EXTERNAL BALANCE.
HOW VULNERABLE IS ROMANIA?

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Abstract. *Large and persistent current account deficits in Romania have pointed to a competitiveness problem, although recent improvements have eased these concerns. This paper investigates the nature of the deficit against current research by transactions and by capital and financial transfers, extra attention being paid to the interconnections between the indicators of external balance of payments and the macroeconomic aggregate results. At the same time, sustainability of current account deficit is reviewed in the light of external debt sustainability – the model seeking to determine the current account deficit which is consistent with maintaining a constant share of external debt in GDP.*

Keywords: current account, trade balance, capital inflows, external debt, sustainability.

1. Introduction

Assessing Romania's external competitiveness, like other economies in Central and Eastern Europe, is challenging. Besides the well-known difficulties of estimating equilibrium exchange rates, several factors have recently affected Romania's external balances, such as: (i) Romania's capital account liberalization in 2005 was followed by strong capital inflows and coincided with a rapid domestic credit expansion. The lingering propensity of households towards consumption failed to spur the growth rate of domestic output, hinting at a larger contribution of imports to accommodating household demand because of inflexible supply. Structural vulnerabilities are heightened by the fact that 54 percent of total credit to non-government is granted in foreign currency, a large number of debtors being unhedged borrowers. Although further deepening of financial intermediation is desirable, the growth rate of this process should be dampened, in the face of a potential negative impact of rapid credit growth both on inflation and current account deficit; (ii) As other EU Member States in the region, the process of capital accumulation has determined a noticeable transformation of Romania's production and

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exporting structure, shifting away from production of traditional low-tech products towards higher value-added goods. The underperformance of traditional exports can be partially clarified by the re-allocation of resources linked to this transformation process; (iii) Growing relative prices of non-tradable goods have been partially the outcome of strong productivity gains in tradable sector, a phenomenon formerly pointed out in other countries that have joined the European Union (Balassa Samuelson effect). Against this background, standard measures of the real exchange rate based on consumer prices do not reveal changes in external competitiveness but the effect of gap productivity gains across sectors on relative prices; (iv) Simultaneous to this transformation process, Romania's external trade has been impinged on by rapidly rising commodity prices (minerals and fuels) in recent years, and by competition from Asian countries (following the liberalization, in early 2005, of the world textile market).

2. External balance

2.1. Current account balancing perspectives

In 2008 the current account deficit amounted to 12.2 percent of GDP (Fig. 1), the fourth highest among EU10 Member States (Fig. 2). The substantial decline in external demand for Romanian products, along with economic agents' diminished access to financing resulted in sharp contraction of trade deficit. A negative income balance, linked to profit repatriation by direct investors and interest payments was partly alleviated by the positive developments in the services balance and current transfers (including mainly remittances and EU funds). Although the economic activity in emerging countries lost its momentum, the Swedish and Russian economies, which are the main economic partners of the Baltic States, reported a rebound, unwinding the negative tendency.
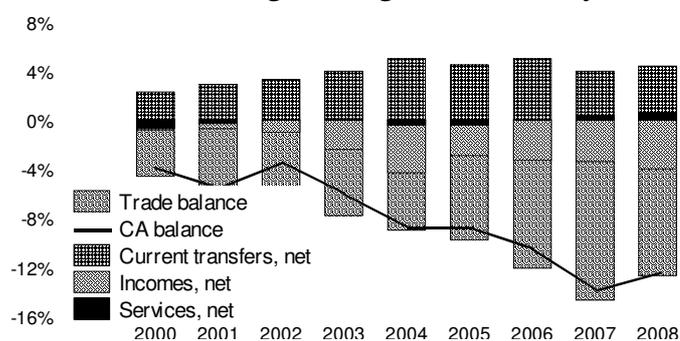

