Slovenia started their different trajectories for the reforms and in particular financial sector reforms. Overall, in 2008 the EBRD transition scores<sup>4</sup> ranked the studied countries as follows: Slovenia, Croatia and Serbia from the first one as most advanced in the process.

## Croatia

In Croatia almost all state-owned banks were privatized and in 1991 26 banks were operating in the country. As they were owned not directly by the State, but by large society firms, there were no strictly speaking bank privatization, but by the 1997, almost 60% of total banking sector assets belonged to private investors<sup>5</sup>. Due to a rather liberal overall banking regulation the number of banks in Croatia grew rapidly and reached a peak of 60 in 1998, but then declined. Nevertheless, the concentration in the banking sector remained at the high level through the whole period with the increasing importance (and number) of foreign banks. At the end of 2000, there were 45 banks in Croatia (see table 2 for further evolution). Of these, 21 were private domestic banks, seven were foreign greenfield banks, 13 were foreign-controlled domestic banks, and only three remained state-owned. From 1997 to 2000, the share in Croatian banking assets held by foreign greenfield operators almost quadrupled<sup>6</sup>.

After the crisis of 1998, Croatia's financial sector has undergone many positive changes<sup>7</sup>, for example the banking sector infrastructure was improved and harmonized with the EU neighbor<sup>8</sup>: we may suppose that it was done at least partly because of the large share of the foreign banks. From 2002 to 2008 credit to private sector was increasing rapidly. The household debt to GDP ratio (more than 40%) is one of the highest in the Central Europe and comparable with that of developed countries<sup>9</sup> (see Table 1).

The very fast deepening of the financial sector was accompanied by an increasing risk of foreign crisis contagion through foreign banks and external borrowing. Thus, Croatia's external debt increased from 53% of GDP in 2000 to 82.4% in 2008, mainly as a result of financing from parent banks to the banking sector and private sector borrowing. It must be underlined that the foreign exposure is highly concentrated (perhaps even more than in Serbia) – Austria (41%) and Italia (38%) are main home countries of parent banks.

## Slovenia

We can note that from the beginning of the transition period, Slovenia was described as having a comparative advantage to the other former SFRY countries: in its relative independence, good geographic position and rather (comparatively) developed small private ownership. It is recognized that Slovenia has adopted a more gradual and pragmatic approach: from 1991 measures have been

<sup>3</sup> Stiblar (1997) stated in Bonin (2004)

<sup>4</sup> EBRD (2008)

<sup>5</sup> Reininger (2005)

<sup>6</sup> Bonin (2004), for further information on ownership evolution en Croatia see Table 2.

<sup>7</sup> This is also in accordance with Doing Business 2009 results.

<sup>8</sup> IMF, 2008

<sup>9</sup> IMF, 2008

taken to ensure the financial and monetary independence of Slovenia. According to Mencinger (2004), the transformation of Slovenian banking sector was very successful and authorized a rapid economic development, compared to other former SFRY countries. We can also underline a long tradition of bank establishments – for example Ljubljanska Banka starts its history in 1900, in the time of Austro-Hungarian Empire.

**Table 1. Lending activity of the banking sector in Croatia, Serbia and Slovenia**

		2000	2001	2002	2003	2004	2005	2006	2007
CROATIA	Domestic credit to private sector (in per cent of GDP)	39,9	45,3	53,8	56,3	59,2	64,5	73,2	76,6
	Domestic credit to households (in per cent of GDP)	15,3	18,2	23,8	27,7	30,4	34,0	38,2	41,1
	EBRD index of banking sector reform	3,3	3,3	3,7	3,7	4,0	4,0	4,0	4,0
SERBIA	Domestic credit to private sector (in per cent of GDP)	63,6	34,1	17,8	20,3	23,9	29,7	29,8	34,9
	Domestic credit to households (in per cent of GDP)	na	na	na	2,6	4,9	7,6	10,1	12,6
	EBRD index of banking sector reform	1,0	1,0	2,3	2,3	2,3	2,7	2,7	2,7
SLOVENIA	Domestic credit to private sector (in per cent of GDP)	36,7	38,8	38,6	41,3	48,1	56,4	65,9	79,0
	Domestic credit to households (in per cent of GDP)	11,3	10,9	10,5	10,8	12,2	14,8	17,0	19,2
	EBRD index of banking sector reform	3,3	3,3	3,3	3,3	3,3	3,3	3,3	3,3

Source: EBRD indicators

While being one of the former SFRY and thus may be compared as such with Serbia and Croatia, Slovenia today is in a particular case: the country has entered the European Union in 2004. Analyzing the financial system of this country we must thus bear in mind that it is much more deeply integrated into the EU's financial system. According to IMF's Report on Slovenia<sup>10</sup>, the efficiency of its banking sector is, as it could be expected, much lower than in other EU members. The state owned banks are found to be the less efficient among all.

The banking sector in Slovenia remains largely dominated by domestic banks, especially in comparison with Serbia and Croatia and the state-owned share though declining all over considered period is still significant. More interestingly, the IMF's Report on Slovenia finds that the profitability of Slovenian banks is rather low (in particular their regional relative profitability), due to the integration into the euro area. For example, compared to Serbia, where the net interest margin was growing, it has been declining in Slovenia for the considered period. The causes listed are the decreasing interest rates and losses of currencies exchange revenues. The presence of large state owned banks decreases, according to IMF Report, the contestability and the efficiency of the all sector

<sup>10</sup> IMF, 2007

and thus the profitability. It remains to be seen how it affects the stability of the banking sector and the financing of the economic activity.

As the result of their lowering profitability at home, number of Slovenian banks tried to find other options to increase their income. The chosen solution was the increase of cross-border borrowing and lending. To increase the profit margins some Slovenian banks had to expand the lending in South and East Europe (with consequently higher risks) and to provide for the growing credit demand they had to resort to foreign borrowing, mainly from EU countries. This foreign (EU) borrowing grew in Slovenia more rapidly than in other new EU members: between 2002 and 2005 foreign loan exposure grew from 2% to 12% of GDP.

Therefore, these Slovenian banks are doubly exposed to crisis transmission risks from both types of countries and to all currency risks. The foreign banks from which Slovenian ones are borrowing can stop their funding (or increase the cost) or the countries to which Slovenian banks are lending can be subjects to macroeconomic instability and activity downturn.

**Table 2. The ownership structure of banking sector in Croatia, Serbia and Slovenia**

		2000	2001	2002	2003	2004	2005	2006	2007
CROATIA	Number of banks (foreign-owned)	45 (21)	44 (24)	46 (23)	42 (19)	39 (15)	36 (13)	35 (15)	35 (16)
	Asset share of state-owned banks (in %)	5.7	5.0	4.0	3.4	3.1	3.4	4.2	4.7
	Asset share of foreign-owned banks (in %)	84.1	89.3	90.2	91.0	91.3	91.3	90.8	90.4
SERBIA	Number of banks (foreign-owned)	81 (3)	54 (8)	50 (12)	47 (16)	43 (11)	40 (17)	37 (22)	35 (21)
	Asset share of state-owned banks (in %)	90.9	68.0	35.6	34.1	23.4	23.9	14.9	15.8
	Asset share of foreign-owned banks (in %)	0.5	13.2	27.0	38.4	37.7	66.0	78.7	75.5
SLOVENIA	Number of banks (foreign-owned)	28 (6)	24 (5)	22 (6)	22 (6)	22 (7)	25 (9)	25 (10)	27 (11)
	Asset share of state-owned banks (in %)	42.5	48.9	13.3	12.8	12.6	12.0	12.5	14.4
	Asset share of foreign-owned banks (in %)	15.3	15.2	16.9	18.9	20.1	22.6	29.3	28.8

Source: EBRD indicators

However, IMF's Report<sup>11</sup> suggests that domestic banks (both private and state-owned) do not heavily depend on external financing, while foreign banks are indeed largely linked with their country of origin. As we have underlined before and as we can see in Table 2, the share of foreign-owned assets is less large in Slovenia than in Croatia and Serbia. The major risks are therefore concentrated in several banks. This relatively (comparing to other countries in transition of Central and South-Eastern Europe) little dependence of foreign funding means also a little exposure to external financial risks, very important characteristic during the global financial crisis time. From the macroeconomic point of view, financial stability along with well functioning system of payments and financing could be preferred to increasing efficiency in terms of profitability. In fact, Slovenia is much more suffering from foreign demand decelerating than from financial side of the current crisis.

<sup>11</sup> IMF, 2007

The IMF 2008 Financial System Stability Assessment when comparing Slovenia and Croatia on selected financial soundness indicators (we take the share of nonperforming loans to total loans and capital to risk-weighted assets), Croatia fares overall poorer than Slovenia. The same results can be found in dynamic for the studied period and are presented in Table 3.

**Table 3. Non-performing loans (in per cent of total loans)**

	2000	2001	2002	2003	2004	2005	2006	2007
Slovenia	9.3	10.0	10.0	9.4	7.5	6.4	5.5	3.9
Croatia	22.6	17.3	12.8	13.1	7.5	6.2	5.2	4.8
Serbia	13.7*	12.6*	24.3*	21.8*	n.a.	n.a.	n.a.	n.a.

Source: EBRD indicators, \*Fink and Haiss (2005)

### Serbia

The political turnaround in late 2000 and the related easing of the economic isolation marked the beginning of banking sector reform in Serbia (Gardó (2005))<sup>12</sup>. As it was described in Ri et al. (2009), Serbian former state owned banks were transformed into shareholding companies and opened to public two years after the beginning of reforms and, simultaneously, the establishment of new private banks was authorized with domestic as well as foreign capital. The main problem remained the old management approach and thus, insolvency problem. At the end of June 2001, from a total of 71 banks in Serbia, 29 (accounting for 13% of total assets of the banking sector) were assessed to be “healthy”, 16 were judged to be solvent but undercapitalized, 7 credit institutions (accounting for over 60% of total assets) were facing insolvency and were put under administration of the Federal Agency for Deposit Insurance, Bank Rehabilitation, Bankruptcy and Liquidation with the aim of their rehabilitation, and 19 banks were found to be insolvent<sup>13</sup>.

Serbia started its financial transition process later than other transition economies. However, the progress in financial reform and development was very fast during the 2000s (see Tables 1 and 2). A sharp contraction of credit activity in the early 2000s is due to massive liquidation of insolvent banks. As we can judge by the dynamic of foreign assets in the domestic banking sector, obviously, Serbia chose the “Croatian way” of financial development and not the “Slovenian” one. Most banks were privatized via tender offers with a large participation of foreign banks, that was encouraged by the EBRD which itself invested in local banks (for example, Volksbank).

Serbian’s financial sector is strengthening, but remains fragile especially in the light of rapid changes in the ownership structure and very strong foreign presence. Similar point of view is expressed by Coletti (2005). In this section, we have tried to outline the strength of foreign presence and the risks it can present for all concerned countries in various degrees depending in each country. Banking efficiency literature generally suggests that foreign presence is useful in providing examples of an efficient banking for private domestic banks. In the next Section, we are studying this issue for the cases of Slovenia, Serbia and Croatia. However, we would like to underline that the foreign presence is not in itself a sufficient factor of financial intermediation development and much less prevents major economics risks what is consistent with results obtained by Bonin (2004). As it is well known and widely described, current financial crisis had a deep impact on the less mature financial sectors of transition countries due to their dependence on external financing. The crisis has as a consequence a sharp fall of credit growth (and in some cases lending contraction) and growing non-performing loans, accompanied by the runs on the banks. For example, Serbia suffered 15 per cent deposit withdrawals (€700 million) in October 2008. To avoid panics and relocation of deposits from one country to

<sup>12</sup> Stated in Fink and Haiss (2005)

<sup>13</sup> idem

another, measures have been taken by the governments; one of the most popular was to protect the retail deposits by raising the levels of deposits insurance (Croatia and Serbia)<sup>14</sup>.

Having presented these different brief descriptions of some characteristics of financial sectors of Croatia, Serbia and Slovenia on macroeconomic level, we would like to present some micro-indicators which could give an idea about the sector's efficiency in each of the studied countries (Table 4). We notice that there is an amelioration of banking efficiency in terms of costs through the period in all countries. Slovenia's banking sector appears as most efficient, but also, as we can judge by recent events, as the most stable. In terms of cost efficiency, we suppose Serbia is far behind of Croatia and Slovenia what is explained by the late transition process. Finally, we would like to underline that net interest margin declining is associated to the financial development what is consistent with previous macroeconomic indicators.

**Table 4. Banking sector efficiency: some indicators**

Country	Year	Net Interest Margin, %	Return on Average Assets (ROAA), %	Return on Average Equity (ROAE), %	Cost to Income Ratio, %
Croatia	2007	3,84	1,21	9,29	66,44
	2006	4,18	1,01	5,40	75,28
	2005	4,46	1,39	11,63	63,89
	2000	6,60	0,76	3,38	68,12
Serbia	2007	7,87	0,66	1,64	64,84
	2006	9,17	1,61	4,64	68,03
	2005	9,94	1,60	5,27	68,92
	2000	n.a.	n.a.	n.a.	n.a.
Slovenia	2007	2,12	0,84	11,99	51,74
	2006	2,33	0,90	8,99	67,37
	2005	2,53	0,85	8,08	83,85
	2000	5,12	1,65	14,97	55,13

Source: *BankScope database (for all available banks)*

### 3. Cost function: specification, data, results

Generally, economic literature shows that financial systems are highly important to assure macroeconomic stability and economic development of countries. Thus, the "mainstream" view in economics proposes to deepen financial systems in order to boost real economic activity. Nevertheless, attaining of this macroeconomic objective is possible only if financial sector's actors are efficient themselves in terms of profitability and costs to be able to maintain durable relationships with other sectors of economy. This micro-efficiency is even more important in competitive environment.

So, after exposing the transformation process, institutional differences and analyzing the macro- and meso- efficiency indicators of banking systems in all three studied countries, in this Section, we propose to examine banking efficiency at a microeconomic level.

The objective of a bank, like of any firm, is to maximise profit by producing more outputs using less inputs. The frontier analyse represents a good instrument to estimate the *relative efficiency* of banks. Different economic efficiency concepts (based on profit or cost function) could be applied to banking

<sup>14</sup> Beadle (2009)

data<sup>15</sup>. In this paper, we examine bank efficiency by studying a cost function as the data on output prices needed to estimating a profit function is not available. Here, *cost efficiency* is a measure of how close a bank's cost is to what a best-practice bank's cost would be for producing the same output bundle under the same conditions.

There is no consensus in econometric literature as for the “best” method to determine the cost efficiency, both types of methods (parametric frontier methods and non-parametric models) having their advantages and disadvantages. In this paper, we follow studies on banking efficiency in transition economies (Asaftei and Kumbhakar (2008), Fries and Taci (2005), Hasan and Marton (2003), Kraft et al. (2006), etc.) and choose one of parametric methods, the Stochastic Frontier Approach (SFA).

The SFA consists in estimating of a cost function by imposing a restrictive functional form and by assuming that the random error is divided into two elements: the first one, the inefficiency term ( $u_{it}$ ), is non-negative and follows asymmetric distribution and captures inefficiencies due to poor management, and the second one, the random term ( $v_{it}$ ), follows symmetric distribution and reflects a “bad luck” phenomenon beyond the control of management:

$$\ln C_{it} = f(w, y, z) + u_{it} + v_{it} \quad (1)$$

where  $C_{it}$  denotes total costs,  $f$  represents functional form,  $w$  is the vector of input prices,  $y$  is the vector of output quantities,  $z$  the vector of fixed netput quantities.

