

*Srđan Boljanović**

A SUSTAINABILITY ANALYSIS OF SERBIA'S CURRENT ACCOUNT DEFICIT

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ABSTRACT: *The global economic crisis have important implications for international capital movements, which further sharpens the question of the sustainability of permanent current account deficits in Southeast Europe. The goal of this paper is to analyse the medium- and long-term sustainability of Serbia's current account deficit. The first part of the paper presents a factor analysis of the sustainability of Serbia's current account deficit. In the second part of the paper the theoretical model created by Milesi-Ferretti and Razin is used to assess Serbia's medium-*

term current account sustainability. On the basis of Reisen's theoretical work (Reisen methodology) and by adding net reinvested earnings from foreign direct investment to the model, a new (modified) model for assessing the long-term sustainability of a country's current account deficit is presented. The created model was used for assessing the long-term sustainability of Serbia's current account deficit.

KEY WORDS: *sustainable development, current account deficit, foreign debt, solvency.*

JEL CLASSIFICATION: E21, E22, F21, F32, F34, F37

* PhD student at Singidunum University, Serbia E-mail: s.boljanovic@yahoo.com

1. INTRODUCTION

Current account balance is an important macroeconomic indicator, since it is closely related to other important components of national savings and investment - the budget balance and private savings - and has important implications for overall economic growth, exchange rate movements, and competitiveness. The question of the sustainability of the current account deficit is very important and very complex since, in economic literature, there is no clear definition of what level of deficit is considered unsustainable. A current account deficit is the result of an imbalance between domestic savings and investment which can, on the one hand, reflect growing investment activity that exceeds domestic savings (and create conditions for future repayment obligations on debt) or of rising domestic consumption, which results in the accumulation of debts that cannot be neatly serviced. Current account deficit is considered sustainable if the deficit does not lead to the emergence of an external sector crisis. An external sector crisis may appear in the form of a currency crisis or a crisis related to the external debt. A currency crisis can occur as a panic reaction that leads to the rapid depreciation of the national currency and reduction of foreign exchange reserves. An external debt crisis can mean the impossibility of further foreign borrowing and the inability to service current liabilities arising from external debt. The problem of sustainable current account deficit defined in this way is that we can only speak about its sustainability 'post festum'.

Lawrence Summers, the U.S. Deputy Treasury Secretary, wrote in *The Economist* (Economist, 1995, pp.46-48) on the anniversary of the Mexican financial crisis that close attention should be paid to any current account deficit in excess of 5% of GDP, especially if it is financed in a way that can lead to a sudden reversal in capital flows. From Table 1 we can see that, in the period prior to 2008, current account deficits of most countries of Southeast Europe were higher than 5% of GDP and had a growing tendency. With the start of the global economic crisis, because of reduced opportunities to finance such high deficits, there was a reduction of foreign trade deficits (by adjusting the level of consumption and reductions in imports of industrial inputs), which resulted in the reduction of the current account deficits. Despite these adjustments, current account deficits in some countries of Southeast Europe (including Serbia) are at such a level that the issue of their sustainability is very topical.

Table 1: Current account balances (in % of GDP) in Southeast Europe

Country	2003	2004	2005	2006	2007	2008	2009	2010
Albania	-7.14	-4.90	-7.00	-7.46	-10.77	-15.44	-15.45	-11.84
Bosnia and Herzegovina	-19.5	-16.36	-16.94	-8.08	-10.82	-14.43	-6.89	-5.73
Bulgaria	-4.95	-6.61	-11.58	-17.66	-27.16	-22.94	-9.75	-0.99
Croatia	-6.39	-4.61	-5.75	-6.75	-7.59	-9.02	-5.26	-2.55
Macedonia	-4.01	-8.41	-2.74	-0.44	-7.42	-12.41	-6.78	-3.32
Montenegro	-	-	-	-	-40.20	-50.70	-30.47	-26.07
Romania	-5.57	-8.42	-8.57	-10.42	-13.53	-11.61	-4.32	-4.23
Serbia	-7.8	-13.8	-8.8	-10.1	-17.7	-21.7	-7.2	-7.2

Source: Unctadstat, online data

Serbia's current account deficit in 2010 was one of the largest in the sample (only Albania and Montenegro had a greater deficit) and in 2008 amounted to more than 20% of GDP, which suggests the existence of a high level of consumption (consumer goods had the largest share in imports) and a lack of export competitiveness. Modern literature on the sustainability of current account deficits is strongly influenced by the theoretical work of Milesi-Ferretti and Razin, who consider current account deficits as less sustainable if they are high relative to GDP, if they are the consequence of a fall in domestic savings rather than investment activities, and if they are accompanied by a low level of national savings. Serbia and most countries in Southeast Europe meet these conditions. Deficits are high relative to GDP (an extreme example is Montenegro), they are the result of high consumption rather than investment, and are accompanied by stagnant and declining domestic savings, which are much lower than in other developing countries. A mitigating circumstance for the countries of Southeast Europe is the fact that the level of inflow of short-term portfolio investment ('hot money') is relatively low and that high foreign exchange reserves were accumulated in the previous period.

2. FACTOR ANALYSIS OF THE SUSTAINABILITY OF SERBIA'S CURRENT ACCOUNT DEFICIT

Milesi-Ferreti and Razin (1996) and Roubini and Wachtel (1998) suggest that, when analyzing the sustainability of current account deficits, it is necessary to take into account the following factors:

- a) the cause of the current account deficit;
- b) current account structure;
- c) the structure and volume of foreign capital inflow;
- d) the level of economic growth;
- e) real exchange rate appreciation;
- f) the structure and level of external debt, the level of foreign reserves;
- g) financial system stability;
- h) openness of the economy;
- i) political and macroeconomic stability;
- j) global factors.

Current account deficit is an accounting identity equal to the difference between domestic savings (sum of private savings (Sp) and public savings (Sg)) and investment (I), which can be expressed by the following formula:

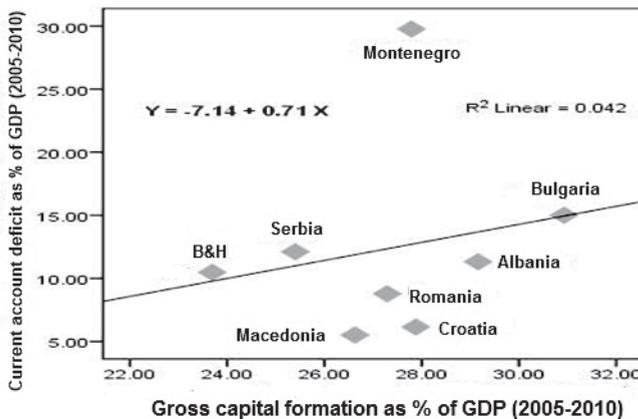
$$Ca = Sp + Sg - I \quad (1)$$

The cause of a current account deficit can be either a decline in private savings, or a fall in public savings or growth of investment activity. It is very important to understand which of these three variables is 'abnormal' in Serbia and other countries of Southeast Europe.

In Figure 1 the relation between gross capital formation and current account deficits for countries of Southeast Europe is presented (average values in the period 2005-2010 were used for every country). From the graph we can see that a weak positive correlation exists but is not statistically significant ($p > 0.05$) and the coefficient of determination is only $R^2 = 0.042$, which means that only 4.2% of variation of current account deficit can be explained by gross capital formation. Countries with the highest level of gross capital formation (as a % of GDP), like Bulgaria, Croatia, and Albania, do not have larger current account deficits than other countries. The investment level in the region of Southeast Europe is slightly higher than the world average but is lower than the average of all emerging and developing countries, especially when compared with Asian countries.