Figure 1. Level and 12-month structure of current account deficit (% of GDP).
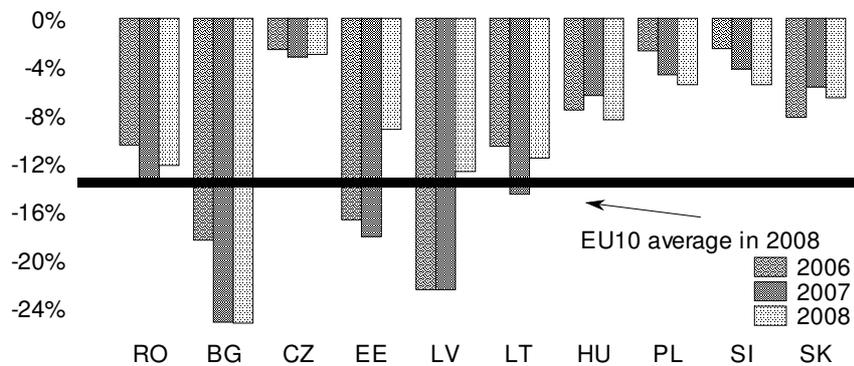**Source:** National Bank of Romania.

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Figure 2. Current account deficit in EU10 Mamber States (% of GDP).

The systematic negative contribution of net external demand to economic increase starting 2003 declined slightly in 2008, but its amplitude (–7 percentage points) reveals the persistently large gap between the two components of the balance of goods and services in terms of physical volume growth and share in GDP (Fig. 3).
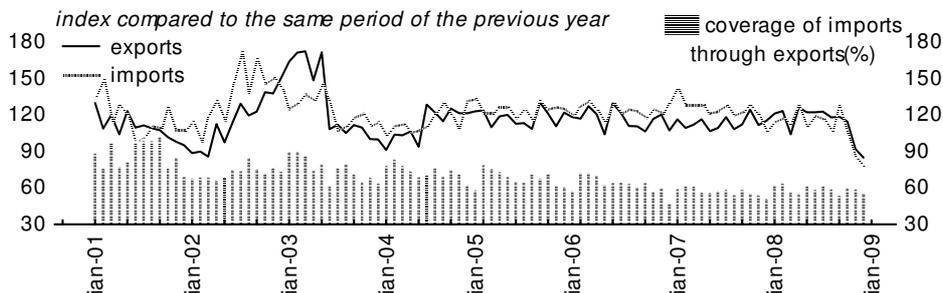

Figure 3. Trade balance.

The development presented above is explained first of all through the distribution of exports and respectively imports by group of commodities. Between 2000 and 2008, the annual change in the physical volume of the two flows of the foreign trade was accounted more than 75 percent, by the same five groups of goods (Table 1). As for the sector "textiles, wearing apparel and footwear" the indexes of the intra-sectors exchanges witnessed decreasing values, a possible explanation being the fierce competition from Asian producers. Despite the strong export growth of mineral, chemical and plastic products, the values of the intra-sectors exchanges indexes suggest that there is no „Dutch disease" phenomenon in Romania, as the economy is a net importer of these commodities. The sector "machinery,

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equipment and transport means" posted relatively constant values and increasing rates with cyclic character.

Table 1

Index of the trade exchanges on the intra-groups of products[*]

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Mineral products	0.64	0.55	0.72	0.62	0.59	0.69	0.65	0.58	0.61
Chemical and plastic products	0.66	0.57	0.54	0.57	0.61	0.63	0.58	0.57	0.50
Textiles, wearing apparel and footwear	0.79	0.78	0.78	076	0.76	0.76	0.77	0.74	0.70
Base metals	0.66	0.82	0.81	0.85	0.82	0.89	0.98	0.96	0.98
Machinery, equipment and transport means	0.72	0.73	0.77	0.73	0.72	0.72	0.73	0.71	0.75

[*] This index has been calculated based on the relation: $Index = 1 - \dfrac{|\exp - imp|}{\exp + imp}$. A value at par indicates merely commercial exchanges in – among discrete industries, while a naught would imply a mere commercial influx (either imports or exports).

Source: Own calculations based on the data released by National Institute of Statistics.