In our study, we adopt the translog functional form (2), even if we are aware that Fourier-flexible functional is considered by some authors to be more suitable for banking data (Berger and Mester (1997), Kraft et al (2006)).

$$\begin{aligned} \ln C_{it} = & \alpha_0 + \sum_{m=1}^M \alpha_m \ln Y_{mit} + \sum_{n=1}^N \beta_n \ln W_{nit} + \sum_{k=1}^K \gamma_k \ln Z_{kit} + \\ & \frac{1}{2} \left[ \sum_{m=1}^M \sum_{p=1}^P \alpha_{mp} \ln Y_{mit} \ln Y_{pit} + \sum_{n=1}^N \sum_{r=1}^R \beta_{nr} \ln W_{nit} \ln W_{rit} + \sum_{k=1}^K \sum_{s=1}^S \gamma_{ks} \ln Z_{kit} \ln Z_{sit} \right] + \quad (2) \\ & \sum_{m=1}^M \sum_{n=1}^N \phi_{nm} \ln Y_{mit} \ln W_{nit} + \sum_{m=1}^M \sum_{k=1}^K \lambda_{mk} \ln Y_{mit} \ln Z_{kit} + \sum_{n=1}^N \sum_{k=1}^K \delta_{nk} \ln W_{nit} \ln Z_{kit} + u_{it} + v_{it} \end{aligned}$$

As linear homogeneity and symmetry of cross effects are necessary theoretical properties of cost function, we impose the following constraints:

$$\sum_{n=1}^N \beta_n = 1; \sum_{n=1}^N \beta_{nr} = 0; \sum_{n=1}^N \phi_{nm} = 0; \sum_{n=1}^N \delta_{nk} = 0 \text{ and } \alpha_{mp} = \alpha_{pm}; \beta_{nr} = \beta_{rn}; \gamma_{ks} = \gamma_{sk}.$$

In banking efficiency literature there is no agreement on the nature of banking inputs and outputs. We adopt here the intermediation approach<sup>16</sup> according to which banks use deposits or deposit costs and other operating costs (inputs) to create loans (outputs). Following Berger and Mester (1997), we introduce financial capital as a netput quantity to account for risks and as another funding source for loans. Table 5 lists the variables associated with the translog cost function specified here before.

<sup>15</sup> See Berger and Mester (1997) for the cost and profit efficiency concepts comparison.

<sup>16</sup> The intermediation approach was proposed by Sealey and Lindley (1977) and is used in a number of recent efficiency studies (for example, by Berger and Mester (1977)).

**Table 5. Definitions and descriptions of variables**

<b>Variable</b>	<b>Definition</b>	<b>Description</b>
<i>Dependent Variable</i>		
$C_{it}$	Total costs	Interest and Commission Expenses + Total Operating Expenses
<i>Output Quantities</i>		
$Y_{it}$	Total loans	Loans to banks and to clients
<i>Input Prices</i>		
$W1_{it}$	Labor cost ratio	Personal expenses /Number of employees
$W2_{it}$	Funding cost ratio	Interest and Commission Expenses / (Deposits and other funding)
$Z_{it}$	Financial Equity	Share capital, capital reserves, retained earning

Besides, choice of variables is largely influenced by data availability (for example, personal expenses data and data on number of employees are rare what leads to use proxies like other operating expenses to total assets). Our data set is from BankScope database. It consists of 73 banks (26 Croatian, 33 Serbian and 15 Slovenian) through 2000-2007 period. Accurate data for each bank and for each year is not always available (it concerns especially personal expenses and number of employees series), so we obtained an unbalanced data of 321 observations.

Even though many critics were made to multi-country studies analyzing banking efficiency (principally due to the heterogeneity caused by differences in regulatory and economic environment), we found it valuable to proceed to the efficiencies comparison of banking systems of Croatia, Serbia and Slovenia by establishing a common frontier and then measuring a gap from this frontier for each bank. To accounting for environment differences, we introduce two additional variables: the first one measuring the financial deepening (credit to private sector to GDP) and the second one representing the state of banking regulation (EBRD index of banking sector reform). Nevertheless, we find that credit to private sector is not statistically significant. On the contrary, the EBRD index of banking sector reform is significant and negatively correlated to total costs. That means that banking reform progress reduces banking costs due to increasing incentives to efficiency improvements. The index of banking reform introduction highly influences the estimation results. Notably, the inefficiencies proper to bank management decrease showing so that banking environment differ across considered countries, what could be explained by the differences in paths of reforms evoked in the first section.

The estimation results are listed here after for different ownership groups: majority foreign owned, domestic private and domestic state banks. The estimation results are to be read as follows: a perfectly efficient bank has a cost efficiency estimate equal to one. For a given bank, more important is the deviation from one, less efficient this bank is.

According to these results, we can conclude that, as it was expected, Slovenian banks in general are more cost efficient than Croatian and Serbian ones. However, there is only slight difference between Croatian and Slovenian average scores and it appears only if accounting for the regulating environment. Serbian banks due to institutional, economic and political environment in the late 1990s, as it was noted before, are still less cost efficient. This fact could be considered as a catching up process.

**Table 6. Cost inefficiency estimates by categories of ownership**

Country	Foreign	Domestic Private	Domestic State	Average country
Croatia	2,11	1,78	2,05	1,98
Serbia	2,26	2,26	2,17	2,23
Slovenia	1,55	1,56	2,54	1,89
Average ownership group	1,97	1,87	2,25	2,03

As for ownership structure, state-owned banks are globally less cost efficient than private domestic and private foreign-owned banks. These results are robust independently of database sample. The gap between the efficiency of private domestic and foreign banks is rather narrow. In contrast to numerous studies' results, foreign banks appear to be to some extent less efficient than domestic private ones. The explanation we can give is that, on the one hand, foreign banks entering domestic banking sector are to face high expenses to gain market share and to restructure purchased actives. On the other hand, most of domestic banks in these countries benefited from European banks' (or in some cases from international institutions such as the EBRD) expertise and capital. Moreover, the number of domestic private banks dropped significantly during the 2000s, especially in Serbia, because of mergers and acquisitions by foreign banks. Consequently, only the most competitive and most efficient ones could save their positions.

#### 4. Conclusion

Croatian, Serbian and Slovenian banking systems, even having the financial structure of the same origin, followed then different paths of financial transition. This historical development accounts a lot for a comprehension of recent evolution in size, structure and efficiency of the banking sectors of these countries. We notice that Serbia started its transition later than the other two countries. However, Serbian Republic was making a big progress in developing its banking sector during the 2000s by adopting the strategy close to the Croatian one of encouraging foreign entry to domestic sector. Slovenia followed quite a different banking sector development by conserving a large part of domestic private and state assets in banking sector.

The presented analyze shows that Slovenian banking sector is globally more efficient than Croatian and Serbian one (the gap between Slovenian and Serbian cases being large while between Slovenian and Croatian rather narrow). We find also that state banks are less efficient in Slovenia and Croatia, but slightly more efficient in Serbia. Private banks, both domestic and foreign, do not have a large difference in cost efficiency scores.

Finally, we would like to underline that these results should be considered with caution because represent only microeconomic efficiency. We admit here that the aggregated micro-efficiency of a banking sector does not always necessarily account for its stability and efficiency as one of the pillars of economic development, especially in the transition countries and be mindful of that while making comparative studies.

## References

1. Asaftei, Gabriel, and Subal C. Kumbakhar S.C. 2008. "Regulation and Efficiency in Transition: the case of Romanian Banks." *Journal of Regulatory Economics*, Springer, Vol. 33(3), pp. 253-282.
2. Beadle, Sibel. 2009. "The impact of the financial crisis on the banking sector in transition countries in 2008." *Law in transition*, EBRD, 2009, pp. 40-49.
3. Berger, Allen N., and Loretta J. Mester L. 1997. "Inside the Black Box: What Explains Differences in the Efficiencies of financial institutions." *Journal of Banking and finance*, 21(1997), pp. 895-947.
4. Bonin, John P. 2004. "Banking in the Balkans: The Structure of Banking Sectors in Southeast Europe." *Economic Systems*, Vol. 28, No. 2, pp 141-153.
5. Bonin, John P., Iftekhar Hasan I., and Paul Wachtel. 2005. "Bank Performance, Efficiency and Ownership in Transition Countries." *Journal of Banking and finance*, No. 29, pp. 31-53.
6. Bonin, John P., and Paul Wachtel. 2003. "Financial Sector Development in Transition Economies: Lessons from the First Decade." *Financial Markets, Institutions and Instruments*, vol. 12, No 1, pp. 1-63.
7. Coletti, Elisa, and Virginia Tirri. 2005. "The Serbian Banking System: Recent Development and Major Players." *Transition Studies Review*, Vol. 12, iss. 2, pp. 201-21
8. EBRD. 2008. Transition report: Growth in transition, EBRD, London.
9. Fink, Gerhard, Peter Haiss, and Mina Ugljesic. 2005. "Serbia's Reform of the Banking Sector – Implications for Economic Growth and Financial Development." Paper presented at the IPSI Conference, Belgrade, 2-5 June 2005.
10. Fries Steven, and Anita Taci. 2005. "Cost Efficiency of Banks in Transition: Evidence from 289 banks in 15 post-communist countries." *Journal of Banking and finance*, No. 29, pp. 55-81.
11. Hasan Iftekhar, and Katherin Marton. 2003. "Development and efficiency of the banking sector in a transitional economy: Hungarian experience." *Journal of Banking & Finance*, 27 (2003), pp. 2249-2271.
12. IBRD/World Bank. 2008. Doing Business 2009, Country profile for Croatia, Washington.
13. IMF. 2007. Republic of Slovenia: Selected Issues, May 2007, IMF Country Report No. 07/182.
14. IMF. 2008. Republic of Croatia: Financial System Stability Assessment—Update, May 2008 IMF Country Report No. 08/160.
15. Kasman Adnan, and Canan Yildirim. 2006. "Cost and profit efficiencies in transition banking: the case of new EU members." *Applied Economics*, 2006, 38, pp. 1079–1090.
16. Mencinger Jozef. 2004. "Transition to a National and a Market Economy: A Gradualist Approach" in *Slovenia. From Yugoslavia to the European Union*, Editors Mojmir Mrak, Matija Rojec, and Carlos Silva-Jáuregui, The World Bank, pp 67-82
17. Reininger, Thomas, and Zoltan Walkom. 2005. "The Croatian Banking System" *Financial Stability Report 9*, OENB, pp 110-126.
18. Ri Anastasia, Kamilya Suleymenova, and Aleksandar Zdravkovic. 2009. "Efficiency And Competition in Serbian Banking." In *The New Economy: Challenges, Opportunities and Choices*, ed. Mirjana Radovic Markovic, Dejan Eric, Hasan Hanic, Srdjan Redzepagic, and Ivan Stosic.
19. Stiblar, Franjo. 1997. "Bank restructuring in Slovenia. The New Banking Landscape in Central and Eastern Europe: Country Experiences and Policies for the Future." Organisation for Economic Co-operation and Development, Paris, pp. 295–375.
20. Stiblar, Franjo and Marko Voljc. 2004. "The Banking Sector" in *Slovenia. From Yugoslavia to the European Union*, Editors Mojmir Mrak, Matija Rojec, and Carlos Silva-Jáuregui, The World Bank, pp 263-275

# Chapter 16.

## THE IMPACT OF THE GLOBAL FINANCIAL CRISIS ON TRANSITION CHANGES IN SERBIA<sup>1</sup>

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### Abstract

*After more than eight years of implementing transition reforms, the economic environment in Serbia, while showing signs of progress, remains unsatisfactory. The economy of Serbia is facing too many difficulties, which are reinforced by the “spillovers” from the global financial crisis. Nevertheless, the country’s economy could rebound in the coming period if certain conditions are met.*

*Key words:* Serbia, Transition Changes, Economic Environment, Global Financial Crisis

### 1. Introduction

After more than eight years since the transition process started, the economic environment in Serbia, while showing signs of progress, cannot be deemed satisfactory. The Serbian economy is facing numerous problems, which are aggravated by the “spillovers” from the global financial crisis.

An attempt to answer, at least partially, some of the questions relating to the course of the transition in Serbia will be made in this paper. The effects of the transition reforms implemented to date in Serbia and the prospects for ensuring an enabling business environment under unfavourable conditions created by the global financial crisis will be assessed.

### 2. The transition process and the business environment in Serbia

#### 2.1. Analysis of the transition indicators for Serbia

While the transition process has yielded results, many desired objectives have not been reached. Regrettably, many initial expectations that transition reforms, in particular the privatisation and restructuring of enterprises, would enable a radical improvement of key economic performances have not been met. The belief that reforms would boost economic development is increasingly giving way, as transition losses build up, to a slowdown in reforms and even scepticism that they will create any improvements in the near future.

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According to the criteria that the European Bank for Reconstruction and Development uses in its assessment of transition results [2], Serbia was ranked 12<sup>th</sup>-17<sup>th</sup> among nineteen transition economies in Europe in 2008. All countries of the Visegrád Group, the Baltic countries, Eastern Balkan countries and some countries in the Western Balkans (Croatia, Albania and the Former Yugoslav Republic of Macedonia) had a higher ranking than Serbia.

In 2008, Serbia achieved the best results in price liberalisation, then in small-scale privatisation and in trade and foreign exchange liberalisation and, finally, in banking reform and interest rate liberalisation. The least amount of progress was observed in the implementation of a competition policy and in the development of securities markets and financial institutions other than banks. Serbia was relatively slow in long-term structural reforms. The country's average score was 2.89 on a scale of 1 to 4+. Table 1 outlines the results that Serbia achieved in the areas of key importance for the transition process.

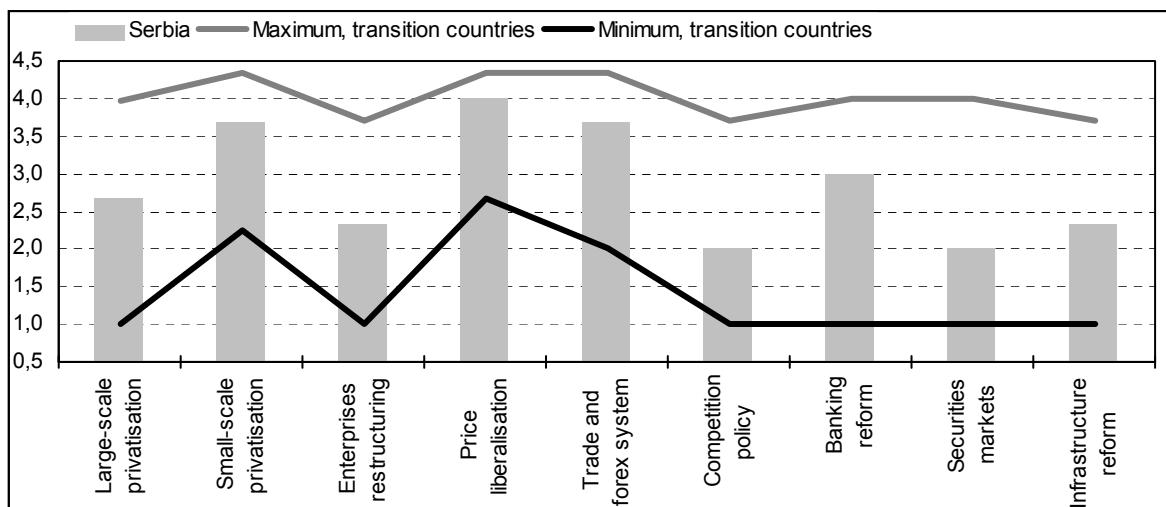
**Table 1. Transition indicators for Serbia, 2001-2008**

	2001	2002	2003	2004	2005	2006	2007	2008
Large-scale privatization	1.00	2.00	2.33	2.33	2.67	2.67	2.67	2.67
Small-scale privatization	3.00	3.00	3.00	3.33	3.33	3.67	3.67	3.67
Enterprises restructuring	1.00	2.00	2.00	2.00	2.33	2.33	2.33	2.33
Price liberalization	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Trade and foreign exchange liberalization	2.67	3.00	3.00	3.00	3.33	3.33	3.33	3.67
Competition policy	1.00	1.00	1.00	1.00	1.00	1.67	2.00	2.00
Banking reform and interest rate liberalization	1.00	2.33	2.33	2.33	2.67	2.67	2.67	3.00
Securities markets and non-bank financial institutions	1.00	1.67	2.00	2.00	2.00	2.00	2.00	2.00
Infrastructure reform	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.33
Average score	1.52	2.33	2.41	2.44	2.59	2.70	2.74	2.89

Source: [2]

The analysis of the pace of transition in Serbia reveals a rather pronounced cyclical tendency. Clear progress in 2002 was followed by a hiatus in 2003 and particularly in 2004, after which the economy recovered to some extent in 2005 and 2006. Then came another pause (in 2007) and another improvement (in 2008).