The inflow of foreign direct investment in the previous decade in countries of Southeast Europe was mainly linked to the privatisation process, which did not influence the growth in gross capital formation (because there was only a change in ownership), and funds obtained from privatisation were used primarily for consumption purposes rather than for investment (because of this there is no correlation between the inflow of foreign direct investment and gross capital formation). From this we can conclude that current account deficits in Southeast European countries are not the result of an especially high level of investment in these countries.

Figure 1: The relation between gross capital formation and current account deficits for countries of Southeast Europe

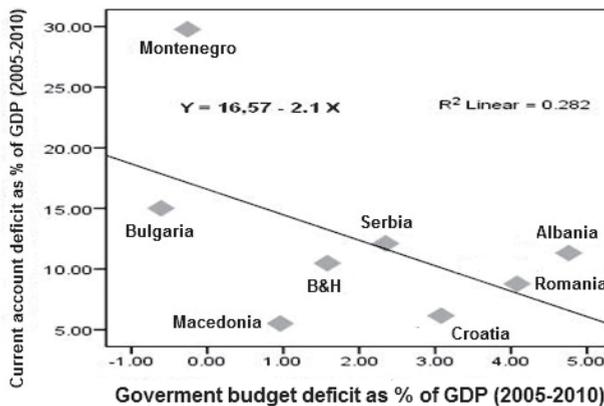


Source: Author's calculation based on IMF online data

In Figure 2 the relation between government budget deficits and current account deficits for the countries of Southeast Europe is presented (the average values in the period 2005-2010 were used for every country). From the graph we can clearly see that a negative correlation exists between government budget deficits and current account deficits, which means that the twin deficit hypothesis cannot explain current account deficits in Southeast European countries. The explanation for this negative correlation may lie in the fact that, in different economic cycles, budget deficits and current accounts move in different directions. In the period of economic 'boom', budget deficits are reduced due to the effects of automatic stabilizers. Developments in the current account balance are to a greater extent anti-cycle. However, during the economic 'boom', increase in income affects growth in aggregate demand, which affects the growth of

imports and has a negative impact on the current account balance. Also, during the ‘boom’, foreign investment inflow grows, which influences the appreciation of the domestic currency, which negatively affects the competitiveness of exports, and hence the current account balance. If we look at equation (1), the increase in public savings (S_g) is neutralized by the reduction in private savings (S_p) due to higher consumption and by increasing levels of investment. By contrast, during a recession the appearance of government budget deficits is very likely. Potentially high budget deficits may cause a decline in foreign investment inflow in government bonds due to concern for the state’s ability to properly service its obligations, which may have a positive impact on the current account balance due to the effects on the income account (lower capital inflows from abroad mean lower level of profit repatriation) or through the impact on exchange rates and interest rates (there is no appreciation of the currency and no pressure on the monetary base). To conclude, the fall in public savings is not the main cause of current account deficits in Southeast European countries.

Figure 2: The relation between government budget deficits and current account deficits for countries of Southeast Europe



Source: Author’s calculation based on data from EBRD (2009) and EBRD (2010)

The decline of domestic savings in Serbia and other countries of Southeast Europe is to some extent the result of a decline in public savings (due to budget deficits), and to a much greater extent the result of a fall in private savings as a consequence of high levels of consumption. With the start of the transition process, households formed unrealistic expectations about long-term economic growth and movement towards a western standard of living, which influenced their decision to borrow in order to immediately effect an improved standard of living . The banking sectors

in all these countries are dominated by foreign banks, whose entry into the market led to the rapid growth of private sector credit indebtedness as a consequence of their aggressive business strategies. Since the level of deposits was limited by low domestic savings, in order to finance credit expansion foreign banks affiliates had to borrow funds from their parent banks, and those funds were directed mainly toward the non-tradable service sector and households, rather than toward the tradable industrial sector. Since the cause of the current account deficit is a high level of consumption rather than increasing investment activity the current account deficit is less sustainable, because these conditions do not create healthy economic development for the future service of debt.

The current account structure of Serbia and other countries of Southeast Europe is very different compared to most Central European countries that had a more successful transition process. Table 2 shows the aggregate structure of current accounts for the countries of Central Europe (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia) and Southeast European countries.

Table 2: Structure of aggregate current account for
Central and Southeast European countries

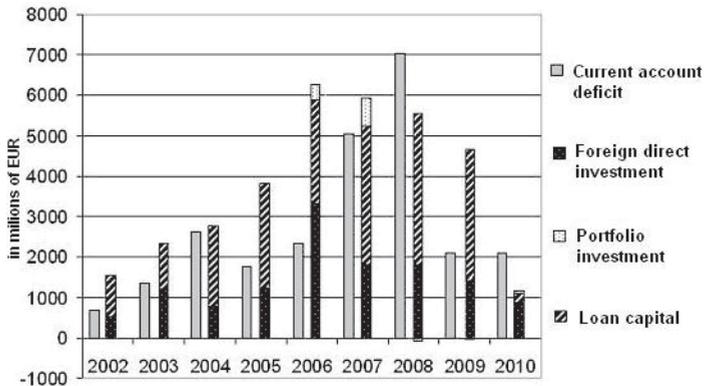
Central European countries					
Year	Current account	Trade balance	Service balance	Income account	Current transfers
2004	-25717	-16051	3980	-17752	4105
2005	-18981	-12068	6315	-18184	4956
2006	-29919	-19358	7216	-22774	4996
2007	-43379	-24009	9850	-34572	5352
2008	-44745	-31157	10557	-28614	4469
2009	-12390	-1192	10141	-27266	5927
2010	-19086	-5442	11619	-32078	6816
Southeast European countries (without Montenegro)					
Year	Current account	Trade balance	Service balance	Income account	Current transfers
2004	-13257	-25991	5927	-2648	9454
2005	-16701	-30207	6485	-3078	10099
2006	-19037	-36688	9500	-4942	13093
2007	-34592	-48905	8909	-8000	13404
2008	-39118	-55871	10149	-7614	14217
2009	-14484	-30737	8116	-5184	13321
2010	-9406	-25755	8418	-5421	13352

in millions of EUR

Source: Author's calculation based on Eurostat online data

In the case of Central European countries, the main cause of the current account deficit is deficit of income account (due to the repatriation of profits arising from foreign investment), while in the case of Southeast European countries the main cause is foreign trade balance deficit. A current account deficit is considered less sustainable if it is a consequence of a foreign trade balance deficit, because high trade deficits point to the existence of serious problems of economic competitiveness, and insufficient inflows of foreign currency on the basis of export activity leads to questions about a country's ability to service external debt in the future. This thesis was confirmed with the emergence of the global economic crisis, since the adjustment of current account deficits was much more successful in the case of Central European countries (most countries in Central Europe after the outbreak of the crisis recorded negligible current account surpluses or deficits, except for Poland). After foreign trade liberalization, Serbia is facing a permanent trade deficit, which reflects the lack of competitiveness of its exports, whose structure has not changed in the last ten years and is based on labour- and resource-intensive products of lower stage of finalisation. In the ratings of the World Economic Forum (WEF Global Competitiveness Report 2011/2012) Serbia was ranked 95th out of 142 countries for level of competitiveness, which clearly suggests that domestic products cannot compete in price (to a lesser extent) or quality (to a larger extent) in the international market.

The structure and volume of foreign capital inflow are very important for the sustainability of current account deficits because different types of foreign investment have a different impact on the sustainability of the current account deficit. The current account deficits covered to a large extent by the inflow of foreign direct investment are considered more sustainable, because it is considered that foreign direct investment is a more stable financial flow (has less volatility) than portfolio investment (since investment in fixed assets is far more difficult to withdraw than investment in equity or debt securities) and does not increase debt as opposed to loan capital. However, as we can see from Table 2, foreign direct investment is not a 'free lunch', because it can create large outflows of capital and make the income account deficit a main cause of the current account deficit. This issue will be further analysed in the second part of this paper, given that the income from direct investment consists of reinvested earnings, dividends, and income on debt. The most important source of funds for financing Serbia's current account deficit is loan capital (which can be seen in Figure 3), which resulted in the accumulation of foreign debt. Serbia is among transition countries with the lowest share of foreign direct investment to cover the current account deficit, which can be seen in Table 3. 2008 is taken as the initial year because it coincides with the start of the global economic crisis, and therefore shows current trends.