The mixed performance across sectors resulted in a shift in the structure of exports by production stage. While raw materials exports accounted for 29.3 percent of total exports in 2000, their share fell to 5.2 percent in 2008. Meanwhile, the share of intermediate goods increased from 10.5 to 60.0 percent in the same period. These changes resemble the experience of other EU Member States in the region, although in the case of Romania this pattern has been accompanied by a simultaneous shift towards resource-intensive products, against the backdrop of high international commodity prices (Fig. 4).
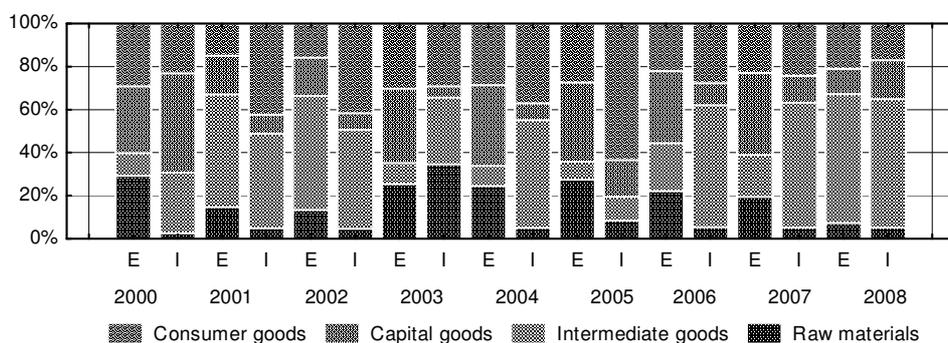

Figure 4. The structure of exports and imports by production stage.

Source: National Institute of Statistics.

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On the imports side, the share of capital goods accounted for 18.1 percent in 2008. Roughly 65 percent of capital goods direct imports were directed to companies in the tradable goods sector. Manufacturers that import capital goods for investment purposes sell a growing share of their output on external markets. The share of exports in total transactions augmented from 42 percent in 2005 to 48 percent in 2008. Meanwhile, active processing companies, even though systemically significant to the external sector (23 percent of exports) have a reducing contribution to the current account deficit drop. This evolution can be explained by the negative dynamics of net exports over the past two years (8.5 percent in 2007 and 7.2 percent in the first half of 2008), in contrast with the rest of the economy, which recorded increases.

In 2008 the geographical spread shows that European Union was Romania's main trading partner, accounting for about 70.5 percent of country's foreign trade, up 0.6 percentage points versus 2000 (Fig. 5). Partner countries holding the first three places in the total amount exports were the following: Germany (16.5 percent of total exports), Italy (15.4 percent) and France (7.4 percent). Imports registered a similar trend, 69.1 percent of the total amount within the EU. The Russian Federation is also outstanding, since it occupies the fourth position as trading partner due to Romania's imports of primary energy resources, a figure which shot up within total imports mainly second to the increase in the price of natural gas and its derivatives. The terms of net trade recorded a positive slope from 103.5 percent in 2000 to 101.5 percent in 2003, due to higher prices of commodities exported to the European Union. In the following years, it was maintained at a constant level of 104 percent. Regarding the terms of gross trade the maximum in the analysis period was recorded in 2002, when it amounted to 102.1 percent as a result of the changes appeared in the structure of exports that took place in a hostile external environment.