**Figure 1. Position of Serbia among countries in transition, 2008**



Source: [2]

In conclusion, the pace of transition reforms in Serbia has been rather slow, in a “stop-and-go” fashion. However, the achieved results can be seen as relatively satisfactory (see Figure 1), especially given the huge delay (ten years) in the implementation of reforms in comparison with many countries in Central and Eastern Europe.

## 2.2. Comparative analysis of the business environment in Serbia and in Central and Eastern European countries

The business environment in Serbia that emerged as a result of transition reforms is neither too favourable nor too competitive compared with Central and Eastern European countries. The most recent World Bank report on business conditions [9], in which ten ease-of-doing-business indicators are analysed, shows that Serbia ranks low in this respect – Serbia is positioned as 94<sup>th</sup> among 181 countries.

In terms of the ease of doing business, Serbia lags behind other countries in transition. Serbia ranks below Slovakia (36), Hungary (41), Slovenia (54), the FYR of Macedonia (71), the Czech Republic (75), Poland (76) and even Montenegro (90). It is interesting that Serbia ranks higher than Croatia, even though Croatia is far more advanced in negotiations on accession to the European Union. The rankings of selected countries by specific indicators are given in Table 2.

**Table 2. Selected rankings on the ease of doing business, 2009**

	Serbia	Macedonia, FYR of	Montenegro	Bosnia and Herzegovina	Croatia	Slovenia	Hungary	Slovakia	Czech Republic	Poland
Starting a business	106	12	105	161	117	41	27	48	86	145
Dealing with construction permits	171	152	167	137	163	69	89	53	86	158
Employing workers	91	125	104	117	146	158	84	83	59	82
Registering property	97	88	123	144	109	104	57	7	65	84
Getting credit	28	43	43	59	68	84	28	12	43	28
Protecting investors	70	88	24	88	126	18	113	104	88	38
Paying taxes	126	27	139	154	33	78	111	126	118	142
Trading across borders	62	64	125	55	97	78	68	116	49	41
Enforcing contracts	96	70	130	123	44	79	12	47	95	68
Closing a business	99	129	42	60	79	38	55	37	113	82
Ease of doing business	94	71	90	119	106	54	41	36	75	76

Source: [9]

The currently unfavourable ranking of Serbia on the ease of doing business results from the following factors:

- Numerous and time-consuming procedures still stand in the way of starting a business in Serbia. It takes 11 procedures and 23 days to start up an enterprise. Serbia's ranking in this respect is lower than in the previous period, notwithstanding frequent (apparently only declarative) endeavours to improve start-up conditions, especially for small and medium-sized enterprises.
- In dealing with construction permits, an enterprise in Serbia faces 20 procedures that take 279 days. In this regard, Serbia is significantly below the average for Central and Eastern European countries.
- The rigidity of labour regulations is decisive for a country's ranking in the field of employment, because it has effects on the level of unemployment and the size of the informal sector. However, labour regulations are more rigid in Serbia than in any country of the Visegrád Group.

- Registering property in Serbia requires 6 procedures and takes 111 days. There have been no changes in this respect in the last three years.
- Of all indicators analysed by World Bank experts, Serbia ranks highest on conditions for obtaining credit.
- In protecting investors, Serbia ranks satisfactorily (70), higher than a number of its neighbours: the FYR of Macedonia (88), Bosnia and Herzegovina (88) and especially Croatia (126).
- Serbia has a complex and insufficiently transparent tax system. The number of annual tax payments amounts to 66, meaning that an enterprise spends as many as 279 hours to fulfil its tax obligations.
- Judging by the time needed to export or import, trading across borders is easier in Serbia than in any other country included in Table 2. However, the costs to export are higher only in Montenegro and Slovakia, whereas the costs to import are higher only in Montenegro.
- The efficiency of the Serbian legal system is unsatisfactory. To collect disputed receivables resulting from commercial agreements, an enterprise spends 635 days on 36 procedures, while the average rate of debt collection from insolvent enterprises is a mere 29%.
- The closing of a business in Serbia still takes too much time and resources. The liquidation of an enterprise requires 2.7 years and 23% of bankrupt's assets.

A worrying fact is that World Bank analysts identified in the current report compared with the previous one some improvements in only one area in Serbia – in registering property. In the same period, the FYR of Macedonia implemented reforms in six areas, Bosnia and Herzegovina, Bulgaria and Albania conducted reforms in four areas, whereas Croatia saw reforms in two areas.

### 3. Key economic developments in Serbia, 2001–2008

In early 2001, after the political changes of October 2000, Serbia embarked on the path of transition and, accordingly, of recovery and reintegration of its economy with the international community. Serbia became a member of all key international organisations (with the exception of the World Trade Organisation) and considerably improved its relations with the EU. However, Serbia remains the only country in the region for which the EU Stabilisation and Association Agreement has still not come into force.

**Table 3. Key economic indicators for Serbia, 2001–2008\***

	2001	2002	2003	2004	2005	2006	2007	2008
Gross domestic product								
Real value, growth, %	5.6	3.9	2.4	8.3	5.6	5.2	6.9	5.5
Total, million €	12,820.9	16,033.7	17,416.4	19,075.0	20,358.0	23,520.6	29,542.7	34,260.0
Per capita, €	1,708.7	2,137.8	2,328.2	2,555.9	2,736.0	3,173.5	4,002.2	4,651.4
Gross value added by activities, %								
Industry	25.0	24.3	23.2	22.9	22.0	21.7	21.2	20.4
Agriculture	15.8	15.3	14.1	15.5	14.1	13.2	11.4	11.8
Construction	3.8	3.5	3.8	3.7	3.6	3.6	3.8	3.6
Services	55.4	56.9	58.8	57.9	60.3	61.5	63.6	64.2
Volume of production, growth, %								
Industry	0.1	1.8	-3.0	7.1	0.8	4.7	3.7	1.1
Agriculture	18.6	-3.4	-7.2	19.5	-5.0	-0.3	-8.0	8.5
Construction	-5.8	12.7	3.2	9.8	5.8	10.9	18.9	4.9
Volume of services, growth, %								
Tourism	-6.5	0.2	-7.3	-0.6	-2.2	1.4	11.2	0.1
Transportation	9.6	6.9	5.0	4.7	4.6	5.8	6.8	0.4
Communications	25.1	3.6	24.1	26.8	28.6	64.2	43.4	41.3

	2001	2002	2003	2004	2005	2006	2007	2008
Real value of services, growth, %								
Wholesale	0.8	12.2	3.2	24.3	17.0	13.3	16.7	10.3
Retail trade	19.8	23.9	13.8	18.0	26.5	7.7	23.0	5.9
Catering	1.1	0.9	0.1	1.3	-1.7	-7.4	6.0	1.0
Consumer prices (end-year), growth, %								
National classification	43.2	11.9	8.2	13.1	17.1	6.0	12.0	7.9
EU classification							11.0	8.6
Employment (annual average) and unemployment (end-year)								
Employed, thousand	2,101.7	2,066.7	2,041.4	2,050.9	2,069.0	2,025.6	2,002.3	1,999.5
Unemployment rate, %	13.4	14.5	16.0	19.5	21.8	21.6	18.8	14.7
Real value of wages and pensions (annual average), growth, %								
Average net wage	16.5	29.9	13.6	10.1	6.4	11.4	19.5	3.9
Average pension	17.9	16.8	9.7	5.9	4.2	2.9	4.7	14.3
Merchandise trade and foreign direct investments, million €								
Exports	1,922.2	2,201.7	2,442.4	2,831.6	3,608.3	5,102.5	6,432.2	7,428.3
Imports	4,759.2	5,956.8	6,589.3	8,623.3	8,439.2	10,462.6	13,506.8	15,580.5
FDI, net	184.0	502.2	1,205.7	776.6	1,244.6	3,492.2	1,820.8	1,812.1
Foreign currency reserves of the central bank and external debt (end-year), million €								
Reserves	1,320.0	2,175.0	2,840.0	3,117.0	4,935.0	9,025.0	9,641.0	8,160.0
External debt	12,608.8	10,765.9	10,858.4	10,354.7	13,064.3	14,885.4	17,789.0	21,801.0

\* Real values imply constant prices; the rates of growth refer to the previous year.

Sources: [3, 4, 6]

Between 2001 and 2008, Serbia recorded high economic growth: the gross domestic product grew at an average rate of 5.4% per annum. Furthermore, economic tendencies improved – as for the curbing of inflation, the growth of exports, increases in salaries and pensions, higher foreign exchange reserves and the inflow of foreign direct investments (see Table 3). The Serbian economy is, however, facing major problems and challenges. These include, in particular, a high trade deficit, a high unemployment rate and an excessively high public spending.

The analysis of key economic indicators for Serbia in the period 2001–2008 points to the following conclusions:

- In Serbia, as in Central and Eastern European countries, the growth of GDP was driven by the growth of the so-called tertiary sector (services), foreign trade, domestic demand and investments (mostly from foreign capital inflow).

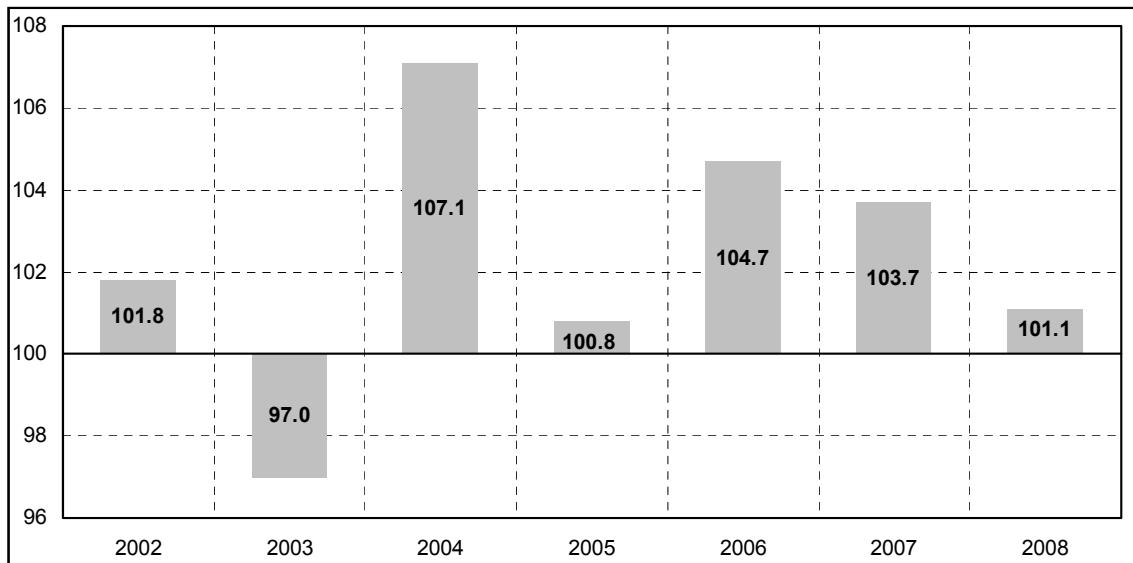
Unfortunately, the actual level of GDP in Serbia (34,260 million euros in 2008) is rather modest. Of all transition economies – according to the data released by the Statistical Office of the European Communities [5] – only Bulgaria, with a population size comparable to that of Serbia, has a similar level of GDP (34,118 million euros). Other transition economies have a much higher GDP. Romania, with three times the population of Serbia, has a four times higher GDP (137,035 million euros), while Hungary, with a population which is 36% higher than that of Serbia, has a three times higher GDP (105,843 million euros). Moreover, Croatia, with 40% less inhabitants, has a GDP that is about 40% higher (47,365 million euros), whereas Slovenia, which has a population 3.7 times smaller, generates a GDP about 10% higher (37,126 million euros).

The structure of the Serbian economy is not much different from that of most EU member states. In the structure of the gross value added in Serbia in 2008, services accounted for 64.3%, while industry,

agriculture and construction accounted for 20.3%, 11.7% and 3.7%, respectively. A similar structure of the economy, although with a far lower share of agriculture, can be observed in most EU member states. However, the volume of Serbia's real sector is modest, whereas the EU is a rich post-industrial society.

- The growth of “traditional” sectors of the Serbian economy – agriculture and in particular industry – was, on average, much lower than the growth of GDP. Significant oscillations could be observed in industrial production from year to year (see Figure 2), but noticeable improvements did not take place. The Serbian industry is still characterised by obsolete technologies and a production that is largely based on labour-intensive and resource-intensive sub-sectors.

**Figure 2. Industrial production of Serbia, 2002–2008: Chain indices**



Source: [6]

Transition reforms – primarily those relating to the privatisation and restructuring of enterprises – have been particularly intensive in industry, but they failed to radically increase the volume of production. Experiences from privatisation and restructuring vary greatly, ranging from failure to success.

A large number of privatisations ended in a complete failure. The Privatisation Agency annulled privatisation agreements during the control process in many cases – but most enterprises the privatisation of which had been abolished fell in an even more precarious economic position, with slim chances to recover.

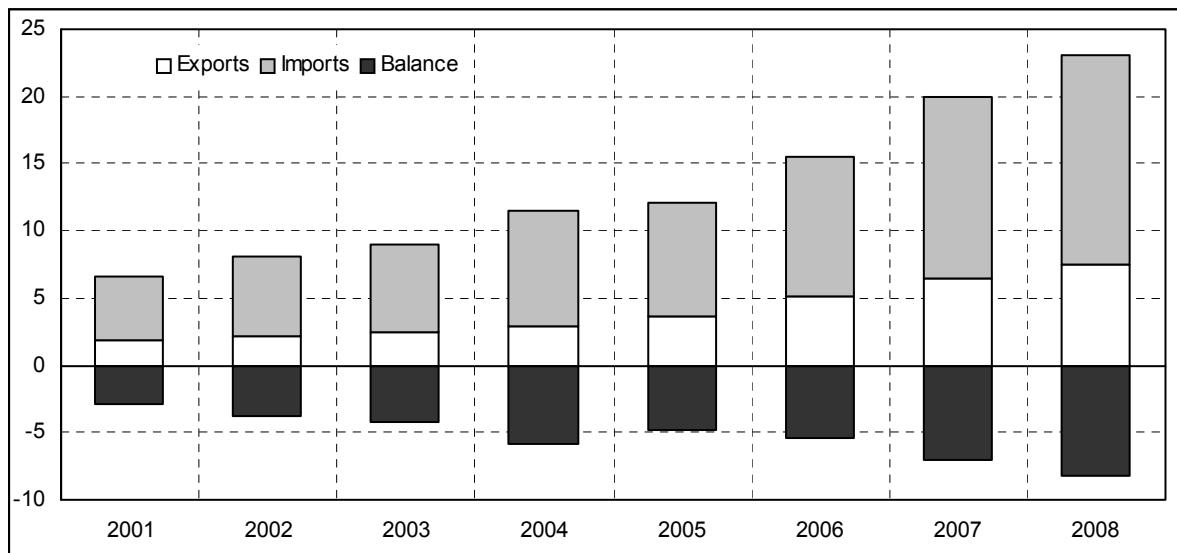
Regrettably, the number of unsuccessful privatisations was even larger. Many of the new owners, often lacking the slightest of competences in the activities of the enterprises they purchased, were unable to improve the way of doing business. Some privatised enterprises underwent changes, usually operational ones, resulting primarily in labour force reduction.

On the other hand, a certain number of privatised enterprises, in particular those acquired by “real” foreign investors, saw major improvements, reflected in a complete change of the business management, in accordance with international standards.

- The volume of merchandise trade has increased considerably. In 2008, merchandise trade accounted for 23,008.8 million euros, which was 3.4 times higher than in 2001 (6,681.4 million euros).