Figure 3: Financing of the Serbia's current account deficit

Source: Author's work based on data from National Bank of Serbia

Table 3: Share of FDI in financing the current account deficit of countries in Southeast Europe

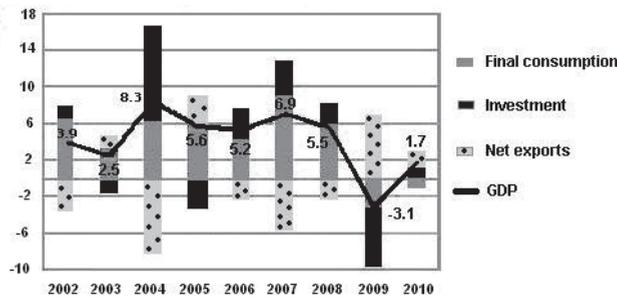
Country	2008	2009	2010	Average (2008-2010)
Albania	44.17%	50.57%	79.26%	58.00%
B&H	35.41%	23.23%	1.91%	20.18%
Bulgaria	76.11%	80.12%	64.66%	73.63%
Croatia	74.20%	47.96%	49.87%	57.34%
Macedonia	47.45%	30.51%	115.13%	64.36%
Montenegro	41.42%	122.69%	73.79%	79.30%
Romania	57.58%	71.91%	51.33%	60.27%
Serbia	25.86%	65.84%	41.31%	44.34%

Source: Author's calculations based on data from the central banks of countries in the sample

From the table we can see that in 2008 Serbia had the lowest share of FDI financing the current account deficit, and that in 2010 only Bosnia and Herzegovina was worse on this indicator. The calculated average for the last three years shows that Serbia is in the penultimate place, which suggests that, despite the reduction of current account deficit, it cannot be financed without the accumulation of external debt. Montenegro is the country that has the largest share of foreign direct investment financing its current account deficit, which enables Montenegro to have an extremely large current account deficit relative to GDP.

Countries with strong economic growth can maintain a constant current account deficit without increasing their external debt relative to gross domestic product. Frankel and Rose (1996) have shown that the lower than normal (in most cases) current economic growth rates quite reliably predict the occurrence of external crisis. If the real rate of growth exceeds the real interest rate on external debt it leads to reduction in the share of external debt relative to GDP, and therefore reduced indebtedness. Growth based on increasing physical capital, human capital creation, and increased productivity creates the conditions for future servicing of external debt. Growth based on a high level of consumption, the growth of services, bank credit expansion and foreign borrowing is unsustainable in the long term. The problem with Serbia and most other countries of Central and Eastern Europe is that the main generator of growth is consumption (as can be seen from Figure 4), and this consumption is financed by inflows of foreign capital. For this reason, with the start of the global economic crisis and due to a drastic reduction in inflow of foreign capital, countries in Central and Eastern Europe had a record decline in GDP. For sustainable economic development in the future period Serbia needs healthy economic growth based on increased levels of investment and productivity (by using modern technology and better organization of work processes), increased employment, and maintaining a level of consumption in line with the real possibilities of the economy.

Figure 4: Contributions to Serbia’s y-o-y growth rate by expenditure (percentage points)



Source: Šoškić, 2011

Appreciation of the real exchange rate indicates the domestic economy’s loss of competitiveness and is expressed in a slower growth in exports (export of goods becomes more expensive in a foreign currency) and faster growth of imports (imported goods become more competitive in the domestic market) which results in the appearance of a foreign trade deficit, and due to this the current account

deficit becomes less sustainable. From one point of view, the real exchange rate appreciation can be seen as a result of strong inflows of foreign capital that lead to unsustainable imbalances, which can be reversed only through nominal and real depreciation of the exchange rate. The inflow of foreign capital puts pressure on the growth of the domestic currency value due to its increasing demand. In order to reduce exchange rate fluctuations and excessive strengthening of the domestic currency, the central bank intervenes in the foreign exchange market by purchasing foreign currency, thereby putting pressure on the growth of the monetary base (reserve money) and monetary aggregates. In order to restore the monetary base at an adequate level, the central bank activates the mechanism of 'sterilization'. Sterilization can be done directly, through the sale of government securities on the open market, or indirectly, by increasing the discount rate, reserve requirements, or other methods; but the effect will be more or less the same: an upward pressure on interest rates. Increasing interest rates attracts new inflows of foreign capital (mostly speculative, which is motivated by quick and easy profits on the basis of high interest rates on government bonds), and thus a vicious circle is created. If the central bank fails to sterilize the monetary base, the growth of the monetary base leads to the emergence of inflation, which results in real exchange rate appreciation.

According to some authors, from the fundamentalist point of view real exchange rate appreciation in transition countries is not due to loss of competitiveness, but is a consequence of structural changes in the economy and local currency undervaluation at the beginning of the transition process. Economic instability at the beginning of the transition process has led to a depreciation of the nominal exchange rate that has exceeded even the high levels of inflation, which resulted in the appearance of real exchange rate depreciation, and subsequent appreciation of the real exchange rate represents the return to an equilibrium state. Real appreciation can also be seen as a consequence of changes in productivity and technology (Ballasa-Samuelsson effect). Serbia is one of the countries with the highest real exchange rate appreciation, resulting from high levels of inflation that are not accompanied by adequate depreciation of the market (nominal) exchange rate. Movement in the market and the real exchange rate of the dinar against the euro is shown in Table 4. The table is formed using the purchasing power parity theory. Hypothetically it is assumed that the market exchange rate in 2001 was the real exchange rate. (In accordance with the theory, it is most appropriate to choose a base year in which the country had a satisfactory current account balance, which is 2001 when the current account was in surplus. An additional reason is that in October 2000 the National Bank of Serbia abandoned the fixed exchange rate policy). From the table we can clearly see that the nominal

exchange rate grew more slowly than inflation and led to real appreciation, which resulted in the reduction of inflation. From the table we can see that in 2003 and 2004 the market and the real exchange rates were not significantly different, and this phenomenon can be explained by the fact that policy makers were satisfied with the results achieved in terms of inflation reduction, so they tried to use the exchange rate as a instrument for balancing the balance of payments. This led to growing inflation in 2005. Policy makers, learning from this experience, realized that one instrument cannot achieve two goals, and the difference between the market and the real exchange rate increased in the following years (the overvalued dinar is used as a nominal anchor to contain inflation). Real appreciation negatively affects the competitiveness of Serbian exports (export products are 15%-18% more expensive than they would be if real appreciation did not exist), but given that the structure of exports is dominated by labour- and resource-intensive products (those products make up about 70% of total exports), even though most of Serbia's exports are price-competitive their quality competitiveness is more questionable.