Trade balance deficit financing could be tricky if international liquidity remains restrictive. Romania reports autonomous liquidity inflows – remittances from abroad and European funds. In 2008 these autonomous inflows represented 3.6 percent of GDP, less by 1 percent from 2007, due to the worsening economic conditions in the main countries hosting Romanian workers, especially in Spain. The loss of jobs as a result of the slowdown in construction activity in these countries had a negative impact on the inflows of foreign currency that Romania accounted on this year. In this context, the European fund-absorbing capacity becomes more important.
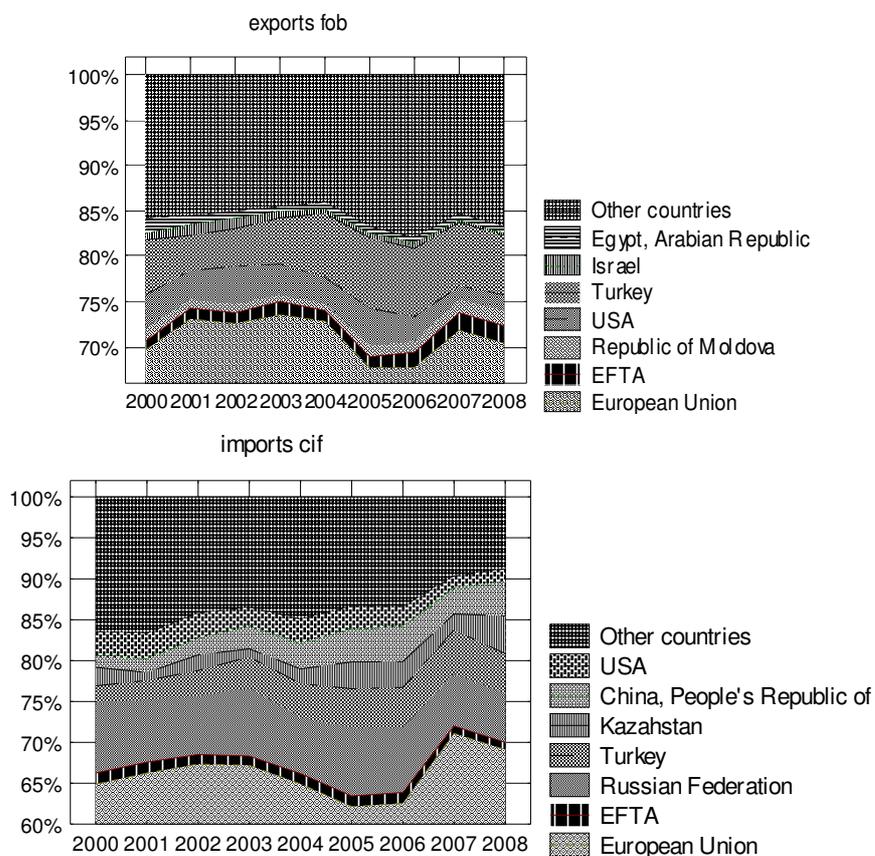
exports fob

imports cif

Figure 5. Foreign trade by group of countries.

Source: National Institute of Statistics.

2.2. Issues regarding the external competitiveness

The picture for Romania is bleaker, taking into account two of the most relevant composite competitiveness indicators that are calculated internationally. Thus according to Global Competitiveness Index, surveyed by World Economic Forum, Romania positioned sixty-eighth out of 134 countries, ninth within the EU 8+2, ahead of Bulgaria. Romania benefited from its large market, which was characterized by relative high competition (42th). However, some more basic issues must still be tackled such as upgrading the quality of infrastructure (105th), addressing the burgeoning inefficiencies in the labor market (97th), reinforcing the efficiency and transparency of public institutions (89th) and improving macroeconomic stability (76th). All these areas make it quite difficult to do business in the country and should be addressed to place Romania on

a more sustainable development path going forward. Comparatively, a study by the Institute for Management Development rated Romania 45-th (versus 23-rd in 2003) out of 55 countries and regions surveyed, before Russia (47-th) and Turkey (48-th).