Unfortunately, the growth of merchandise trade stemmed from the growth of imports that permanently and substantially exceeded the growth of exports. This, in turn, resulted in a persistent and increasing trade deficit (see Figure 3). The deficit generated in the last two years – especially in 2008, when it reached as much as 8,152.2 million euros – is not sustainable in the long term and, coupled with enormous public spending, constitutes a major potential source of large-scale macroeconomic instability.

**Figure 3. Merchandise trade of Serbia, 2001–2008: Values (billion €)**



Source: [6]

While exports have grown significantly, they remain low. The structure of exported goods is also unfavourable. Primary and resource-intensive products (products with little value added, mostly agricultural and mineral inputs) prevail in the structure of exports. A persistent constraint to the growth of exports is the lack of non-price factors of competition: design, brands, standards and the like.

- The results achieved by Serbia in the field of employment leave much to be desired. The expected wave of new employment in the wake of the reform processes has so far failed. New employment has mostly been generated in sectors dealing with non-tradable goods, i.e. in sectors incapable of exporting.

Developments in Serbia's labour market in the transition process have been characterised by lower employment, which was due to privatisation and restructuring in the first place. The total number of the employed declined by 102.2 thousand between 2001 and 2008.

In spite of a negative population growth, Serbia remains a country with high unemployment. In October 2008, the unemployment rate, based on the methodology of the International Labour Organisation, was 14.7% in Serbia – as opposed to 7.3% in the EU [5].

The issue of unemployment and new employment is one of the largest problems faced by Serbia – not only in an economic, but also in a social sense – and this will become even more severe as the economic crisis deepens. It should be pointed out that the growth of food prices is permanently higher in Serbia than in the EU in 2009 over 2008, and that the share of food in the total household expenditure accounts for 35.0% in Serbia – and only 14.5% in the EU [8].

#### **4. The impact of the global financial crisis on economic tendencies and transition changes in Serbia**

- In late 2008, the global financial crisis started affecting the Serbian economy. The effects of the external crisis were felt in Serbia not only through the higher cost of money, but also through difficulties to export, owing to the recession in Serbia's largest exports markets, primarily in EU member states. Moreover, foreign-owned banks slowed down their loan activities, taking a much more cautious approach in the new circumstances.

Turbulences in international financial markets impaired the Belgrade Stock Exchange, as well. Late 2008 saw a major decline in the volume of trade and the value of shares in the domestic securities market [1]. Total turnover was 882.5 million euros – 57.2% lower year-on-year. The index of the most liquid shares, Belex15, plummeted by 75.6%. Prices of shares included in the basket of BelexLine index suffered a somewhat smaller decline – 68.7%. Total market capitalisation was 10.3 billion euros – 36.4% lower than a year earlier.

The effects of the global financial crisis became more obvious in the first quarter of 2009, when economic activity in Serbia saw a major decline [6]. Compared with the first quarter of 2008, imports fell by 25.7%, whereas exports fell by 23.8% (the percentages are calculated for amounts in euros). Construction activity (measured as the value of performed works at constant prices) was down by 17%. The decline in the volume of industrial production was almost identical – 16.9%. Retail trade turnover (at constant prices) decreased by 11.7%, while tourism turnover (measured as the number of overnight stays) decreased by 6%. In consequence, the GDP fell by 4.2% in real terms. Furthermore, illiquidity has reached huge proportions, and this may cause the bankruptcy of many enterprises, especially small ones.

Budget revenues have shrunken, prompting a budget revision and steps to ensure new borrowing. In mid May 2009, the International Monetary Fund approved a facility of 2.9 billion euros to build up Serbia's foreign exchange reserves. Shortly after that, large international banks agreed in Vienna to keep the overall level of loan exposure in Serbia.

Measures have also been taken to reduce the risk for financial stability. Government guarantees for savings deposits have increased from 3,000 to 50,000 euros. In addition, incentives for savings and the stock exchange have been introduced. The government abolished the tax on foreign-exchange-savings interest, the tax on capital gains and the tax on the transfer of title to securities. This further reinforced the trust in the overall financial system and preserved the stability of the banking sector. It should be noted that the banking sector in Serbia is sounder than in most transition economies, because of strict regulation and control.

However, in view of the current facts and most likely prospects, projections of key macroeconomic indicators, of which the projection of GDP is always in the limelight, have been revised. Thus, it has been officially estimated that the real GDP in 2009 would fall by 2% – and then by 4%.

The current global financial crisis shook the foundations of the world and of the Serbian economy and will have serious repercussions on economic growth in the coming years. Forecasts of economic tendencies are continuously revised, even by such distinguished institutions as the World Bank. While it is very difficult to predict future economic developments, the following tendencies can be identified as highly probable:

Firstly, economic developments in Serbia in the coming period will be under the dominant influence of the effects of the global financial crisis (which limits the potential for growth) and the resulting global economic environment. Besides, if the EU Stabilisation and Association Agreement does not

take effect, the economic situation in Serbia would further deteriorate, as the country would not be able to access certain EU funds and thus compensate for the reduction in foreign capital inflow.

Secondly, the expected decline in exports-driven and domestic demand will result in an economic slowdown. Exports-driven demand is expected to decline because of the economic and trade slowdown worldwide, and particularly in EU countries, on which Serbia mostly depends for exports. On the other hand, domestic demand is expected to decline because of the projected restrictions in both public and private spending and because of lower capital investments that will result from limited access to borrowing abroad and limited inflow of foreign direct investments.

- The negative effects of the global financial crisis have shifted the focus of macroeconomic policy from the monetary to the fiscal sphere, i.e. they have reaffirmed the role of the public sector and of budget management. Considerable effort will be required to cut soaring public spending. However, the role of the government should not be reduced to expenditure control and downsizing. The government needs to become more actively involved in the economic life, and not just by creating an economically enabling and legally reliable business environment. Its efforts should also be focused on providing incentives for agriculture development and for investments in infrastructure (particularly in Corridor 10), ad hoc involvement to salvage large enterprises from bankruptcy (especially exporters and those that employ many workers), providing incentives for exports, and also implementation of various non-tariff measures of protection (those permitted by the WTO).

Monetary policy will remain focused on curbing inflation (at the level below 10%) and providing macroeconomic stability. Accordingly, a highly restrictive monetary policy can be expected to remain in place. However, certain adjustments to the new situation need to be made in this field. Interest rates in Serbia are still too high, much higher than in other countries in the region. Lowering interest rates (primarily the reference interest rate) could be a crucial step towards improving the competitiveness of Serbian enterprises in the global market and boosting economic growth.

Adverse developments in international financial markets, compounded by the unfavourable investments risk rating given to Serbia, will have negative effects on domestic financial markets. It therefore seems reasonable to expect even an absence of portfolio investments, a reduction in the volume of financial market transactions, a lower share of foreign investors in the total stock exchange turnover, a slowdown of foreign loan inflows and lower foreign exchange reserves.

Sales conditions in foreign and domestic markets will become worse in the coming period. The global financial crisis and lower global demand are expected to result in lower exports, especially of some leading sectors (e.g. the metal sector). The pressure of imports supply on the domestic market will increase. Coupled with the expected restrictive policy of commercial banks and insufficient competitiveness of the Serbian economy, this could lead to a production crisis and, possibly, to mass redundancies. In view of this, industrial production is expected to be about 15%-18% lower in 2009 than in 2008. Furthermore, in 2009 both exports and imports are expected to decline by at least 25% compared with 2008.

High unemployment will remain a key issue. In 2009, employment is expected to decline by 0.5% to 1%.

After nineteen years of privatisation according to various models and under different regulations, this process should finally be completed. Privatisation is not an end in itself. It is the key means of transition towards a market economy, i.e. it should enable efficient corporate governance and technological modernization of production, higher exports and improved overall efficiency and effectiveness of doing business. Regrettably, privatisation is often seen in Serbia as the sale of the “family silver” to foreigners [7]. It is frequently associated only with tycoons, illegal accumulation of wealth, theft, the acquisition of property at “preferential” prices, lay-offs and the like. While numerous

anomalies have been registered during the privatisation process in Serbia, it appears that the privatisation process has nevertheless had positive effects on economic tendencies and on business efficiency. It is worth remembering that privatisation is only the first step on the long path of reforms that should ultimately improve the overall competitiveness.

The transition reforms in Serbia have not produced the desired changes – improved business efficiency, economic recovery, renewal of economic potentials and new productive employment. The transition process turned out to be more complicated and longer than initially anticipated. Many circumstances were disregarded in the original analysis, including the issue of how transition economies would respond to cyclical tendencies, in particular recessions and crises.

The current global financial crisis generates additional problems, which hinder the process of necessary transition reforms. Namely, in the new circumstances – characterised by recession, deepening of macroeconomic imbalances and sharpening of social tensions – other problems are taking centre stage, and this will not have positive effects on the implementation and pace of transition reforms.

## References

1. Belgrade Stock Exchange, website: <http://www.belex.rs>
2. European Bank for Reconstruction and Development (2008), *Transition Report, 2008*, website: <http://www.ebrd.com>
3. Ministry of Finance of the Republic of Serbia (2009), *Public Finance Bulletin*, May, website: <http://www.mfin.gov.rs>
4. National Bank of Serbia, website: <http://www.nbs.rs>
5. Statistical Office of the European Communities, website: <http://ec.europa.eu/eurostat>
6. Statistical Office of the Republic of Serbia, website: <http://www.stat.gov.rs>
7. Ivan Stošić, and others (2009), “Privatisation and Restructuring Process of the Serbian Economy”, *The 7<sup>th</sup> International Conference on Economic Integration, Competition and Cooperation*, Opatija (Croatia), April
8. Gordana Vukotić-Cotić, Ivan Stošić (2009), “Inflation in Serbia and in the European Union”, *Economic Analysis*, Institute of Economic Sciences, Belgrade (Serbia), No. 3-4, pp. 29-37
9. World Bank (2009), *Doing Business, 2009*, website: <http://www.worldbank.org>

# Chapter 17.

## FOREIGN DIRECT INVESTMENTS IN SERBIA AND FUTURE ROLE OF HUMAN CAPITAL<sup>1</sup>

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### Abstract

*International capital flows, transfer of real and financial funds between different countries' legal entities became very intensive after WWII. Importance of foreign investments in the world market is continuously growing since. The level of foreign investments has significantly fluctuated during last few decades worldwide, which is directly correlated to business activities life cycle. Today with the world economic crisis influencing world economy, the level of foreign investments has dramatically diminished. This trend is also present in Serbian economy. This paper will show an alternative source of increasing country's attractiveness for foreign investments through increase of the value of human capital. Many authors note that multinational companies in their investments decision process start with the analysis of the availability of high level of human capital. What is the exact level of human capital (education and skills) required is the questions which have to be discussed in order to facilitate inflow of foreign capital, especially in transition countries. One of the key motivators for transition countries' wish for attracting foreign capital is the transfer of technology. Transferability of technology is directly related to host country approach to defining national development strategies and policies. We use econometric analysis of data from countries which have already gone through transition process, follow the trends of foreign investments, and divide them into mergers and acquisitions on the one side and Greenfield investments on the other side. Finally we present findings of the other authors' research on this topic, as well as the level of human capital required to boost FDI.*

*Key words:* Human Capital, FDI, Education, Skills, MNC

### 1. Foreign investments

International capital flows intensified after WWII. These flows include transfer of real and financial funds between different countries' entities, with a counter transfer being postponed for a certain period of time, with the goal of achieving economic and political goals of participants in the transfer (Unković, 1980, pp 1). Three major types of international funds flows according to Kovač (1994, pp 274) are:

- International flow of loan capital – state inflows
- Portfolio investments – capital market inflows
- Foreign direct investments

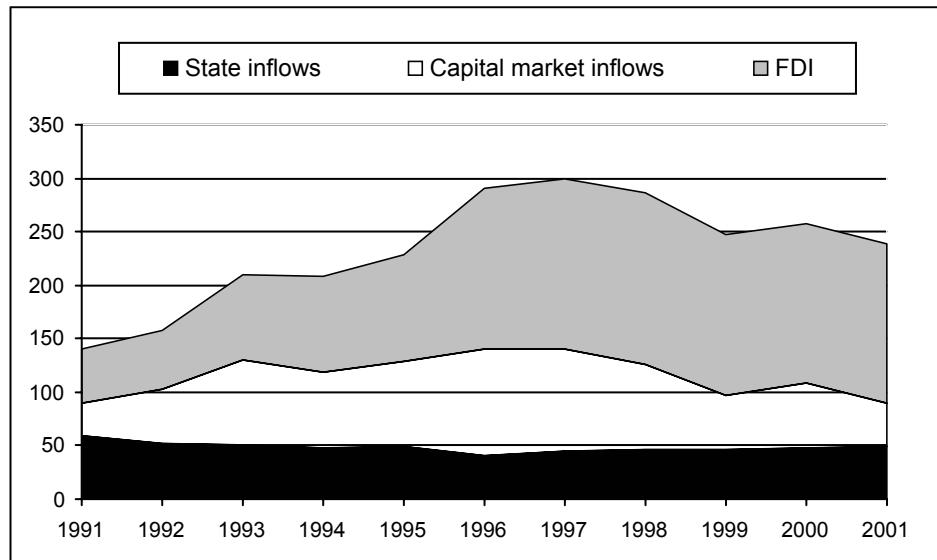
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Host country economy is obtaining capital inflow from different public and private sources. Since 1990 large number of developing and transition countries has recognized foreign direct investments as a major source of financial capital inflow. Not all sources of funds have been important during time, but after 1993 foreign direct investments became major source of inflows with state and capital market inflows importance decreasing. According to Miyamoto (2003, pp 12) such a trend has been persistent until 21<sup>st</sup> century.

**Graph 1. Net capital inflow in developing countries (US\$ bil.)**



Source: Miyamoto (2003, pp 12)

Beginning of nineties brought expansion of investment activities in developing countries. Factors which made these countries attractive for investments were rapid economic growth especially in South East Asia and Latin America; privatization programs open for foreign investors; and liberalization of FDI regimes (Unctad, 1994). FDI inflow, capital markets investment growth and renewed private loans changed the structure of global financial inflows to developing countries during nineties (Unctad, 1995).

**Table 1. FDI by groups of countries and in Serbia (billion US\$)**

	1990	2000	2001	2002	2003	2004	2005	2006	2007
World	207	1,398	824	625	561	718	959	1211	1,833
Developed countries	172	1,135	600	443	361	404	611	941	1,248
EU	97	698.1	384	309	259	214	498	562	804
Developing countries	35	257	214	171	180	284	316	413	500
SEE transition countries*	4.1	3.7	4.5	4.2	8.4	13.4	15.2	28.9	30.1
Serbia	0.1	0.1	0.2	0.5	1.4	1.0	2.1	5.1	4.0

\* including Bulgaria and Romania

Source: FDI Stat

Table 1 gives data about FDI inflow by groups of countries, where we can observe significant growth in developing countries until the beginning of the century, and raise of FDI in SEE transition countries and in Serbia. After global investment crisis in 2001-2003, despite nominal growth, share of investments in developing countries started decreasing from the highest of 40% in 2004 to 27% in 2007. Without detailed analysis what caused this decrease, one may say that investors shifted towards other regions like Canada, Russia, Australia, China, Ireland and rising SEE transition countries.

Most common division of FDI is to greenfield investments on the one side and mergers and acquisitions on the other side. Establishment of new affiliations in foreign country is defined as greenfield investments, whereas takeover of existing capacities in foreign country is named M&A. Importance of M&A as a FDI tool grew after 1980, so that its share in total FDI today varies between 55% and 75%, and it is highest in developed countries.

Table 2 gives data about share of FDI, greenfield investments and M&A in groups of countries' GDP. Except for selected years, when privatization of large scale state owned companies took place, in transition countries, greenfield investments play much more important role. This is to say that share of M&A shows the stage of development of host country, which means that foreign investors see existing companies as a good and profitable investment location.