Table 4: Movement of the market and the real exchange rates of the dinar against the euro

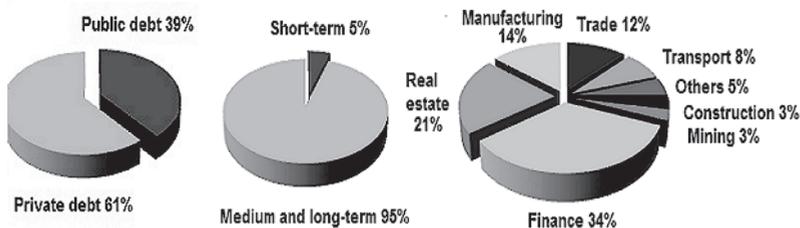
Year	Market exchange rate	Price indices in Serbia (chain)	Price indices in Euro zone (chain)	Real exchange rate	Real appreciation (in %)
2001	59.71	100	100	59.71	1.00
2002	61.52	114.80	102.30	67.01	0.92
2003	68.31	107.80	102.10	70.75	0.97
2004	78.89	113.70	102.20	78.71	1.00
2005	85.50	117.70	102.20	90.64	0.94
2006	79.00	106.60	102.20	94.55	0.84
2007	79.24	111.00	102.10	102.79	0.77
2008	88.60	108.60	103.30	108.06	0.82
2009	95.89	106.60	100.30	114.85	0.83
2010	105.50	110.30	101.60	124.68	0.85

Source: Author's calculations based on data on price indices from NBS and Eurostat online data

The structure and level of external debt to a large extent determine the external solvency of a country, and thus the sustainability of the current account deficit. The existence of a current account deficit means that the country emerges as a net importer of foreign capital, which affects the accumulation of foreign debt. A

low level of external debt relative to GDP, favourable structure of external debt by debtors, and maturity play an important role in reducing the risk of external insolvency, allowing the country to finance the current account deficit at lower costs. A favourable structure of external debt by debtors is considered to be debt that has a lower share of public debt than private debt (high public debt can lead to creditor's doubts as to the possibility of countries to repay their debt liabilities, which affects the ability of a country to continue borrowing and also the cost of new debt), and a favourable maturity structure is that dominated by long-term external debt. The structure of Serbia's external debt is shown in Figure 5. From the figure we can see that the structure of external debt is dominated by private debt. In 2008 the share of private debt amounted to 70% of the total external debt. An increasing share of public sector debt was created at the beginning of the global economic crisis as a result of a growing budget deficit. The structure of external debt by maturity is favourable; nearly 95% of the debt consists of long- and medium-term loans (in 2008 the share of long-term and medium-term loans accounted for 89% of the total debt; the increase is explained by the fact that the growing public external debt consists exclusively of long- and medium-term loans). The structure of foreign credit indebtedness by sector is not favourable, due to the fact that lending to the 'tradable' sector (manufacturing and mining) is only 17%, and only the export expansion of this sector can possibly solve the problems of a permanent trade deficit.

Figure 5: Structure of Serbia's external debt on 31.1.2011.



Source: National Bank of Serbia

External solvency indicators are used as an indicator of a country's ability to properly service its external debt in the future - the ratio of external debt to gross domestic product and the ratio of external debt to export of goods and services. Indicators of the external solvency of the Southeast European countries are presented in Table 5.

Table 5: Indicators of external solvency of Southeast European countries

Country	External debt/GDP (in%)					External debt/Export of goods and services (in%)				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Albania	22.8	25.3	25.8	27.6	34.1	52.6	70.1	159.8	242.3	296.0
BiH	45.5	44.0	42.5	37.9	46.6	152.4	133.3	128.8	116.4	165.9
Bulgaria	67.1	82.0	101.1	102.4	107.6	119.8	133.5	161.8	173.9	224.2
Croatia	72.1	74.9	77.6	85.1	98.3	168.6	172.2	181.2	197.2	265.8
Macedonia	51.1	51.5	52.5	49.1	58.8	123.9	103.8	83.8	83.0	140.8
Montenegro	22.8	34.8	75.8	95.6	96.9	52.6	70.1	159.8	242.3	296.0
Romania	31.2	33.6	34.4	35.9	48.8	117.3	131.0	160.9	172.8	217.7
Serbia	60.1	60.9	60.2	64.6	77.9	229.0	204.0	197.0	208.0	265.0

Source: EBRD, online data

External debt to gross domestic product is the most important indicator of international solvency and of the external position as a whole. The methodology used by the World Bank suggests that the threshold of external debt to GDP is 80%, and exceeding this level leads to serious problems in the future repayment of debt (according to some opinion every external debt exceeding 60% of GDP is problematic). In Table 5 we notice that in all SEE countries there is a tendency of growth of foreign debt in relation to GDP. In Serbia in 2005 this ratio amounted to 60.1%, while at the end of 2010 it stood at 82.1%, which is above the level which is considered as acceptable. In 2009 Serbia was ranked 4th on this indicator in a sample of Southeast European countries. Albania, Bulgaria, Montenegro, and Croatia have a very high level of external debt to GDP, while Macedonia, Romania, and Bosnia-Herzegovina are top-ranked on this indicator. According to the second external solvency indicator, external debt relative to export of goods and services, Serbia is in a worse situation and is ranked in 5th place. A critical limit when it comes to this indicator is 220% (for moderate debt the limit is 132%), which classifies Serbia as among the highly indebted countries. In 2009 five Southeast European countries belonged to the group of highly indebted countries according to this indicator: Albania, Bulgaria, Montenegro, Croatia, and Serbia.

The level of foreign exchange reserves is an important indicator of the sustainability of the current account deficit in the short-term, because foreign exchange reserves are the main source of liquid assets for the due liabilities of the public sector. Commonly used indicators of external liquidity are the ratio

of foreign exchange reserves to imports of goods and services (in months) and ratio of foreign exchange reserves to gross domestic product, These indicators for Southeast European countries are shown in Table 6.

Table 6: Indicators of external liquidity of countries of Southeast Europe

Country	Forex reserves/imports of goods and services (in months)					Forex reserves /GDP (in%)				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Albania	4.45	4.84	4.38	3.87	4.33	17.25	19.71	19.72	17.91	19.09
B&H	4.35	5.63	5.69	3.55	4.48	23.24	27.30	29.71	19.00	19.04
Bulgaria	4.84	5.18	6.07	5.09	7.76	28.05	33.15	39.29	32.58	35.30
Croatia	5.16	5.91	5.93	4.73	7.64	19.80	23.42	23.35	18.69	23.63
Macedonia	4.23	5.25	4.53	3.17	4.54	21.31	26.87	25.67	19.65	21.66
Montenegro				1.32	2.71				9.64	14.01
Romania	5.63	6.27	6.10	5.00	8.47	20.21	23.02	21.91	18.13	26.29
Serbia	6.14	9.04	7.22	5.20	9.37	24.23	38.70	33.84	24.98	36.71

Source: Author's calculations based on Unctadstat online data

From the table we can see that in the period 2005-2007 both indicators tended to improve, considering that countries recorded growth of foreign exchange reserves as a result of the surplus in balance of payments. With the start of the global economic crisis there was a reduction in inflow of foreign capital which led to a balance of payments deficit, which is accompanied by a reduction of foreign exchange reserves (foreign exchange reserves are also reduced as a result of interventions in the foreign exchange market in order to prevent a strong depreciation of the exchange rate). A period of three months should be considered as a satisfactory level of coverage of imports of goods and services with foreign exchange reserves, and from the table we can see that in 2009 most countries met this requirement (the only exception is Montenegro, which has the lowest external liquidity by all indicators in this sample). Serbia ranked first according to both external liquidity indicators, thanks to the high level of foreign reserves accumulated, which suggests that in the short-term there will not be any problems servicing public debt. Liquidity of the private sector, on the other hand, depends on the income of companies, households, and financial institutions, which are significantly reduced as a result of global recession. Especially worrying when Serbia is considered is the tendency of rapid growth in the liabilities for repayment of debt, from 1.4% of GDP in 2002 to 7% of GDP in 2006 and 11.8% of GDP

in 2010. Nevertheless, we can say that current external liquidity is satisfactory, although there are signs of its deterioration.