Romania's real effective exchange rate has experienced strong appreciation since end 2004, after a prolonged period of stability (Fig. 6). The impact of internal inflation on real appreciation, meaning CPI-based real effective rate, was dulled mainly because of the liberalization of administered prices, to some extent due to the boom in oil prices on the international markets. The inflationist pressures exerted by external prices are assessed as moderate. Comparing CPI-based RERs across countries may be confusing to the extent that the degree of openness varied across them as the size of the non-tradable sector would determine the magnitude of the Balassa-Samuelson effect (Fig. 7). At the same time, the seemingly dramatic appreciation of real exchange rates based on nominal unit labor costs is likely to be misleading. While Romania's real unit labor costs have started to rise up since 2005, much of this seems to reflect catch-up from a previously low level and a tightening labor market. In reality, trends in Romania's manufacturing sector profitability show no clear evidence of the erosion of profit margins in the tradable sectors, as rapid growth in nominal unit labor costs indicators has been matched by corresponding increases in producer prices.
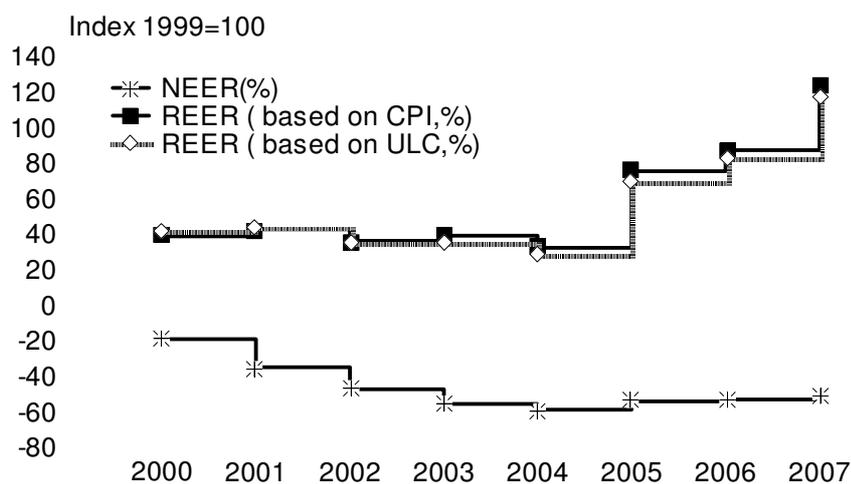

Figure 6. Annual rate of appreciation (+)/ depreciation (–0) of the real effective exchange rate.
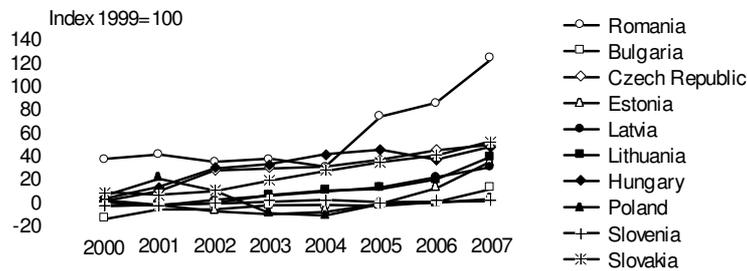
Source. EUROSTAT.

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Figure 7. Annual rate of appreciation (+)/depreciation (–) of the real effective exchange in EU10 Member States.

Source: EUROSTAT.

Regarding the evolution of the nominal exchange rate, LEU accumulated 1.3 percent versus euro in March 2008 compared to December 2007. Beginning with August until December 2008 the domestic currency weakened sharply to 12.1 percent against a background of increased risk aversion in international financial markets due to the financial turmoil and intensifying the circumspection of forex market operators as the progressive deterioration of the external position of the Romanian economy.

The growth rate of productivity in industry reverted in 2008 to a level above the real gross average wage in the same sector (Fig. 8). As against the previous year, labor productivity in industry registered a growth by 4.8 percent which was influenced by the productivity increase in two from the three industrial sectors: manufacturing (+4.9 percent) and electric and thermal energy, gas and water industry (+10.3 percent). In mining and quarrying, labor productivity decreased by 0.7 percent. In real terms, the step-up in the annual inflation rate caused wage dynamics to slow down (–2.1 percent).
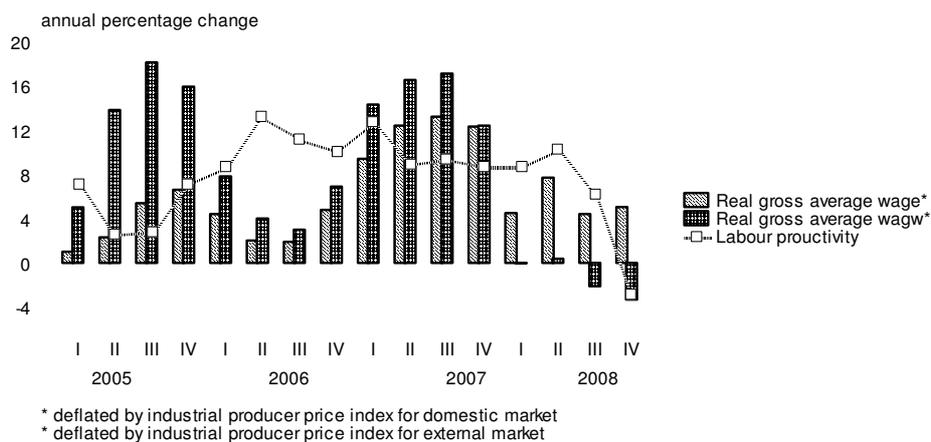

* deflated by industrial producer price index for domestic market
* deflated by industrial producer price index for external market

Figure 8. Labour productivity and real gross wage in industry.
Source: National Bank of Romania.