**Table 2. Total FDI, mergers and acquisitions and greenfield investments (share of GDP)**

		1990	2000	2001	2002	2003	2004	2005	2006
<b>World</b>	total	0,94	4,39	2,61	1,90	1,52	1,73	2,14	2,91
	greenfield	0,26	0,80	0,73	0,78	0,71	0,81	0,54	1,09
	M&A	0,68	3,59	1,88	1,12	0,80	0,91	1,60	1,82
<b>Developed Countries</b>	total	0,99	4,60	2,45	1,73	1,26	1,26	1,83	2,68
	greenfield	0,21	0,24	0,39	0,47	0,40	0,27	0,02	0,61
	M&A	0,78	4,35	2,06	1,26	0,85	0,99	1,81	2,07
<b>EU</b>	total	1,34	8,25	4,48	3,31	2,28	1,63	3,64	3,87
	greenfield	0,48	1,14	1,89	1,08	1,17	0,27	0,51	0,90
	M&A	0,86	7,10	2,59	2,23	1,11	1,36	3,13	2,97
<b>Developing countries</b>	total	0,91	3,78	3,20	2,49	2,37	3,22	3,06	3,44
	greenfield	0,53	2,80	1,93	1,85	1,86	2,62	2,15	2,38
	M&A	0,38	0,99	1,27	0,64	0,51	0,60	0,91	1,06
<b>SEE transition countries</b>	total	0,08	3,99	5,41	3,81	5,79	4,09	5,49	9,61
	greenfield	0,06	2,53	4,07	2,51	4,17	2,47	3,24	4,84
	M&A	0,02	1,46	1,33	1,30	1,62	1,62	2,25	4,76
<b>Serbia</b>	total	0,08	0,46	1,19	2,87	5,97	3,77	8,32	14,53
	greenfield	0,08	0,46	1,19	1,46	2,31	3,34	4,07	3,88
	M&A	0,00	0,00	0,00	1,41	3,66	0,43	4,25	10,65

*Source: FDI Stat*

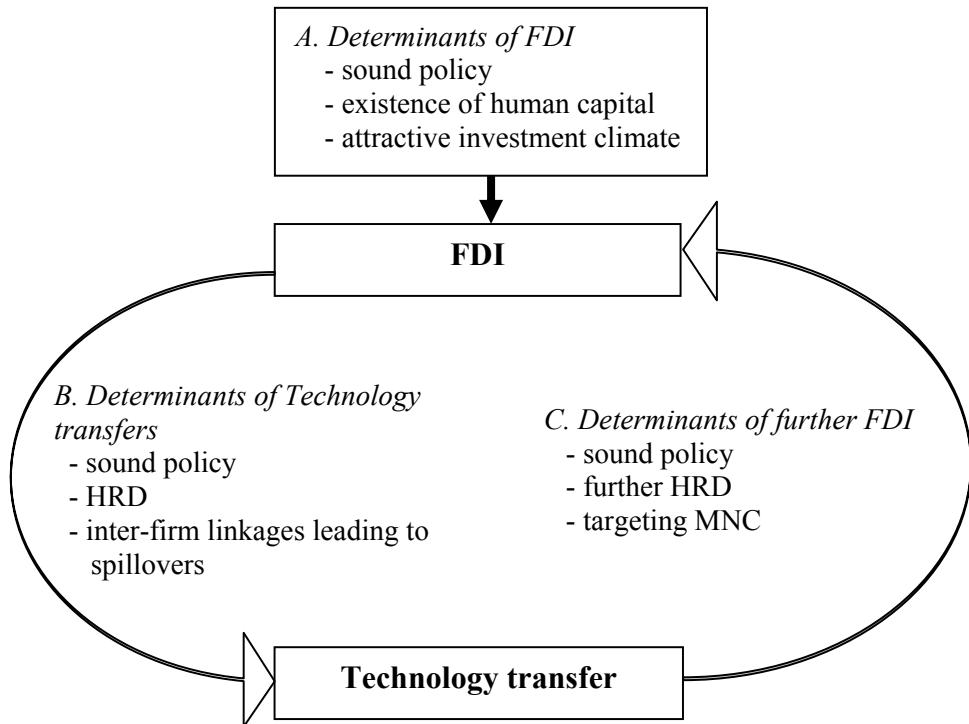
In countries like Serbia, which have completed the first phase of transition, with socially owned companies privatization completed, it is necessary to search for other ways to attract foreign investors. Foreigners are not attracted for further M&A, and high dependency of local GDP on foreign investments, taking almost 15% of GDP has to be replaced with other sources of financial inflow. Greenfield investments create good source of funding for public and private sector of host countries, in particular for complementary investments in infrastructure and development of human resources (Miyamoto, 2003, pp. 13). It is important to have viable development policy which will guarantee that funds raised from FDI will be used for increase of host country attractiveness for renewed M&A.

## 2. Human capital and foreign investments

The level of human capital had in developing countries significantly improved during the period of high inflow of FDI, mostly as a result of growing role of the state in formal education and training as well as with the policies supporting companies which invested in training. In Serbia similar policies have been adopted, so we may expect positive result similar to those in developing countries in nineties.

One of the developed countries' qualities is availability of workforce with high level of human capital. There we can raise the question of whether it is human capital triggering economics prosperity or it is vice versa. Studies which analyzed long term trends in education and economic growth in 20<sup>th</sup> century (for example Godo and Hayami, 2002 and Cohen and Soto, 2001) showed that development of human resources and economic growth incident simultaneously.

**Graph 2. The Virtuous Circle of FDI and Technology-Transfer/Spillovers**



Source: Miyamoto (2003)

Developing countries in the nineties achieved high economic growth by attracting high levels of FDI-s, especially from multinational companies. One may ask how developing and transition countries succeeded in attracting foreign investments. Graph 2 shows the importance of attractive investment climate and sound policy for achieving high level of foreign investments. Investment climate include availability and quality of production factors, market size, distribution costs and several social and political factors which have impact on the level of risk for business activities. Among all factors which create investment climate, most important is the level of human capital, especially for MNC which operate with the high level of value added. In modern economy the importance of human capital is increasing with production becoming knowledge oriented in high technology and services. MNC in planning their investments seek for employees with high level of knowledge and skills in engineering, technology, organizational skills and business administration.

### 3. The impact of human capital on FDI - literature review

Literature which analyses foreign investments assumes that human capital is among key factors in attracting FDI-s (Dunning 1998, Lucas 1990, Zhang and Markusen 1999).

We may divide multi-country analyses of FDI in developing countries into two groups. First group covers period between 1960 and 1980, and the other is analyzing period after 1980.

In the first group of papers written by Root & Ahmed (1979), Schneider & Frey (1985), Hanson (1996) & Narula (1996) key conclusions are that in developing countries covered by the research, with

number of countries included varying between 20 and 100, impact of human capital including literacy, school enrollment, availability of technical and professional labor has no statistical impact on the level of FDI. Such conclusions may be consistent with the fact that these authors analyzed period between 1960 and 1980, when foreign investments were concentrated on opening new markets, gathering of natural resources and above all cheap labor force. According to Dunning (2002) in that period of time availability of highly educated labor had no significant impact to investors activities.

The second group of papers with multi-country coverage includes Noorbakhsh et al (2001), UNCTAD (2002) and Nunnenkamp & Spatz (2002). They use key statistical indicators for the period after 1980. Authors proved that level of human capital and investments in human resources have significant impact on attracting FDI, and that those effects grow over time. Except for econometric precision, the second group of authors, unlike researches made by the first group of authors, use contemporary data on investments which bring higher value added. The fact is that most MNC which invested their capital in developing countries after 1980 have been oriented more to effectiveness and highly educated work force. Paper published by UNCTAD shows high positive correlation between the elements of human capital, like the share of students in sciences and engineering with the level of FDI in 140 developed and developing countries.

In most studies researching this field, human capital is analyzed by the level of secondary and higher education. For example Broadman & Sun (1997) and Coughlin & Segev (2000) confirmed in their researches that in China at the beginning of nineties adults' education level was key determinant for regional distribution of FDI in China.

Since the beginning of century, several international organizations initialized researches related to FDI and host countries investment climate. One of them is research named FY2001 financed by the World Bank and JBIC, which analyses world economic environment and foreign investments (JBIC, 2002). Research included questions related to investors' motivation in selecting host country for their investments, and the results showed that quality of human resources is very important factor, with availability of technical labor being most important with 39%, followed by availability of managerial labor with 38% and high-skilled labor with 32%.

To conclude literature review we can say that human capital is very important determinant for attracting FDIs, especially those which require high efficiency and skilled labor as one of the production factors.

#### **4. Trends in human capital creation**

Primary education is core of every human development policy. Without widespread primary education available for all population, host country is not risking in attracting only low added value investments, but it will hardly enter virtual circle shown in graph 2. This happened to many countries in Africa. Experiences of developing countries which steadily invested in primary education show very positive results in increase of FDI. For that reason the program "Education for everyone" on the conference in Thailand in 1990, was initialized by UNESCO, UNICEF, UNDP, World Bank and representatives of 155 governments and over 150 non-governmental organizations. This initiative influenced on increase of donations for primary education, stimulating governments of developing countries to increase the level of education. Serbia needs to generate its strategy from their positive experiences in order to deal with 1.5 million people without completed primary education.

Effective example of proactive approach is what Singapore Investment promotion Agency (IPA) has developed under title "World Class University Program". A goal of this program was to establish 10 international educational institutions in Singapore in order to support development of curricula which will satisfy market needs (Miyamoto 2003). Example of Singapore shows that even in countries which have begun their transition process 40 years ago, there is still a need to enforce strategies for human

resources development, in order to keep competitive advantage on the world market, particularly in attracting foreign investments.

Another example is Irish investment promotion and development agency (IDA) which took significant part in creation of educational policy which is synchronized with the market needs. In 1997 they established “Expert group for future skills needs” in order to identify skills and qualifications requirements in different business sectors, so they can suggest necessary activities for development of human resources (EGFSN 2008). Their another activity was development of “Education, skills and development” strategy which included research programs in higher education with the goal of promoting research, development and innovative capacity of the economy (IDA 2009).

European Union also developed a strategy named “Minimal learning platform for all” which defines knowledge and competences which will be needed on the future labor market (Carneiro 2002). Strategy includes analysis of the skills in communication, IT, self-learning capability and other personal and social skills. It is expected for this platform to cover analysis of minimal skills requirement on the future labor market which will be oriented to technology and personal development.

## 5. Conclusions

Experiences of other transition and developing countries lead us to two important conclusions. At first human resources development policy has to be based on a good primary educational system. Without good primary educational policy, educational system will continuously create non-skilled labor force which will be negative signal for foreign investors. Quality primary education creates good basis for improvement of human capital in higher education, which became highly demanded by foreign investors. Secondly human development policy has to be created in accordance with market needs. Market analysis and inclusion of foreign educational institutions closely related to high-technology industry can be effective. What countries like Singapore and Ireland have done in the past show us that educational strategies recommended by investment promotion agencies enable reform of human resources development policies so as to satisfy market needs.

At the end we can say that empirical research show that human capital is very important for attracting FDI and that country has to provide at least primary education for all adults so as to be viewed as a country potentially interesting for foreign investors. Countries which tend to attract MNC operating in high value added activities in the area of high technology has to develop high education sector in such a way to satisfy market needs. To define effective human resources development policy it is necessary for all stakeholders to cooperate, including government, economy and investment promotion agencies.

Serbian Government should adopt complementary policies and strategies of development of human resources if they want to succeed in keeping high level of foreign investments in the country.

## References

1. Broadman HG & Sun X (1997) *The Distribution of FDI in China*, The World Economy, vol 20, no. 3, pp. 339-361
2. Carneiro R (2002) *Achieving Minimum Learning Platform for all: critical queries influencing strategies and policy options*, European Journal of Education, vol. 37, no. 3, pp. 301-309
3. Cohen D & Soto M (2001) *Growth and Human Capital: Good Data, Good Results*, technical paper 179, OECD, Paris
4. Coughlin CC & Segev E (2000) *FDI in China: The Spacial Econometric Study*, The World Economy, vol 23, no. 1, pp. 1-23
5. Dunning J H (1998) *Explaining International Production*, Unwin Hyman, London

6. Dunning J H (2002) *Determinants of FDI: Globalization Induced Changes and the role of FDI Policies*, Annual Conference, World Bank, Washington DC
7. EGFSN (2008) *National Skills Bulletin 2008*, available on [http://www.skillsireland.ie/media/egfsn081117\\_national\\_skills\\_bulletin.pdf](http://www.skillsireland.ie/media/egfsn081117_national_skills_bulletin.pdf)
8. FDI Stat (2008) – available on <http://stats.unctad.org/FDI/TableViewer/tableView.aspx?ReportId=1254>
9. Godo Y & Hayami Y (2002) *Catching up in Education in the Economic Catch-up of Japan with the USA, 1890-1990*, Economic Development and Cultural Change, vol. 50, no. 4, pp 961-978
10. Hanson J R Jr. (1996) *Human Capital and Direct Investments in Poor Countries*, Explorations in Economic History, no. 33, pp. 86-106
11. IDA (2009) *Education, Skills and Research Strategy*, available on <http://www.idaireland.com/home/index.aspx?id=3>
12. JBIC (2002) *JBIC Review*, br. 6, June, Tokyo, Japan
13. Kovač O (1994) *Platni bilans i međunarodne finansije*, Beograd, Cesmecon
14. Lucas R E Jr. (1990) *Why doesn't Capital Flow from Rich to Poor Countries*, American Economic Review, no. 80, pp. 92-96
15. Miyamoto K (2003) *Human Capital Formation and Foreign Direct Investments in Developing Countries*, OECD Working Paper 211
16. Narula R (1996) *Multinational Investment and Economic Structure: Globalization and Competitiveness*, Routledge, London
17. Noorbakhsh F, Paloni A & Youssef A (2001) *Human Capital and FDI to Developing Countries: New Empirical Evidence*, World Development, vol 29, no. 9, pp. 1593-1610
18. Nunnenkamp P & Spatz J (2002) *Determinants of FDI in Developing Countries: Has Globalization Changed the Rules of the Game?* Transnational Corporation, vol. 2, no. 2, UNCTAD
19. Root F & Ahmed A (1979) *Empirical Determinants of Manufacturing FDI in Developing Countries*, Economic Development and Cultural Change, no. 27, pp. 751-767
20. Schneider F & Frey B (1985) *Economic and Political Determinants of FDI*, World Development no.13, pp. 161-175
21. UNCTAD (1994) *World Investment Report*, New York and Geneva
22. UNCTAD (1995) *World Investment Report*, New York and Geneva
23. UNCTAD (2002) *World Investment Report*, New York and Geneva
24. Unković M (1980) *Međunarodno kretanje kapitala i položaj Jugoslavije*, Belgrade, Naučna knjiga
25. Zhang K & Markusen J (1999) *Vertical Multinationals and Host Country Characteristics*, Journal of Development Economics, no. 59, pp. 233-252
26. Zubović J (2007) *Investing in Human resources, Economic Analysis*, vol. 40, #1-2, pp 3-5
27. Zubović J (2008) *Personality Model in Human Resource Management*, Economic Analysis, vol. 41, #3-4, pp 1-7
28. Zubović J, Hanić A (2009) *Praksa zapošljavanja u bankarskom sektoru Srbije - preporuke u odnosu na saradnju sa obrazovnim institucijama*, Tempus Conference: Business Opportunities In Serbia: The Case of Italian Business, BBA I IEN, Belgrade, June
29. Zubović J, Domazet I (2008) "Upravljanje projektima ljudskih resursa", Proceedings book from International Scientific Conference „Project Managers Competences“, YUPMA

# Chapter 18.

## IMPACT OF GLOBAL FINANCIAL CRISIS ON BANKING PROFITABILITY: THE CASE OF SERBIA<sup>1</sup>

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### Abstract

*The global financial crisis has been threatening the banking world since 2007. The erosion of profits and rising losses of banks have been the inevitable consequence of this crisis. "The decline in bank profits was a global phenomenon" (BIS, 2009). Consequential decline in profitability during 2008 was dramatic (ECB, 2009). A significant reduction in profitability was also recorded in the countries of Southeastern Europe (SEE), as well as in countries of Central and Eastern Europe (CEE). The exception is Serbia, whose banking sector achieved remarkable growth of ROA and ROE profitability in 2008 - for over 20% compared to last year, though the banks from Serbia were among the most successful in Europe in 2007. Investigation of this paradox represents the topic of this work. The plan of the article is accommodated to this topic: 1. the global financial crisis and banking profitability; 2. banking profitability in Southeastern Europe (2005-2008); 3. paradoxical growth of banking profitability in Serbia during the crisis; 4. conclusion*

*Key words: Banks, Profitability, Global Financial Crisis, Serbia, Southeastern Europe*

### 1. The global financial crisis and banking profitability

The primary indicator of banks' profitability is the return on assets (ROA).<sup>5</sup> Another indicator is the return on equity (ROE).<sup>6</sup> Equity multiplier or asset to equity ratio, which shows the leveraging level at the same time determines the relationship between the two base indicators of profitability (EM = ROA / ROE).