The stability of the financial system, particularly the banking sector, has a significant impact on the sustainability of the current account deficit. Inflows of foreign capital and foreign direct investment have, as a precondition, foreign participation in the domestic financial system - at least a willingness to hold deposits in domestic banks. The absence of confidence in the banking system adversely affects the willingness of foreigners to finance the current account deficit by participating in the local economy. In such circumstances the burden of financing the current account deficit falls to the accumulation of external debt. The collapse of the banking system has several immediate consequences. Firstly, it directly affects the decline in domestic savings, and due to the contraction in economic activity further falls in domestic savings appear. Secondly, the insecurity and instability related to the payment system will adversely affect the inflow of foreign capital. Thirdly, if the country's monetary authorities mitigate the losses of failed banks after the banking crisis by creating additional money from primary emission or through additional borrowing, the monetary authorities' ability to maintain exchange rate stability will be in question. On this basis we can conclude that the crisis of the banking sector may be the immediate cause of current account deficit unsustainability. In Central and Southeast European countries banking sectors are dominated by banks with foreign ownership, and a particular cause for concern is the fact that banks in certain countries are very active in certain regions, which increases the possibility of financial contagion and the risk of spillover of the crisis from one country to another (either from the home country of foreign banks or from countries in which their affiliates operate). The banking system in Serbia showed stability during the first shock of the global economic crisis, regardless of the distrust of citizens which resulted in a substantial outflow of domestic savings from the banking system (at the beginning of the crisis around one billion euros of savings were withdrawn from the banks). Stability was accomplished by restrictive NBS measures and a strong capital base, which by capital adequacy ratio (capital in relation to the quality of bank assets) ranked Serbia significantly higher than the average of other European countries. Capital adequacy in the banking sector of Serbia was 27.4%, significantly higher than in other countries in the region: Croatia 15.9%, Bulgaria 14.5%, Romania 13% and Hungary 10.8%.

A higher level of economic openness enables easier servicing of debt liabilities. Countries with a strong export sector may find it easier to service debt, with debt service absorbing a smaller portion of their total export revenues. If reduction

in inflow of foreign capital occurs the country will need to orient itself towards forcing the export sector to generate foreign currency to service debt liabilities. Given that this reorientation towards exports may not happen immediately it is necessary to drastically reduce imports, and this can be very bad for the industrial sectors that depend on imported inputs. At the beginning of the economic crisis, due to a reduced inflow of funds to finance the current account deficit and the decline of aggregate demand, Serbia had to significantly reduce imports. The reduction of imports can be particularly devastating for a small open economy because it usually involves the reduction of imports of essential inputs. On the other hand, a greater degree of openness increases the risk of exposure to external shocks and crisis. The exposure of countries to external shocks is particularly high if the country has a narrow export base, and if its economy is dependent on imported inputs, which is the case with Serbia. From Table 7 we can see that Serbia only ranks 6th in degree of openness among the countries of Southeast Europe, which indicates the economy's low potential to maintain its external position within acceptable limits.

Table 7: Degree of openness of the economies of Southeast Europe

Country	2008	2009	2010	Average (2008-2010)	Rank
Albania	85.16%	81.73%	90.56%	85.82%	5
B&H	100.48%	82.39%	92.04%	91.64%	4
Bulgaria	135.14%	102.13%	115.69%	117.66%	1
Croatia	89.62%	74.30%	76.76%	80.22%	7
Macedonia	124.44%	94.57%	105.20%	108.07%	2
Montenegro	126.35%	95.14%	102.05%	107.85%	3
Romania	73.95%	68.45%	77.90%	73.43%	8
Serbia	86.77%	73.58%	86.43%	82.26%	6

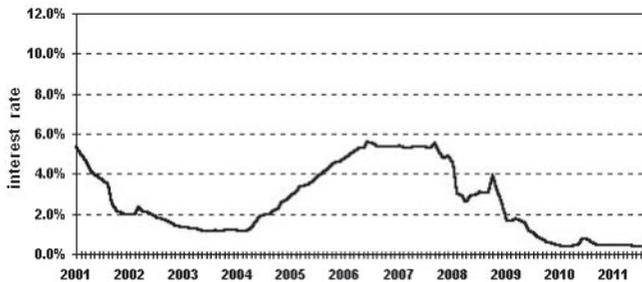
Source: Author's calculations based on Unctadstat online data

Political instability or uncertainty about future guidelines of economic policy affect the sustainability of the current account deficit in a similar way as the stability of the banking sector. Political instability affects the behaviour of investors, who in these conditions begin to question the future sustainability and credibility of the current macroeconomic policy of the state. For example, if a government that has a policy of free movement of capital is replaced by a government that imposes restrictions on the movement of capital, there will be a sudden outflow of capital from the country. Numerous studies have confirmed the link between political instability, high inflation, low investment, and poor

economic growth. The political situation affects the sustainability of the current account in two other ways. Firstly, a so-called 'soft' or coalition government could lead to problems when taking certain measures of economic policy aimed at neutralizing the shocks, because of its inability to garner adequate political support for its intentions. This is precisely the situation that exists in Serbia, since the coalition government is created from parties with quite different programme orientations. Secondly, prior to elections, the current government is not motivated to take any radical macroeconomic policy measures for fear that it will undermine its electoral results. A special problem for Serbian political stability is the fact that certain groups of Western countries, ignoring international law, are trying to redraw the internationally recognized state borders of Serbia which are validated by the constitution.

Country risk evaluations performed by different international assessment institutions can be used to indicate political and macroeconomic stability. According to Euromoney (*Euromoney Magazine*, 2011), which uses political and economic risk as the two main factors for risk assessment, Serbia is ranked 87th in country risk with a score of 44.34, putting it in the third group of level of risk. The Southeast European countries that rank better than Serbia are Croatia (56.47), Bulgaria (53.82) and Romania (49.09), while Macedonia (44.23) and Albania (42.77) rank slightly lower.

Among global factors that affect the sustainability of a current account deficit the most important are global economic growth, global real interest rates, and changes in the price of oil. Considering that the majority of the foreign direct investment in Serbia comes from EU countries and that the EU is Serbia's main trading partner, recession in the EU and at a global level has a negative impact on the sustainability of Serbia's current account deficit. Frankel and Rose (1996) have shown that real interest rates on a global scale are a significant factor in the sustainability of the current account deficit. A higher real interest rate on a global scale can lead to an outflow of capital from the country, while lower real interest rates globally may lead to inflow of foreign capital. Therefore higher interest rates on a global level not only increase the cost of debt financing but also affect the willingness of foreigners to lend capital. At the beginning of the global economic crisis real interest rates fell, as can be seen from Figure 6 (six-month LIBOR was used as a real interest rate), which should theoretically have a positive impact on the sustainability of Serbia's current account deficit.

Figure 6: Global real interest rate

Source: <http://www.moneycafe.com/library/6monthlibor.htm>

Changes in oil prices affect the sustainability of a current account deficit in two ways. Firstly, for oil importing countries such as Serbia, the price of oil directly affects import value. Secondly, high oil prices may slow down investment and negatively affect the level of production. The global recession resulted in a decrease in oil prices (the average price was \$97.035 a barrel in 2008 and \$79.030 a barrel in 2010 - data source: IMF), which positively affects the valorisation of Serbian imports. Unfortunately oil prices in the domestic market, due to the presence of a monopoly on the trade of petroleum derivatives and high state excise tax, are the highest in the region and not price-adjustable (down) in accordance with the movement of oil prices on the world market; so a drop in oil prices on the world market will have no significant effect on the price of oil in the domestic market and therefore on production costs in Serbia.