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Romania's exports market shares are growing steadily in all trading partners (Fig. 9). In addition, historical expansions in Romania's exports share normalized by the country's GDP share in EU GDP reflect that its development has been evolving roughly in line with its production capacity (Fig. 10). Nevertheless, a similar metric for several EU Member States in the region (e.g., Slovakia, Czech Republic, and Hungary) illustrates a significantly deeper penetration into the EU market share relative to their production capacities, possibly resulting from their location and status as early recipients of FDI inflows.
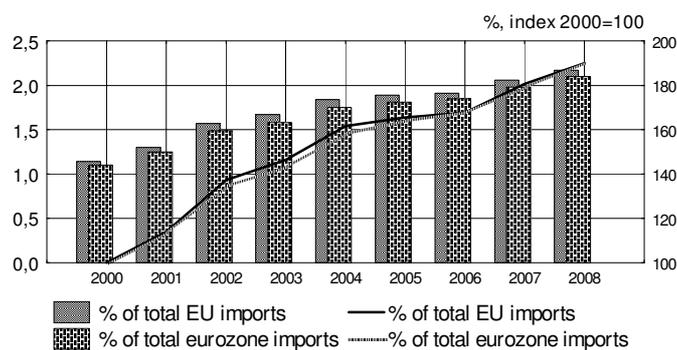

Figure 9. Share of Romanian exports in EU imports.
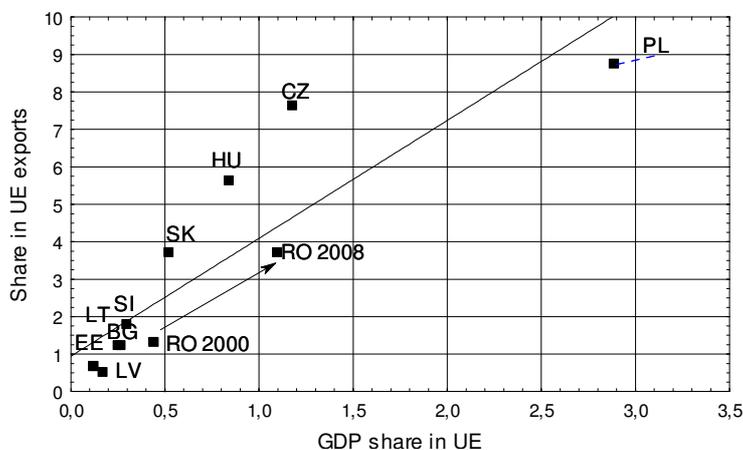**Source:** EUROSTAT and own calculations.

Figure 10. Romania: Share in European Union exports, 2008.
Source: EUROSTAST.

As regarding competitiveness indicators, the export effort increased to 12.8 percent in 2008 from 12.2 percent in 2007 (Table 2). The firming up of this indicator is partially triggered by the propensity of the Romanian manufacturers to evade from the internal business environment which was marred by financial blockage. At the same time, the forcible pressure on

exports has generated lesser supply on the home market, which was compensated by inputs, so the penetration rate of imported goods rose to 18.4 percent. Since 2004, the openness of the Romanian economy had a downward trend which soared to 62.3 percent in 2008, whereas the weight of intra-EU trade remained unchanged at 47.3 percent. This indicator shows a lower level compared with other EU Member States in the region such as Slovakia, the Czech Republic and Hungary, whose value ranged from 72 percent to 155 percent.