The decline in banks' profits during the financial crisis steadily reduces their profitability. Reduction of capital in such circumstances is unacceptable, even if it does not threaten the prudential level of the banks' capital adequacy, because a relatively high amount of capital is the best response to the challenges of a crisis.<sup>7</sup> Because of this, ROE profitability proportionally declines as the profit declines,

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<sup>5</sup> „A basic measure of bank profitability is the return on assets, ROA = net profit after taxes / assets. The return on assets provides information on how efficiently a bank is being run.“ Mishkin (2007), p. 232.

<sup>6</sup> However, what the bank's owners (equity holders) care about the most is how much the bank is earning on their equity investment. This information is provided by the other basic measure of bank profitability, the return on equity, ROE = net profit after taxes / equity capital. Also, p. 232.

<sup>7</sup> Therefore the capital injections are integral part of Support banking system in the Euro Area (ECB, 2009, p. 87-88).

even more rapidly, if the total capital of banks' increases, such has been conducted through support schemes in EU during the current crisis.

Contrary to equity, total banks' assets in times of a crisis are being reduced, as the inevitable consequence of liability contraction, caused by a significant deposits withdrawal. Reducing of assets is typically slower than the decline in profits, excluding the cases of bank panic, and mass deposits withdrawal. Direct support from the public sector by the aid of measures to provide relief from legacy assets can significantly alleviate or even prevent reducing of banks' assets. Despite this, one of the basic characteristics of the current crisis in the banking sector is deleveraging (BIS, 2009).

The extent of the last year's fall of profitability is illustrated by the available data from ECB for the full sample of 20 large and complex banking groups: the average ROA declined from 0.41% in 2007 to just 0.01% in 2008, the average ROE for 2008 as a whole "dramatically" to 1.9 %, from 11.7% in 2007.<sup>8</sup>

The current crisis is endangering not only profitability, but also the survival of many banks. "A number of European lenders averted outright bankruptcy thanks to direct support from the public sector."<sup>9</sup> However, even the complete support could not prevent a precipitous fall in banks' profitability, the largest after the Great Depression, in the thirties of last century.

The latest ECB data show that the key indicators of profitability of all domestic banks in EU are in the negative zone: ROA is -0.1% and -3.0% ROE (15% in 2007). Results of the banks mainly in majority foreign ownership in EU are on the verge of successfulness: ROA amounts to only 0.2%, while ROE falls to 4.6%. Most countries with highly developed banking in EU had a negative ROA and ROE profitability during 2008 - United Kingdom, Germany, Netherlands, Denmark and Belgium (ECB, 2009).

Considering a high level of dependence of transition economies, especially banking, from the Western European banks and the consequential financial contagion,<sup>10</sup> the banks' profitability in CESE<sup>11</sup> countries inevitably had to decline. However, banking sectors in all new EU member states (EU 16-27) made a respectable profitability, despite the general fall of profits in 2008. The most successful banking sectors in EU, measured by country-level indicators, are the banking sectors in Romania (2.7% ROA, ROE 29.5%), Bulgaria (2.0% ROA, ROE 17.3%), Poland (1.4% ROA, ROE 14.8%), Estonia (1.3% ROA, ROE 16.0%) and Czech Republic (1.1% ROA, ROE 14.6%). Banks in the European transition countries were not involved in operations with U.S. mortgage securities, which contributed to a smaller decline in their profitability.

The countries of Southeastern Europe (SEE) are even more exposed to foreign banking groups, which are the owners of a predominant number of banks and manage the largest part of banking sector assets in this region. Therefore, the exogenous impact on their profitability was even stronger.

## 2. Banking profitability in Southeastern Europe (2005-2008)

The movement of the banking sector profitability in SEE countries<sup>12</sup> during the past four years, from 2005 to 2008, is shown in the following Figure 1.

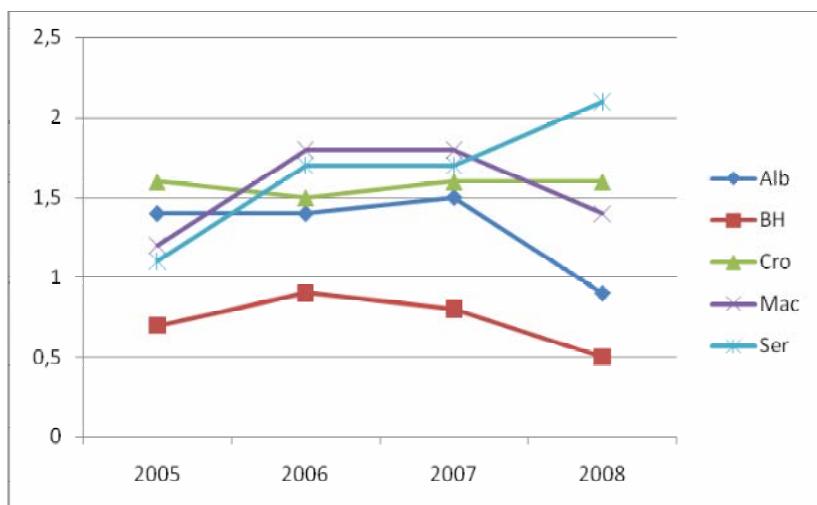
<sup>8</sup> ECB, 2009, p. 83 - 85.

<sup>9</sup> BIS, 2009, p. 40.

<sup>10</sup> Some authors focus on „two forms of contagion affecting a CESE country: (i) exposure to a shock originating from the home country of a foreign bank, and (ii) exposure to regional contagion triggered by a problem in another CESE country to which a Western European country has significant exposures.“ (Arvai et al. 2009, p. 19).

<sup>11</sup> CESE – Central, Eastern, and Southeastern Europe.

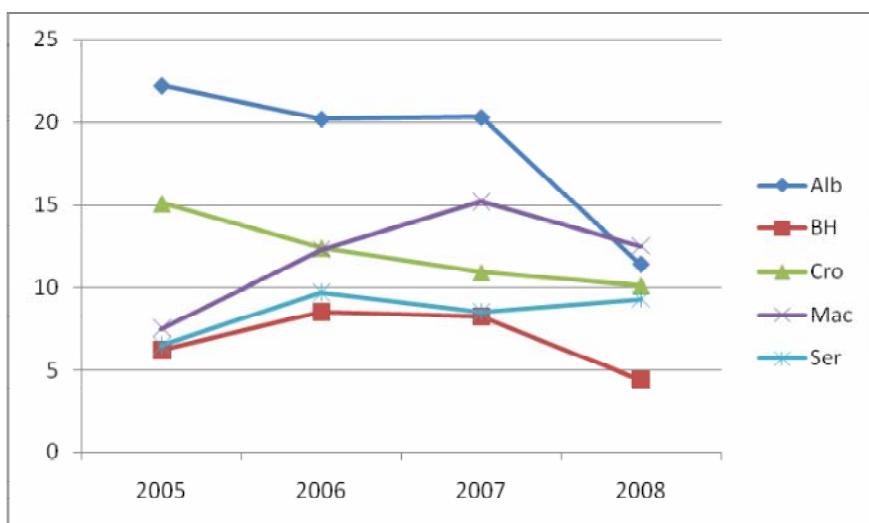
<sup>12</sup> EU members from SEE region are not included, while Montenegro was not shown because of the data

**Figure 1. ROA banks' profitability in the SEE countries (% of total assets)**

Sources: Boa (2009), CBBH (2009), CNL (2009), NBM (2009), NBS (2009)

At first glance, it can be observed that the banks' ROA profitability in the SEE had an upward trend during 2008, when there had come to a general fall in the efficiency of their operations, except for the banking sector in Serbia. An increase of ROA profitability for over 20% would be an excellent result even in the non-crisis times, especially if one bears in mind that Serbia was one of the most successful EU countries in profitability for the previous 2006 and 2007, together with Bulgaria and Romania.<sup>13</sup> Thanks to such ROA profitability, the banking sector of Serbia was at the second place in Europe, after Romania and before Bulgaria in 2008.

It is indicative that most banks from SEE countries in 2008 reported significantly lower decline of average profitability than the banking sectors of Western countries, although they had been significantly more profitable before (ECB, 2007). The only country in the region whose banking sector had not made any profit was Montenegro and due to that, having ROA sector indicator -0.6% (CBM, 2009).

**Figure 2. ROE banks' profitability in the SEE countries (% of total assets)**

Sources: Boa (2009), CBBH (2009), CNB (2009), NBM (2009), NBS (2009)

discontinuity.

<sup>13</sup> Vuković, 2008, p. 228

The resultant of the achieved base profitability and sector equity multipliers was ROE profitability, which oscillations in the period 2005-2008 are shown in the Figure 2.

Return on equity of the banking sector also declined in all SEE countries during 2008, except in Serbia. Approximately the same growth rate of ROA and ROE profitability indicates that there has not been any deleveraging in the banking sector in Serbia, unlike most of other countries. The absence of deleveraging has not improved ROE ranking of Serbian banking, which is on the 12th place of 16 CESE countries, and behind some of the old EU member states (Sweden, Spain, and Greece).

The critical factor of ROE profitability was equity multiplier, so that banks in Albania, with only 0.9% of average return on asset brought their owners an average of 11.4% return on equity, compared to 9.3% in Serbia, despite 2.3 times higher ROA profitability. Generally, the banking sector in Serbia had the lowest equity multiplier among SEE countries,<sup>14</sup> which are by the leverage level at the back of European countries. Extremely high capital adequacy of banks in Serbia was caused by the central bank's prudential measures.<sup>15</sup>

Despite the decline in the crisis 2008, the profitability of banking in other SEE countries, has remained at the relatively high level, which proves the vitality of their economies, the efficiency of domestic banks and their profit performance in the future (Athanasoglou et al. 2006).

Banks in SEE region had the above-average profitability during 2008 compared to the CEE countries and the whole CESE. Comparison of the banking sectors in SEE and CEE countries shows that both groups had almost the same share of banks in majority owned by foreign shareholders (68% to 67%), where these banks managed averagely 86% of the total banks' assets, and in CEE 76%, at the end of 2007 (EBRD, 2008).

Hence it follows that the high financial openness and presence of foreign banks in Eastern Europe had a positive impact on the profitability of local banks during the global financial crisis, proving a significant level of financial integration of this region (Fabricio et al. 2009). At the same time, it is the evidence of "a unique nature and role of banking in modern economies."<sup>16</sup>

High profitability of banks in CESE countries still could not slow down the fall in the efficiency of the EU banking sector, because the banks in transition countries make up a small part of it. In fact, banking assets of the ten CESE countries, EU member states, made up only 1.84% of the total assets in the banking sector of EU in 2007 (ECB, 2008). The same year, assets of banks in 6 SEE countries, non-members of EU was marginal 0.22% of the total EU bank assets, which is cumulatively, for all 16 CESE countries, 2.06%. Hence, even the fastest growth of banks' assets in CESE countries, which was argumentatively predicted (Muhlberger, 2007), would not significantly alter their relationship to total assets of EU banks.

### 3. Paradoxical growth of banking profitability in Serbia during the crisis

Profitability of the banking sector in Serbia has been growing continuously since 2005. In 2006, banking in Serbia moved ahead close to the European top by ROA profitability, just behind Bulgaria and Romania. Last year, as it had been already pointed out, Serbian banking sector was the most successful in Europe, behind Romania.

This result was remarkable, considering that the process of economic transition in Serbia was essentially started in 2001, although it had been formally started before. Creating a new institutional

<sup>14</sup> IMF, 2009, p. 23.

<sup>15</sup> NBS, 2009b, p. 43.

<sup>16</sup> Hughes and Mester, 2008, p. 26.

environment enabled the accelerated expansion of businesses, with a full change in the market and ownership structure of domestic banking. The strongest impulse of these changes was given by the foreign banking groups – investors – by establishing new banks and acquiring banks owned by domestic shareholders, primarily the state. At the end of 2008, from a total of 34 banks, 20 of them were majorly foreign-owned, and they managed 75.3% of the sector assets. The same year, 26 banks made profits (15 foreign and 11 domestic), while eight banks had losses (five domestic and three foreign).

More profitable operation of banks in majority owned of domestic shareholders and state ownership than banks in majority owned by foreign shareholders is one of the unique characteristics of banking in Serbia that characterizes most of developed economies.<sup>17</sup> The next table shows profitability movement of these two bank groups in Serbia.

**Table 1. Profitability of banks in domestic and foreign ownership in Serbia**

Indicators / Year the ownership	Banks by	ROA		ROE	
		2007	2008	2007	2008
Banks in majority foreign ownership	1,62	1,79	8,66	8,18	
Banks in majority domestic ownership	1,96	2,94	8,26	13,32	

*Sources: the calculation based on banks' balance data (www.nbs.rs)*

*Note:* in per cent

Banks in majority foreign ownership gave the largest contribution to gross profit growth in 2008 - 64.9% of net profits of the banking sector in Serbia. The remaining 35.1% was achieved by the banks in majority domestic ownership with 24.7% of total assets (state-owned banks 16% and domestic privately-owned banks 8.7%). Thanks to this, both groups of banks achieved the growth in ROA profitability in 2008, especially domestic for even 50%. It has also happened for the first time in this decade that the domestic origin banks had a better ROE result compared to the foreign,<sup>18</sup> exceeding them by over 61%! The basic factors for this growth were high ROA and leveraging jump, while foreign banks have suffered a strong deleveraging. It turns out that both of the ownership groups of banks visibly contribute to the growth of the banking sector profitability in Serbia.

Local banks achieved a rapid growth of profits, and thus the profitability in the crisis 2008 mainly due to abundance of two sources: 1) the extremely high interest margins and 2) income under 2W repo securities of the National Bank of Serbia. Crucial importance of these revenues was confirmed by the official reports of the Central Bank itself.<sup>19</sup> Banks in Serbia took the highest interest rates on short-term loans citizens.<sup>20</sup>

Other indicators of profitability, important for resolving the causes of the growing profitability of local banks, despite the blows of the global financial crisis are shown in the table below.

<sup>17</sup> Havrylchyk and Jurzik (2006) are document lower RoA for foreign banks in the U.S., Canada, the U.K., Germany, France, and the Netherlands.

<sup>18</sup> "This has led parents to set high ROE targets for their affiliates in SEE – between 20 to 25 percent before tax, compared with an EU average of 14 percent." (Sorsa et al. 2007, p. 18)

<sup>19</sup> NBS, 2009b, p. 42-43.

<sup>20</sup> „Interest rates on short-term citizens loans in Serbia were extremely high relative to relevant group of countries – Bulgaria, Croatia and Romania“ (Đukić and Đukić, 2008, p. 42).

**Table 2. Other indicators of banks' profitability in Serbia**

Indicators / Year	2007	2008
Net interest margin	6,54	7,76
Net interest income / Total assets	3,97	5,39
Operating expenses / Total assets	4,54	4,84
Operating expenses / Net interest income and fees	79,1	68,3

Sources: NBS (2009a), and NBS (2009).

Note: in per cent

Serbian banking sector increased the net interest margin by 19% and the share of net interest income in total assets to 36% (!) in 2008, which confirms the importance of interest income for the sector profitability. At the same time the participation of operating expenses in total assets was increased by 7%, respectively; there was a fall of the operational efficiency, which was compensated by growing coverage of these expenses with the net interest income and fees. Growth of profitability was stimulated by the revenues from abolishing unused long term risk provisions.