The following analysed factors have a positive impact on the sustainability of Serbia's current account: a favourable structure of external debt by maturity and by debtors, a high level of foreign exchange reserves accumulated in the previous period, relative stability of the financial system (due to high capital adequacy in the banking sector), low level of short-term portfolio inflows ('hot money'), lower global real interest rates, and the fall in oil prices, which has a positive effect on the valorisation of Serbian imports. The following factors have a negative impact: the unfavourable structure of the current account, the unfavourable structure of capital inflows that finance the deficit (which is dominated by loan capital), economic growth with an unhealthy base that will be slowed down by the deepening of the global economic crisis, high levels of external debt relative to GDP, real exchange rate appreciation, lack of openness of the economy, potential political instability, the global recession, and the fact that the cause of the deficit is high level of consumption rather than increase in investment activity.

3. MEDIUM- AND LONG-TERM SUSTAINABILITY ANALYSIS OF SERBIA'S CURRENT ACCOUNT DEFICIT

In order to fully assess the sustainability of Serbia's current account deficit, in this part of the paper we will present two models for assessing the medium- and long-term sustainability of the country's current account deficit. The models originate from the theoretical work of Milesi-Ferreti and Razin (MFR methodology) and Reisen (Reisen methodology). The Reisen methodology has been amended by adding one variable to the model – net reinvested earnings from foreign direct investment.

3.1. Measuring the sustainability of Serbia's current account deficit with MFR methodology

Milesi-Ferretti and Razin (1996) distinguished three different yet interrelated concepts: the economy's solvency, current account sustainability, and current account deficit excessiveness. The economy is defined as solvent if the present discounted value of the future trade surplus equals current external indebtedness. The problem with this definition is that it is difficult to apply, as it relies on future events without imposing any 'structure' on them. A distinction should be made between an unsustainable and an excessive current account deficit, i.e., a deficit that is too large to be explained by any given model of consumption, investment, and production. A current account is sustainable if the continuation of current government policy and/or private sector behaviour does not entail a need for a 'drastic' policy shift or a balance of payments crisis. According to MFR methodology, a sustainable current account deficit is consistent with solvency, i.e., it satisfies the criteria of stabilization of external debt to GDP ratio. Milesi-Ferretti and Razin use standard accounting identity to explain the meaning of intertemporal solvency, noting the special role of real economic growth rate (γ), real interest rates on external debt (r), and real effective exchange rate (ϵ) (Aristovnik, 2007, p.89):

$$tb = 1 - i - c - g = -f (r - \gamma - \epsilon) \quad (2)$$

where tb is long term trade balance, i is gross investment, c is private consumption, g is public consumption, and f the ratio of external debt to GDP.

The equation indicates that the country will have a higher level of absorption ($i+c+g$) in relation to national income only if the country is a net exporter of capital. Net importers of capital like the transition countries must achieve foreign

trade surpluses and pay interest on external debt in order to keep the external debt to GDP ratio unchanged.

Doisy and Herve have modified the above equation, taking into account that in the case of transition countries the current account deficit is financed by foreign capital inflows in the form of foreign direct investment, which does not increase the debt (Golubovic, 2008, p.279). If for the sake of simplicity we assume that the long-term real effective exchange rate is constant (ϵ), sustainable primary (non-interest) current account balance to GDP can be expressed as:

$$ca' = -f(r - \gamma) - fdi \quad (3)$$

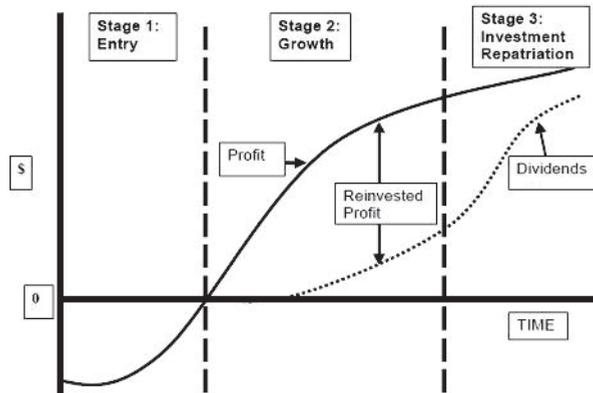
where fdi is share of net foreign direct investment to GDP.

Including foreign direct investment in the model is problematic for three reasons: foreign direct investment is not a 'free lunch', and in transition countries it significantly affects consumption generation, which has a negative influence on the current account balance, and the inflow of foreign capital affects real exchange rate appreciation. As we saw in Table 2, income account deficits are the main cause of current account deficits in Central European countries, and are increasingly important in shaping current account deficits in Southeast European countries. The structure of the income account shows that income from direct investment is the dominant cause of income account deficit, which suggests that foreign direct investment inflow leads to an inevitable deficit in income account balance. Mencinger (2008, p.19) suggests that current account deficits which are financed by foreign savings (direct investment, portfolio investment, and credits) create future investment account deficits and contribute to present and future current account deficits.¹ Inflow of foreign capital thus creates 'addiction' as a vicious circle is created: current account deficits demand new FDI, which generates future current account deficits due to the outflow of foreign capital associated with FDI. Foreign direct investment stock, profitability of foreign affiliates, and FDI financial life cycle determine the level of capital outflow associated with foreign direct investment. In order to explain how the maturity of foreign investment

¹ Although Mencinger's intriguing findings on FDI impact on growth (Mencinger, 2003) have sometimes been challenged by conventional analyses (e.g., Turkcan, Duman and Yetkiner, 2011; Samad, 2009) or have been denied in several preceding papers (e.g., Borensztein et al. 1998) as well as by further analyses (e.g., Zhang, 2001) the impact of FDI on current accounts only appears in a few papers (e.g., Jansen, 1995; Seabra and Flach, 2005). However, it has served as a basis for additional yet similar findings (see: Yalta, 2011).

affects outflow of foreign capital in the form of dividends, Brada and Tomsik developed an FDI financial life cycle (2003, p.22), which is shown in Figure 7.

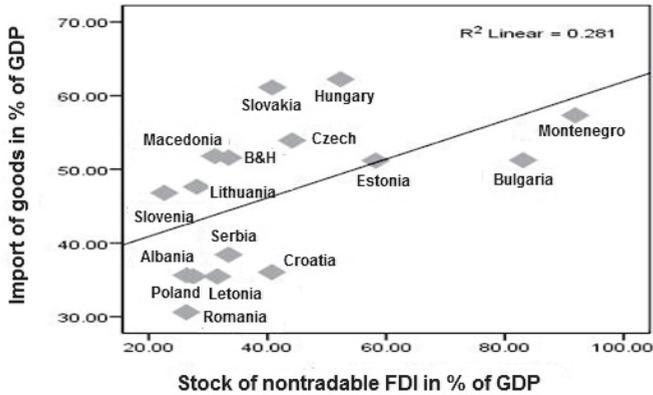
Figure 7: FDI financial life cycle



Source: Brada and Tomsik (2003,p.22)

In the entry phase the affiliate operates with losses. In the second phase the foreign affiliate begins to operate with a profit as it establishes manufacturing, becomes more competitive by reorganization, and gains from the advantages that a multinational company possesses. As the affiliate improves its market position, additional investment in production facilities, new machinery, and labour is required for further market expansion, and most of the company profit is reinvested. In the third phase, affiliates use most of the profits to pay dividends. At this stage there is a stabilization of the market share and the enterprise's profitability rates. The enterprise has no more opportunities for further market expansion and the level of reinvested profit decreases. Drawing the profits in the form of dividends, multinational companies come up with funds that can be invested in those investment projects that promise to achieve greater profits and market expansion. Growing the stock of affiliates close to their full market potential and opportunities to invest in countries with even cheaper labour (above all, Asian countries) create significant capital outflow in the form of dividends, which in 2008 and 2009 surpassed even the inflow of foreign direct investment for Central European countries.

Foreign direct investment in transition countries, especially in Southeast European countries, is mainly directed toward profitable activities in the tertiary sector: financial services, retail trade, real estate, and telecommunications.

Figure 8: The relation between non-tradable FDI and imports

Source: Author's calculation based on data from Unctadstat (for stock FDI as % of GDP), World Bank (for imports of goods as % of GDP), and countries' central banks (for sectorial distribution of FDI)

Non-tradable investment (tradable investment is considered as manufacturing, mining, and agriculture, since they are export-oriented) is market-oriented and has a negative impact on the trade balance, not only through a direct increase of imports but also through the impact on consumption generation (most obviously through credit booms associated with foreign investment in financial intermediaries). To support this thesis, the relation between non-tradable FDI and imports for countries of Central and Southeast Europe is presented in Figure 8 (based on data on FDI stock at the end of 2009 and imports of goods in that year). Pearson's correlation coefficient is $r = 0.530$ ($n = 16$, $p = 0.035$), which means that there is a moderate relation between the variables, and the coefficient of determination is $r^2 = 0.281$, which means that 28.1% of import variation can be explained by changes in stock of non-tradable FDI. Considering that FDI also affects real exchange rate appreciation, as already explained in the first part of the paper, it is clear that implementing FDI in the MFR model is questionable, despite the fact that it is a non-debt-creating instrument.

In Table 8 assumptions for calculating the sustainability of Serbia's current account deficit by using equations (2) and (3) are given, and the results of the sustainability of the current account deficit obtained by using MFR methodology, which is used for assessing the medium-term sustainability of Serbia's current account deficit. As in equation (3), for the sake of simplicity the long-term real effective exchange rate in the MFR model is considered constant (ϵ).

Table 8: Serbia’s sustainable current account deficit according to MFR methodology

The assumptions for Serbia’s current account sustainability calculations (‘MFR’ methodology)			
External debt in % of GDP (2007-2010)	Real interest rate on external debt in % (2010)	Real economic growth in % (2002-2010)	Net FDI in % of GDP (2007-2010)
71.29	3.27	3.62	4.92
Sustainable current account balance by MFR methodology in % of GDP		Actual balance of non- interest current account in % of GDP (2007-2010) - 11.20	
0.25			
Sustainable current account balance by using equation (3) in % of GDP			
Stable FDI 4%	Average net FDI for period (2007-2010)		
- 3.75	- 4.67		

Source: Author’s calculation

The calculated sustainable current account balance by MFR methodology is 0.25% of GDP, which is far from the actual deficit of the non-interest current account in the period 2007-2010, which is 11.20 % of GDP. This means that without serious current account reversal Serbia will have serious problems with the sustainability of the current account deficit in the medium term. Even if we include foreign direct investment in the model (which is problematic, as we explained earlier) the actual balance of the non-interest current account is much larger than the calculated sustainable current account deficit with a stable FDI of 4% of GDP (3.75% of GDP) and the calculated sustainable current account deficit with average FDI inflow in the period 2007-2010 (4.67 % of GDP).

In order to fully assess the sustainability of Serbia’s current account deficit using MFR methodology it is necessary to make comparisons with the obtained results for other countries in the region (Southeast Europe). The assumptions for calculating the sustainability of Southeast European countries’ current account deficits are presented in Table 9.

Table 9: The assumptions for calculating the sustainability of Southeast European countries' current account deficits ('MFR' methodology)

Country	External debt in % of GDP (2007-2010)	Real interest rate on external debt in % (2010)	Real economic growth in % (2002-2010)	Net FDI in % of GDP (2007-2010)
Albania	29.26	4.27	5.04	7.26
B&H	52.85	2.72	4.08	6.02
Bulgaria	103.71	2.87	4.12	14.36
Croatia	87.01	2.71	2.62	4.53
Macedonia	55.45	3.92	3.29	4.95
Montenegro	89.43	4.41	4.01	25.64
Romania	42.74	4.20	4.29	4.36

Source: Author's calculation based on data from Unctadstat, World Bank, and countries' central banks

Table 10 shows the calculation of sustainable current account balance for Southeast European countries using the MFR methodology (as previously, the long-term real effective exchange rate in the MFR model is considered constant (ϵ)). As in the case of Serbia, without implementing FDI in the equation the calculated sustainable current account balance for every country (except Croatia) is far from the actual balance of the non-interest current account. Only Albania and Montenegro have a bigger difference between actual and calculated sustainable current account balance than Serbia. If we take into consideration average net FDI in the period 2007-2010 the situation is different, since most countries do not make significant current account adjustments. In the case of Bulgaria, Croatia, and Macedonia the calculated sustainable current account deficit is in fact larger than the actual deficit, and in the case of Albania, Bosnia and Herzegovina, and Romania the differences between the calculated sustainable and actual current account deficits are smaller than in the case of Serbia (only Montenegro has a bigger difference than Serbia). Results obtained by using the MFR methodology suggest that the region as a whole will have a problem with excessive current account deficits in the medium term as a result of unsustainable development, and that Serbia is among the region's most vulnerable countries.

Table 10: Calculation of current account sustainability for Southeast European countries (MFR methodology)

Country	Sustainable current account balance by MFR methodology in % of GDP	Sustainable current account balance by using equation (3) in % of GDP		Actual balance of non-interest current account in % of GDP (2007-2010)
		Stable FDI 4%	Average net FDI for period (2007-2010)	
Albania	-0.23	-3.77	-7.03	-12.7
B & H	-0.72	-3.28	-5.30	-6.35
Bulgaria	-1.30	-2.7	-13.06	-9.55
Croatia	0.08	-4.08	-4.61	-2.43
Macedonia	0.35	-4.35	-5.30	-5.09
Montenegro	0.36	-4.36	-26.00	-36.86
Romania	-0.04	-3.96	-4.32	-6.25

Source: Author’s calculation

3.2. Measuring current account sustainability with modified Reisen methodology

Reisen methodology is often used to assess the long-term sustainability of a country’s current account deficit. The methodology is based on a standard portfolio approach to the current account. Sustainable current account deficit (CAD) can be represented by the equation (Reisen, 1998, pp.8):

$$cad = (\gamma + \epsilon)f^* - ((\eta + \epsilon - \gamma)/(1 + \gamma)) FX^* \tag{4}$$

where f^* is the target level of foreign debt to GDP ratio at which foreign investors are confident that the country will regularly service its debt liabilities (we assume that this target level of foreign debt is 50% of GDP); η is the real growth rate of imports; and FX^* is the target level of foreign reserves (we assume that this value is equal to six months of imports as % of GDP).

Equation (4) shows that long-term current account sustainability is possible if the ratio of external debt to GDP remains unchanged and if the target level of foreign reserves rises in line with the rate of real import growth. Including the real effective exchange rate (ϵ) in the equation is important, since the real appreciation that is present in most transition countries reduces the level of external debt and foreign exchange reserves relative to GDP.

Instead of implementing foreign direct investment in the Reisen model, we create a modified model by adding net reinvested earnings from foreign direct investment. Reinvested earnings are reported as a credit item in the capital account as part of FDI, to reflect the foreign investor's increased investment in the country; and also as a liability in the current account to reflect the foreign investor's investment returns on equity. In this way the double entry nature of the balance of payments is maintained. Unlike dividends transferred to the parent company when the host country's currency has to be converted to the currency of the multinational company's home country, in the case of reinvested earnings there is no need to exchange the host country's currency for foreign exchange, because the earned profit stays in the country.