Relevant indicators, such as, average assets per employee, loans per employee, and deposits per employee, show that the Serbian banking sector productivity is at the rear of CESE countries that are much behind the old EU member states (EU-15).<sup>21</sup> Consequently, productivity does not affect the profitability of banks in Serbia.

Banking market in Serbia has some uniqueness compared to the other CESE countries,<sup>22</sup> of which the most visible are the relatively small volume of loans and the high level of domestic deposits, which have mainly covered these loans.<sup>23</sup> The data that show that household loans reached only E 500 per capita and that the share of loans to GDP in 2007 was among the lowest in the group of CESE countries, after Albania and Romania (IMF, 2009, p. 23), indicate to a still low level of banking intermediation and financial deepening. On the other hand, the ratio of domestic deposits and loans leads to the conclusion that the inflows from abroad - excluding cross-border loans,<sup>24</sup> as exogenous – have not had a crucial importance for the profitability of banks in Serbia.

Paradoxical growth of profitability was achieved despite the extremely high level of reserve requirements,<sup>25</sup> and extremely restrictive monetary policy. Thus, the position of the parent institutions of the ten largest foreign-owned banks incorporated in Serbia is understandable: "We have made substantial investments in Serbia over a number of years, and we remain committed to doing business in the country."<sup>26</sup> Vitality of the banking sector has certainly influenced the official assessment by the IMF that the real GDP fall in Serbia in 2009 of (-2%) would be less than the average GDP fall in Central and Eastern Europe (-3.7%).<sup>27</sup>

#### 4. Conclusion

The most important findings of the research on profitability of banks in Serbia and other countries affected by the global financial crisis, presented in this paper include:

- Banks' profits were dramatically reduced in most countries during 2008, especially the countries in development;

<sup>21</sup> Vuković, 2008, p. 224

<sup>22</sup> Bonin et al, 2008, p. 22, 31-32

<sup>23</sup> „Relative to the rest of Eastern Europe, Serbia's stock of bank credit is low and its growth in recent years was mostly financed by domestic deposits.“ (IMF, 2009, p. 23)

<sup>24</sup> Vuković, 2008a

<sup>25</sup> NBS, 2009c, p. 61

<sup>26</sup> Concluding Statement (2009).

<sup>27</sup> IMF, 2009a, p. 99.

- All domestic banks in the EU made negative average profitability, while the banks of foreign origin made the minimum positive performance;
- Banking sectors of the CESE countries, and SEE in particular, had significantly less decline in profits compared to the old EU member states (EU-15);
- Consequently, a respectable ROA and ROE profitability level was kept by the banks in these countries, which was well above the EU average in previous years;<sup>28</sup>
- Profitability of banks in the CESE countries could not slow down the decline in the efficiency of the EU banking sector because banks in transition countries make a small part of them (banking assets of the 10 CESE countries - EU member states - made only 1.8% of the assets of the EU banking sector in 2007)
- The only European country, apart from Romania, whose banking achieved growth in profitability for over 20% was Serbia: ROA from 1.7% to 2.1% and ROE from 8.5% to 9.3%;
- Consequently, the banking sector in Serbia was second in Europe by ROA profitability in 2008, but by the ROE indicator it was only at the 12th place of 16 CESE countries;
- The banking sector in Serbia achieved growth of profitability in the crisis 2008, primarily due to (1) the extremely high interest margins and (2) the income under 2W repo securities of the National Bank of Serbia
- The increase in net interest margin (from 6.6% to 7.8%) and other indicators of profitability confirm that interest income had a crucial importance for this result;
- Productivity and reducing of costs had a more visible impact on the growth of profitability of these banks;
- High profitability of banks in Serbia was achieved despite the relatively small volume of loans and the high level of domestic deposits, which were mainly used to cover the loans;
- Banks in majority domestic ownership achieved the faster growth of ROA profitability in Serbia during 2008 (from 2.0% to 2.9%) than banks in majority foreign ownership (from 1.6% to 1.8%), where it can be observed that the banks of domestic origin were extremely successful, which is unusual for the countries in transition.

Given all the facts, it is understandable why the foreign banks – investors - clearly confirmed that they will not leave the banking market in Serbia.

## References

1. Arvai, Z., Driesssen, K., and Otker-Robe, I. (2009), „Regional Financial Interlinkages and Financial Contagion Within Europe“, IMF WP 09/6, International Monetary Fund, Washington.
2. Athanasoglou, P., Delis, M.D., and Staikouras, C.K. (2006), „Determinants of Bank Profitability in the South Eastern European Region“, Working Paper No. 47, Bank of Greece, Athens.
3. BoA (2009), Annual Report 2008, Bank of Albania, Tirana.
4. BIS (2009), 79th Annual Report, 1 April 2008 – 31 March 2009, Bank for International Settlements, Basel.
5. Bonin, J., Hasan, I., and Wachtel, P. (2008), „Banking in transition countries“, BOFIT Discussion Papers No. 12/2008, Bank of Finland, Helsinki.
6. CBBH (2009), Annual Report for 2008, Central Bank of Bosnia and Herzegovina, Sarajevo.
7. CNB (2009), Annual Report 2008, Croatian National Bank, Zagreb.
8. CBM (2009), Chief ekonomist annual report 2008, Central Bank of Montenegro, Podgorica.
9. Concluding Statement by Participating Banks – Financial Sector Coordination Meeting on Serbia Held at the Joint Vienna Institute (March 27, 2009).

<sup>28</sup> Differences in profitability of banks in the Old EU and CESE countries can be responsible for a low banking integration in Europe. „The E.U. banking market is integrated if there a common ROA to which all E.U. banks converge.“ (Gropp and Kashyap. 2009)

10. Đukić, Đ., and Đukić, M. (2008), „The World Financial Crisis and Effects on Serbian Financial Sector“ in: *Financial Systems Integration of Balkan Countries in the European Financial System*, ed. Berthomieu, C., and Režepagić, S., Institute of Economic Sciences, Belgrade, p. 38-43.
11. EBRD (2008), *Transition Report 2008*, European Bank for Reconstruction and Development, London.
12. ECB (2007), *EU Banking Sector Stability*, European Central Bank, Frankfurt.
13. ECB (2008), *EU Banking Structures 2008*, European Central Bank, Frankfurt.
14. ECB (2009), *Financial Stability Review*, June 2009, European Central Bank, Frankfurt.
15. ECB (2009a), *EU banking sector stability*, August 2009, European Central Bank, Frankfurt.
16. Fabricio, S., Leigh, D., and Mody, A. (2009), „The Second Transition: Eastern Europe in Perspective“, IMF WP 09/43, International Monetary Fund, Washington.
17. Gropp, R., and Kashyap, A. (2009), „A New Metric for Banking Integration in Europe“, NBER Working Paper No. 14735, National Bureau of Economic Research, Cambridge, US-MA.
18. Havrylchyk, O., and Jurzyk, E. (2006). „Profitability of foreign banks in Central and Eastern Europe: does the entry mode matter?“, *Conference on Risk, Regulation and Competition: Banking in Transition Economies* Ghent University, 1-2 September 2006.
19. Hughes, J.P., and Mester, L.J. (2008), „Efficiency in Banking: Theory, Practice and Evidence“, Working Paper No. 08-1, Research Department, Federal Reserve Bank of Philadelphia.
20. IMF (2009), *Republic of Serbia*, Country report No. 09/20, International Monetary Fund, Washington.
21. IMF (2009a), *World Economic Outlook: Crisis and recovery*, International Monetary Fund, Washington.
22. Mishkin, F.S. (2007), *The Economics of Money, Banking, and Financial Markets*, Eighth Edition, Pearson Addison Wesley, Boston, US.
23. NBM (2009), Financial Stability Indicators – Financial soundness indicators (for the banking system), National bank of Republic Macedonia, Skopje.
24. NBS, Banking sector in Serbia – Quarter report, various issues, National Bank of Serbia, Belgrade.
25. NBS (2009), Kontrola poslovanja banaka – Izveštaj za IV kvartal, Narodna banka Srbije, Beograd.
26. NBS (2009a), Annual Report 2008, National Bank of Serbia, Belgrade.
27. NBS (2009b), Izveštaj o stanju u finansijskom sistemu (decembar 2008- maj 2009. godine), Narodna banka Srbije, Beograd.
28. NBS (2009c), Inflation Report – May 2009, National Bank of Serbia, Belgrade.
29. Sorsa, P., Bakker, B. Duenwald, C., Maechler, A., and Andrew, T. (2007), „Vulnerabilities in Emerging Southeastern Europe – How Much Cause for Concern?“, IMF WP 07/236, International Monetary Fund, Washington.
30. Vuković, V. (2008), „Structural Characteristics and Profitability of Banking in Selected Transition Economies“ in: *Financial Systems Integration of Balkan Countries in the European Financial System*, ed. Berthomieu, C., and Režepagić, S., Institute of Economic Sciences, Belgrade, p. 222-230.
31. Vuković, V. (2008a), „Strani krediti – ekspanzija i implikacije“, *Finansije*, No. 1-6/2008., p. 204-222.

## FOREIGN DIRECT INVESTMENT AND ECONOMIC TRENDS IN SERBIA<sup>1</sup>

Božo Drašković, Zoran Rajković<sup>2</sup>

### Abstract

*The suspension of economic sanctions and the liberalization of Serbian economic system after the year 2000 led to free space for foreign direct investment. The delay, caused by economic sanctions, in opening the country towards the environment for more than ten years have a great impact to modest growth of foreign direct investment in the period 2001-2007. The presence of financial and global economic crisis in mid-2008 was decelerating, and particularly in future would influence on, the poor intensity of investment inflow in Serbian economy. The total foreign investments were dominantly realized through buying off state-owned and social companies. Therefore, the investment growth effects were not noticed considerably in export growth, employment rate increase, and trade deficit decrease. The expectations that the privatization economic policy, as one of the key economic policy factors, together with deregulation and liberalization, will assure the overall economic prosperity were unreal.*

*Key words:* Liberalization, Foreign Investment, Economic Growth, Employment, External Debt.

### 1. Introduction

The economic strategy and the concept of structural harmonization from early eighties of the past century, also called Washington consensus, coined by John Williamson<sup>3</sup>, was applied as a receipt for the transition countries. This concept is mainly synthesizes in ten postulates; thereby some authors describe it as economic policy *Ten Commandments*. Briefly, it should be remarked some essential elements of structural harmonization models. The standard, original model of Structural harmonization program, implemented by IMF and World Bank comprises the following elements:

- Abolition of restrictions related to foreign investments in national industry, banks and other financial institutions;
- Privatization and constitution of overall and secure property rights over companies and resources together with withdrawal of the state from the property rights domain;
- Import duties and other import restrictions reduction;
- Industry redirection towards greater export and maximizing the use of local comparative advantages – exploitation of natural resources and cheap labour force, all together aiming to assure the payment of foreign debts and increase these countries dependency rate of developed countries economies;

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<sup>2</sup> Institute of Economic Sciences, Beograd

<sup>3</sup> Stigliz J. i N.Serra (2008), The Washington Consensus Reconsidered, Oxford University Press. See also: Miomir Jakšić (2009), Svetska ekonomska kriza i ekonomska politika Srbije u 2009.godini, Economic Faculty, Belgrade.

- A redirection of public expenditure priorities toward fields offering both high economic returns and the potential to improve income distribution, radical decrease of salary expenditure, social expenditure and education.
- Exchange rates control of local currency and adjustment of their value according to Currency Basket, aimed to export competitiveness:
- Liberalization of trade and interest rates, that is liberal capital price defining aiming to create positive environment for inflows of foreign direct investment
- Fiscal discipline and budget equilibrium in order to decrease deficit;
- Deregulation (to abolish barriers to entry and exit), in sense to maximize the free economic activities of multinational companies on developing countries markets. Deregulation's consequences are restriction in labour force protection level, uncontrolled and free multinational companies access to developing countries natural resources;
- State – owned companies privatization, and growing foreign companies influence on developing countries economic activities.

Transition economic policy in Serbia, as well as the one in all previous in Eastern Europe countries, was developing based on key principles of structural harmonization, aiming to realize the ideal of Smith's market "invisible hand" system.

## 2. Foreign direct investments

The open market economy of liberalization and deregulation comprises the free financial capital inflow from areas with fewer yields (profits and interest) to the countries with lower raw material, semi finished products, energy and labour force prices. The plenitude of free financial capital after 1990 flew out from developed towards countries in transition from socialism to capitalism. The expectations of the countries receiving the direct foreign investment were that those investments would ensure their stable development. Unfortunately, those expectations did not come true, particularly in Hungary, Ukraine, Baltic and other East Europe countries.

The direct foreign investment growth in Serbia in the period 2001-2008, observed in nominal amount is extremely dynamic. This fast growth has its mainstay on low initial basis of sole US\$ 50 millions in 2000, on one side, and intensification of social companies' sale off after 2001, on the other side.

**Table 1. Foreign Direct Investment( FDI)  
Total in million. \$**

	<b>FDI</b>	<b>BDP</b>	<b>FDI/BDP u %</b>
2000	50	8.651	0,6
2001	165	10.269	1,6
2002	475	14.282	3,3
2003	1.360	19.094	7,1
2004	966	22.124	4,4
2005	1.481	23.900	6,2
2006	4.387	33.143	13,23
2007	2.195	43.356	5,06

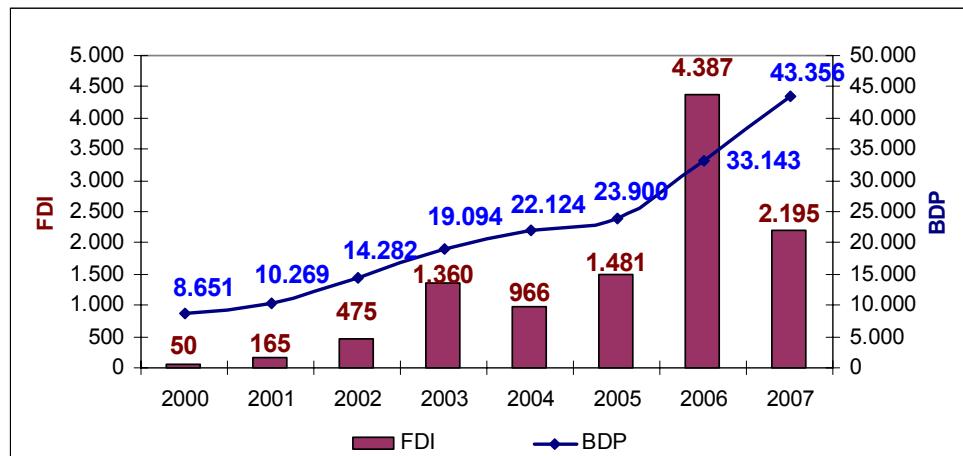
*Source: MAP No.11-12, 2005 Institute of Economic Sciences and NBS*

Foreign direct investment ratio per gross domestic product in the monitoring period was growing from 0.6% in 2000 on 13.23% in 2006, while in 2007 was decreased on 5.06%. In case that in future period the world economic crisis would be deeper, the foreign direct investment would not only be stopped, but the earlier invested capital would be withdrawn.

If we exclude from presented data on foreign direct investment those referring to companies and banks capital sale off, the position of foreign investment will be more than unfavorable.

The stage of state owned and social capital, as well as the one in banks and big state companies is finished by the year 2008. The new capital inflow will be drastically decreased both because of completed the privatization process and occupation of real and financial sector free market space. The issue will be additionally complicated by the pressure on country's currency reserves as a result of drawing the previously invested capital into domicile countries.

**Graph 1. FDI (foreign direct investment) and GDP (in millions. \$)**



Greenfield direct foreign investment was marginal in Serbia. The economic policy priority was to maximize the companies' sale off budget income. The current state income of social capital sale off to national and foreign entities in the period 2001-2008 is only 2.9 billions €. The Petroleum industry of Serbia (NIS) was sold to the Russian company at the beginning of 2008 for € 400 millions, while its market value is € 784.31 millions, estimated based on the fact that 51% shares had been sold per the mentioned money value. From the total amount of about 11 billions Euro foreign direct investment in real sector, about €2.1 billion, or approximately 19% of all foreign investments, was engaged in telecommunication system, not counting the banking sector. The banks with foreign capital in Serbia have 76.32% of overall balance sheet assets and are acting with profit.

### 3. Consequences

It would be worth to mention that the complete privatization concept and the strategy how to attract the foreign capital had the key hypothesis translated into axiom, and that could be reduced on conclusion that the privatization of social and state sector will on its own solve all developing, social, and consequently, all economic, or social problems. Opposing this axiom was a real blasphemy. The privatization together with liberalization and deregulation targeted to achieve the results of economic and monetary stabilization, and further to ensure the prerogatives for fast economic recovery. It has passed more than eight years of established macroeconomic, even marketing goals – “Home for the property”<sup>4</sup>.

In very brief form it will be presented the economic policy effects on domestic product growth, deficit and external indebtedness increase, employment and unemployment.

<sup>4</sup> Marketing motto placed from the Ministry of Privatization from the beginning of the privatization program 2001.

### 3.1. GDP growth

Besides the monetary stability, the positive results of implemented economic policy liberalization and attraction of foreign direct investments are the GDP growth in the period 2001-2007. Nevertheless, the first question to put here, in addition to explicit data on gross domestic product growth, is the GDP low basis values in the period to 2000. The second one is the issue of its structure, in order to asses this economy indicator as positive one.

**Table 2. Real GDP growth for the period 2001-2007.**

	2001	2002	2003	2004	2005	2006	2007
BDP real growth in %	5,4	3,6	2,8	8,2	6,0	5,6	7,1

*Source: MFIN data based on RZS data*

The previous table indicates the highest GDP growth for 2004, owing to real GAV<sup>5</sup> growth in agricultural sector. However, the industry and construction had negative real rates in 2001-2003, followed by considerable growth in 2004, and then decrease of 1.8% in 2005. In the monitoring period only service sector marks the stable growth. GDB growth in 2006 and 2007 is stable. The presented GDP growth rates, in monitoring period, are based on state owned and social companies sale off, inflow of foreign direct investments and public and private sector foreign indebtedness, what in general, initiated the dominated domestic consumption, and far away lower investments and long term development.

### 3.2. Current transactions deficit and foreign indebtedness growth

The relative economic and monetary stability in 2001-2008 is followed by the constant growth of trade deficit, as well as country's indebtedness growth from 10.8 billion dollars in 2000 to about 28 billions dollars in 2008. The indebtedness growth dynamics would have been far higher if it the old debt had not been written off towards the Paris and the London Club creditors. After 2000, trade balance of goods and services marks permanent negative growth with over 2 billion dollars from 2001 to 6.4 billions in 2004, and 5.3 billions in 2005, that is 6.7 in 2006 and 9.7 billions in 2007.

**Table 3. Export and foreign balance towards foreign debt in mil. \$**

Export of goods and services	Import of goods and services	Trade balance of goods and services	Current balance of payment	Foreign debt TOTAL	Foreign debt towards export in %
2.066	3.507	-1441	-350	10.829.7	524.2
2.435	4.499	-2064	-648	11.124.8	456.9
2.961	6.059	-3098	-1731	11.229.5	379.2
3.958	8.054	-4096	-1928	13.574.9	343.0
5.181	11.637	-6456	-2873	14.099.0	272.1
6.424	11.810	-5386	-2088	15.467.0	240.8
6.428	13.172	-6744		19.605,7	
8.825	18.554	-9729		26.235,4	
				27.986,9	

*Source: NBS data (Internet site and Statistical Bulletin), 2008. data concluded by November.*

<sup>5</sup> Gross added value (GAV) is the difference between the production value as the output and interphase consumption.

In the same period, besides the part of debt written off towards Paris club of creditors, the total foreign indebtedness of the country presents constant growth rate, indicating that Serbian economy, in the condition of economic crisis, can easily be enable to pay off due debts without additional indebtedness with IMF and World Bank, which is proclaimed in the new economic policy forecast for 2009. Thus, Serbia is jeopardized by debt bondage because of the overall sale of its companies in the previous period, its additional indebtedness presenting at the same time the constant growth of the trade deficit. Serbia has to get into debt additionally for servicing a part of its due debts and keeping the exchange rate stability.

### 3.3. Employment and unemployment

The total employment rate<sup>6</sup> (active rural population excluded) in 2000-2008 had decreasing trend of the number of employees from 2102 thousands in 2001 to 1991 thousands in 2007. In the same period the traders and entrepreneurs mark the employment rate growth from 349 thousands in 2001 to 522 thousands in 2005. So, the employment structure notices the transfer from the companies' to traders sector, which alleviated the employment rate in companies. The structural changes in 2001-2005 caused the minimal decrease of employment rate from 2,103 thousands to 2,069 in 2005.

**Table 4. Employed and unemployed in Republic of Serbia,  
2001-2008.**

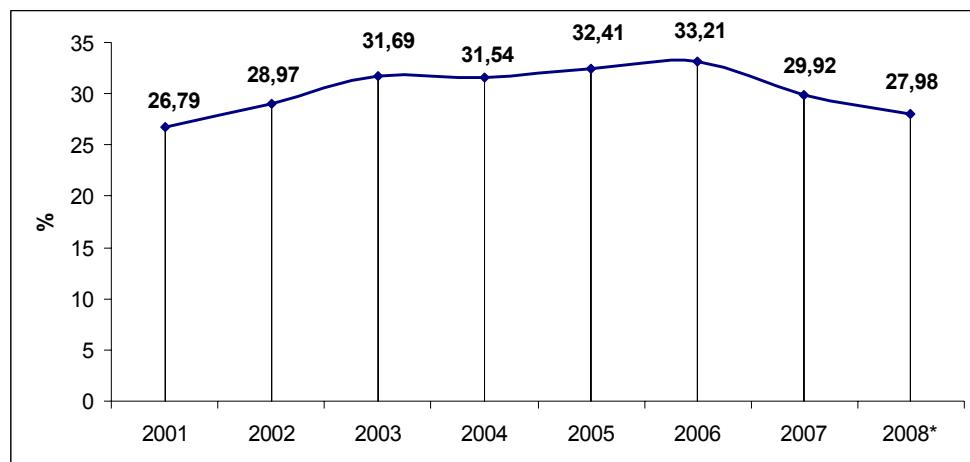
	<b>Total employees</b>	<b>Persons searching for job. Unemployed</b>	<b>Unemployment rate in %</b>
2000	1.908		
2001	2.102	769	26,79
2002	2.067	843	28,97
2003	2.041	947	31,69
2004	2.051	945	31,54
2005	2.069	992	32,41
2006	2.021	1.005	33,21
2007	1.991	850	29,92
2008*	2.013	782	27,98

Source: Data up to 2005, Institute of Economic Sciences, Belgrade, MAP no. 11-12/2005 and Bulletin MIF and NBS

The conclusion is that privatization trends caused the decrease of employment rate in companies in the monitored period, from 207 thousands or 11.8%. However, this negative trend was alleviated by employment rate growth with private entrepreneurs for 173 thousands employees.

The slow structural adjustment of economic system in Serbia and noticed labour force surplus in privatized companies, on one hand, and insufficient investment growth on the other, caused the stable unemployment growth rate tendencies.

<sup>6</sup> The term *employed* covers all the entities having work relation with their employers. The entities working under contract on additional work, temporary and occasional jobs are not considered as employed. The Survey on labour force regarding employed entities encompasses all the persons that at least one day in week of survey investigation, were engaged in any business aiming to assure the living sources. (Source: MAP, Institute of Economic Sciences, Belgrade, no.11-12/2005)

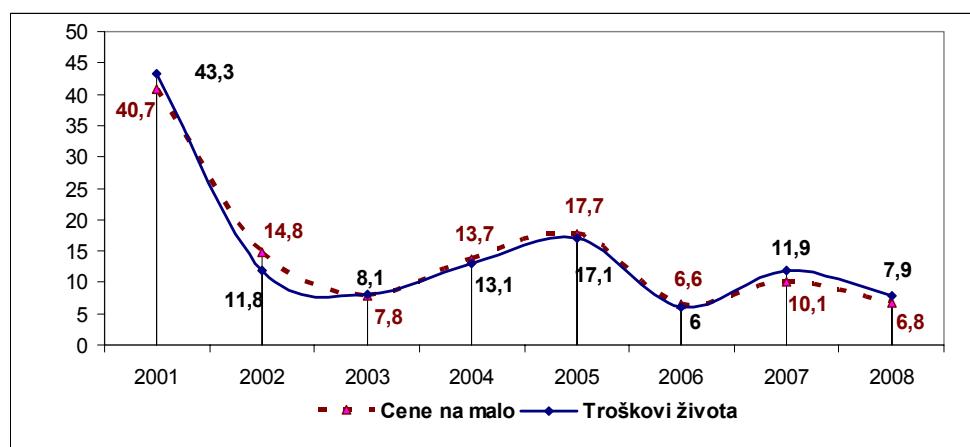
**Graph 2. Unemployment rate trends**

### 3.4. Inflation

The inflation trends in 2001-2008 are marked by cyclic flow. The retail price growth in 2001 was 38.7%, presenting a drastic interruption in relation to inflation trends in 2000, when the inflation rate was 113.3. In 2002 the inflation further decreased to 14% and 7.6% in 2003. Following the decrease in the previous period, in 2004 and 2005, the contrary trends occurred, when the inflation increased to 13.7% in 2004, and 17.7% in 2005.

**Table 5. Inflation rates and costs of living for period 2001-2008.**

Year	Retail prices	Costs of living
2001	40,7	43,3
2002	14,8	11,8
2003	7,8	8,1
2004	13,7	13,1
2005	17,7	17,1
2006	6,6	6,0
2007	10,1	11,9
2008	6,8	7,9

**Graph 3. Comparable review of retail prices growth and cost of living**

In the period 2006-2008 the inflation was maintained under control on one digit number, except the year 2007, when it was a bit over 10%.

A certain correlation between inflation trends and social enterprises sale off income growth trends could be established. As it is mentioned above, in monitored years, a considerable growth of real earnings was not noticed. However, the demand increase and the pressure on prices come from external economic trends (price increase of crude oil during 2008), as well as from the internal economic trends (price growth of utilities sector, expansion of credit for mass consumption financing) and demand creating of one part of population, based on capital sale income (shares and contribution).

#### 4. Conclusion

The foreign direct investments and privatization did not confirm the expectations that the transition would lead to economic growth, development, and employment rate growth. The expectations that privatization economic policy, as one of key factors of de-regulation and liberalization along with stimulating foreign direct investments inflow, according to IMF would provide overall economic progress, proved to be too optimistic. The positive results were realized in the sector of monetary stability, while the banking sector became attractive and economically profitable on one side, whereas the real economic sector, in spite of privatization, did not notice significant results.

The forthcoming economic crisis, which will first hit the most developed countries and then, at the beginning of 2009, the developing countries and countries in transition, will cause the investments withdraw, export-import decrease. The indebted countries will have the problem to pay off the debts. For small and undeveloped countries, the complete liberalization, de-regulation and privatization present the magic circle of economic and social problems generating. Another problem is that the runaway from market fundamentalism into state interventions in the circumstances of irresponsible party governments leads not towards the development but to further social wealth re-distribution trends. The opinions that the foreign direct investments would bring Serbia accelerated development, stability, technological advancement proved to be unreal.

#### References

1. The Analysis of Macroeconomic & Financial Trends for January – June 2008, Ministry of Finance RS, Belgrade 2008.
2. Source data [www.nbs.yu](http://www.nbs.yu), [www.pa-serbia.co.yu](http://www.pa-serbia.co.yu), [www.mfin.sr.gov.yu](http://www.mfin.sr.gov.yu)
3. Memorandum on Budget and Economic and Fiscal Policy for 2007, Republic of Serbia, Ministry of Finance, Belgrade, May 2006
4. Monthly Analyses and Prognosis no.11-12/2005 (MAP), Institute of Economic Sciences, Belgrade, 2006
5. Statistical Bulletin of NBS, December 2008. National Bank of Serbia , Belgrade 2008.
6. Stigliz J. & N.Serra (2008), The Washington Consensus Reconsidered, Oxford University Press. see Miomir Jakšić (2009), World Economic Crisis & Economic Policy of Serbia in 2009, Faculty of Economics, Belgrade
7. Stamenković S., Savin D., Živković B., Vukčević V., Kovačević M., I.Nikolić (2009), World Economic Crisis & Economic Policy of Serbia in 2009, Faculty of Economics, Belgrade 2009. Stability or Anti Recession Economic Policy 2009., pp. 9.
8. Law on Privatization, “Gazette RS” no.. 38/01 article.



# APPENDIX

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## COOPERATION BETWEEN UNIVERSITY OF NICE - SOPHIA ANTIPOLIS AND IES

Our research project titled “FINANCIAL SYSTEMS INTEGRATION OF BALKAN COUNTRIES IN THE EUROPEAN FINANCIAL SYSTEM” was placed on the list of approved projects within the Programme of integrated activities of “Pavle Savic”, that is “Partnership Hubert Curien”, at the meeting of Joint Committee between the Republic of Serbia and France, held in Belgrade on 3 December 2007. The realization of this project started on the 1<sup>st</sup> January 2008 and comprises the reciprocity of researchers. Totally, during two years of the project, we have realized 36 days visits by the researchers from the Institute of economic sciences of Belgrade to the University of Nice – Sophia Antipolis, but also 36 days visits by the researchers from the University of Nice – Sophia Antipolis to the Institute of economic sciences of Belgrade.



During the years 2008 and 2009, two teams of researchers, one from Serbia from the Institute of Economic Sciences from Belgrade leaded by Dr Srdjan Redžepagić and another team from France from the University of Nice – Sophia Antipolis research centre CEMAFI leaded by professor Claude Berthomieu, with mutual cooperation, performed the research on a subject that is very up-to-date both for the European Union (EU) and Serbia, also taking into consideration the significance of subject research for the overall economic development of the Balkan countries. The project's goal was financial services sector analysis of the Balkan countries with a special view on the overall analysis of Serbia. The team of researchers from France contributed to this project by research and over-the-years research experience in the field of financial services modernization sector analysis of the Central and East European Countries (new members states of the EU), as well as current state of Balkan countries analysis. With joint work, both teams during two years explored possibilities and perspectives of integration of the financial services sector of Serbia into the European financial system, analyzing the structure and functioning of the European financial system. Both teams also had in mind the significance of the subject for PhD and postdoctoral students (participants in the project) of the two countries. Subject research contributed to the PhD students in their formerly begun research in the field.





The significance of the project lies in the fact that both research centres (IES and CEMAFI) are interested in contributing to higher quality scientific and research works of their PhD and postdoctoral students included in the project. By analysing the current situation of the finance service sector and its importance for foreign investments in Serbia, for the two teams of research workers, analysis of the economic situation and politics of neighbouring Balkan countries were relevant and all with a goal to reaching an optimum economic situation of Serbia for influx of foreign investments. The basic assignment of the two teams tried to find "the optimum" for the financial services sector of Serbia and its integration into the European financial system. By carrying out the analysis of the level of integration of the Balkan countries' financial services sector, the two teams of research workers aimed to define the possibilities of economic integration of Serbia into the European financial trend. Considering the importance of subject research for the economy

of Serbia, analysis of the current banking system and its development in Serbia in the past years were in the focus of the interest of the two teams of researchers. The two teams cooperated mutually with the aim of quicker and more efficient exchange of information for subject research realization that will be conducted in scheduled meetings for the realization of the subject project. During the years 2008 and 2009 many mobility, Serbia-France and France-Serbia, were realized.

The international conference: "Financial System Integration of Balkan Countries in the European Financial System: Impact of Global Financial Crisis", held in Nice on 9<sup>th</sup> October 2009, presents the result of our two years' fruitfull cooperation.



Many thanks to the French Ministry of Foreign and European Affairs and the Ministry of Science and Technological Development of Republic of Serbia for the support to this project.

#### Project leaders

Prof. Dr Claude Berthomieu, France  
 Dr Srdjan Redžepagić, Serbia



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