As pointed out by Brada and Tomsik (2003, p.3), while reinvested profits and dividend remittances are reported in the income account as seemingly similar debit transactions, the latter must be financed on the foreign exchange market while the former is not. Thus countries that have received large inflows of FDI which generate large profits that are reinvested in the local economy will, paradoxically, appear to have large current account deficits, even though the reinvested profits were used to invest in the domestic economy for land purchase, construction of new plants, expansion of existing capacity, etc., and require no foreign exchange financing. Countries in which foreign affiliates reinvest much more than home enterprises abroad (which is the case with almost all countries of Central and Southeast Europe) will have 'overstated' the current account deficit. Following equation 4, we subtract part of the income account - net reinvested earnings - from foreign direct investment as % of GDP (Re) from the sustainable current account balance:

$$\text{cad} - \text{Re} = (\gamma + \varepsilon)f^* - ((\eta + \varepsilon - \gamma)/(1 + \gamma)) \text{FX}^* \quad (5)$$

Rearranging the above equation, the sustainable current account deficit can be expressed as:

$$\text{cad} = (\gamma + \varepsilon)f^* - ((\eta + \varepsilon - \gamma)/(1 + \gamma)) \text{FX}^* + \text{Re} \quad (6)$$

Table 11 presents assumptions for calculating the sustainability of the current account deficit by using equation 6 (modified Reisen methodology which is used for assessing the sustainability of the current account deficit in the long term).

Table 11: The assumptions for Serbia’s current account sustainability, calculated using modified ‘Reisen’ methodology (equation 6)

Real effective exchange rate (per unit of GDP growth)	Real import growth rate in % (2007-2010)	Real economic growth in % (2002-2010)
0.97	8.19	3.62
Target level of forex reserves as % of GDP (2007-2010)	Net reinvested earnings from foreign direct investment as % of GDP (2007-2008)	
26.55	- 0.8	

Source: Author’s calculation based on NBS online data

From Table 11 we can see that net reinvested earnings from foreign direct investment are calculated on the basis of data from 2007 and 2008, as data for 2009-2010 are not available. Since Serbia started the transition process later than other countries and did not attract a substantial stock of foreign investment, the level of net reinvested earnings from foreign direct investment (as % of GDP) is lower than in other transition countries, especially in comparison with Central European countries. Table 12 presents the calculation of Serbia’s current account sustainability by using modified ‘Reisen’ methodology.

Table 12: Serbia’s current account sustainability using modified ‘Reisen’ methodology (equation 6)

Sustainable current account balance by modified Reisen methodology in % of GDP with assumption of a constant external debt ($f^* = 50\%$ of GDP) and target level of foreign reserves in the six-month import value	Actual deficit of current account in % of GDP (2007-2010)
1.17	-13.45

Source: Author’s calculation

From Table 12 we can see that Serbia’s current account deficit (13.45% of GDP) is much larger than the sustainable current account balance calculated by using modified Reisen methodology, which indicates that Serbia’s current account deficit is unsustainable. Even if we adopt Doisy and Herve’s approach and use average net foreign direct investment in the period 2007-2010 instead of net reinvested earnings from foreign direct investment, the calculated sustainable

current account deficit is 2.95% of GDP, which is 10.5% larger than the actual current account deficit.

In order to fully assess the sustainability of Serbia's current account deficit by using modified Reisen methodology it is necessary to make a comparison with obtained results for other Southeast European countries. The assumptions for calculating the sustainability of Southeast European countries' current account deficits and obtained results are presented in Tables 13 and 14.

Table 13: The assumptions for calculating the sustainability of Southeast European countries' current account deficits (modified 'Reisen' methodology)

Country	Real effective exchange rate	Real import growth rate in % (2007-2010)	Real economic growth in % (2002-2010)	Target level of forex reserves as % of GDP (2007-2010)	Net reinvested earnings from foreign direct investment as % of GDP (2007-2008)
Albania	0.84	3.6	5.04	27.13	-0.67
Bosnia and Herzegovina	0.12	1.26	4.08	33.65	-1.01
Bulgaria	0.36	-3.03	4.12	34.23	-5.05
Croatia	0.15	-2.93	2.62	22.23	-0.85
Macedonia	0.82	3.11	3.29	34.2	-1.41
Montenegro	0.11	5.17	4.01	38.78	-0.72
Romania	0.32	6.64	4.29	19.58	-1.06

Source: Author's calculation

From Table 14 we can see that, without current account reversal, all Southeast European countries face an external sector crisis in the long term. The calculated sustainable current account deficit is the largest in the case of Bulgaria as a result of the highest net reinvested earnings as a percentage of GDP. Croatia, Macedonia, and Romania are in a better position than other countries (the difference between calculated sustainable and actual current account balance is less than 5% of GDP), while other countries need to make significant current account adjustments. Only Montenegro has a bigger difference than Serbia between actual and calculated sustainable current account balance, which again shows that Serbia is among the most vulnerable countries when current account sustainability is considered.

Table 14: Calculation of current account sustainability for Southeast European countries (modified ‘Reisen’ methodology)

Country	Sustainable current account balance by modified Reisen methodology in % of GDP	Actual deficit of current account in % of GDP (2007-2010)
Albania	-3.58	-13.37
Bosnia and Herzegovina	-2.93	-9.46
Bulgaria	-6.84	-15.21
Croatia	-1.90	-6.10
Macedonia	-3.52	-7.48
Montenegro	-2.88	-36.82
Romania	-3.46	-8.42

Source: Author’s calculation

It should be noted that the determination of the sustainability of the current account deficit on the basis of the presented methodologies faces certain restrictions, related to the fact that the assumptions on which the analysis is based are fairly strict, especially when the transition countries are considered, because they imply that structural changes are foreseeable in the future or that the current state of the economy is in a stable equilibrium. This is highly doubtful, considering the global recession, the crisis in the Eurozone, and the fact that transition economies are not fully adjusted to the market economy (for example, it is unrealistic that the economic growth in the period 2002-2010 will be repeated in the near future, and FDI is lower than before the crisis, which means that the problem with the sustainability of current account deficits is larger than shown by existing models). As pointed out by Aristovnik (2007) and Golubović (2008), in the future existing models should be complemented by a set of indicators that have been found to have predictive power in identifying unsustainable current account deficits, such as the level of savings and investment, the fiscal balance, the openness of an economy, and the composition of external liabilities.

4. CONCLUSION

Factor analysis showed that favourable structure of external debt by maturity and by debtors, high level of foreign exchange reserves accumulated in the previous period, relative stability of the financial system, low level of short-term portfolio inflows, lower global real interest rates, and the fall in oil prices have a positive

effect on Serbia's current account sustainability; while unfavourable structure of the current account, unfavourable structure of capital inflows that finance the deficit, economic growth without a healthy basis that will be slowed down due to the deepening of the global economic crisis, high levels of external debt relative to GDP, real exchange rate appreciation, lack of openness of the economy, potential political instability, the global recession, and the fact that the cause of deficit is high level of consumption rather than increase in investment activity, have a negative effect on Serbia's current account sustainability. Calculations of the sustainability of current account deficit using MFR and modified Reisen methodology show that the Serbia's actual current account deficit is above the sustainable level (by MFR methodology a sustainable current account balance is 0.25 % of GDP while actual deficit of non-interest current account is 11.20 % of GDP, and in the case of modified Reisen methodology sustainable current account balance is 1.17% while actual deficit of current account is 13.45% of GDP) and that foreign accumulation in the previous period was not used in order to create the conditions for sustainable development. Compared with obtained results for other Southeast European countries, Serbia is one of the most vulnerable countries when sustainability of current account is concerned. The on-going global economic crisis will contribute to a further reduction of the foreign capital inflow that is an important source of financing the current account deficit, which can result in an even more drastic drop in imports, adversely affecting industrial production (highly dependent on imported inputs) and further sharpening the question of the sustainability of Serbia's current account deficit. Unfortunately the fall in GDP and exports, the low level of domestic accumulation, the slowness in building an adequate environment for foreign investors, and the approaching end of privatisation do not inspire confidence in Serbia's ability to resolve its current account deficit problems.

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