Table 2

Competitiveness indicators[*]

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Export effort (%)	14.7	14.5	15.5	15.5	16.1	14.6	13.8	12.2	12.8
Import penetration rate (%)	16.7	17.7	17.8	18.7	19.7	18.8	18.9	18.2	18.4
Difference between export effort and import penetration (p.p.)	–2.0	–3.1	–2.4	–3.2	–3.6	–4.2	–5.1	–6.0	–5.6
Economy openness (%)	60.6	64.1	66.3	69.4	73.3	65.8	65.3	63.4	62.3

Source: Own calculations based on the data released by National Institute of Statistics.
[*] export effort: exports/output*100 penetration rate: imports/domestic market *100; domestic market: output +imports-exports economy openness: (exports + imports)/GDP.

2.3. Current account deficit financing

Over the past few years, Romania turned into a recipient of massive capital inflows (Fig. 11), thanks to macroeconomic stabilization, strong GDP growth, large scale privatizations and the prospect of EU membership. Even though its per capita FDI stock is still pretty low, signifying roughly 35 percent of that of its central and eastern European neighbors in 2008, it has augmented sixfold since 2000 (Fig. 12).
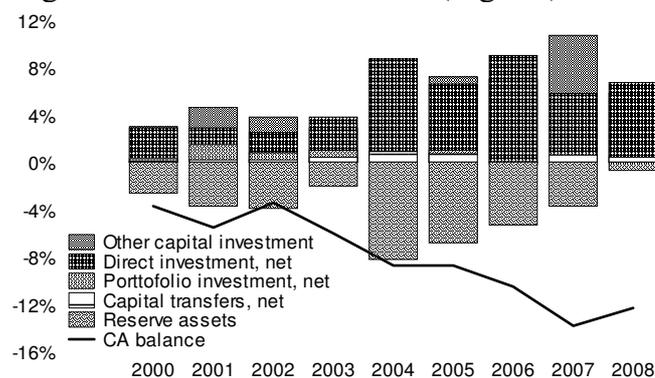

Figure 11. Current account deficit and the funding resources (% of GDP).
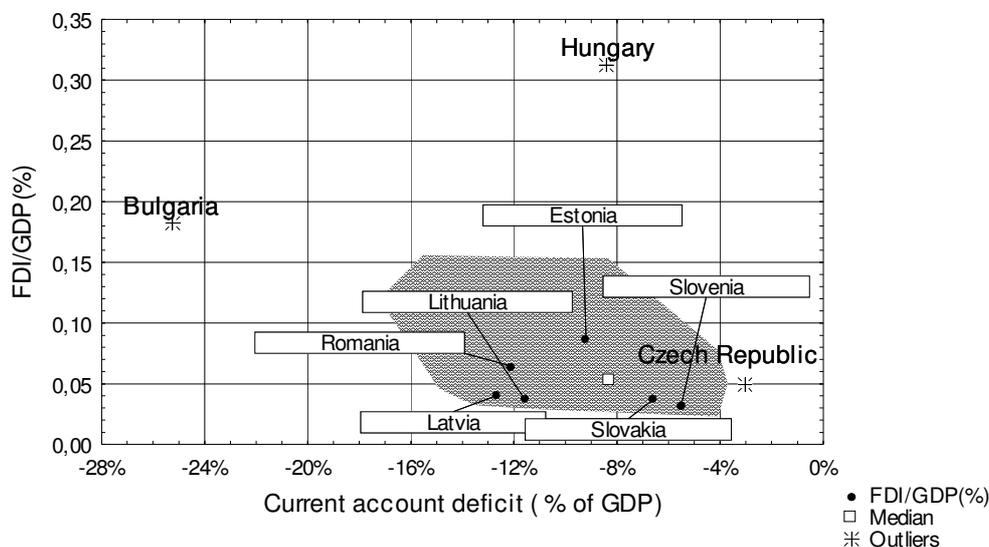**Source:** National Bank of Romania.

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Figure 12. Current account deficit and its coverage by FDI in 2008.
Source: EUROSTAT.

Between 2000 and 2007, FDI was the main financing source, covering around 65 percent of the current account gap. Nevertheless, from 2007 onwards, FDI inflows slumped to roughly 1/2 of the deficit, as the privatization programmed of state-owned enterprises was coming to an end. Moreover the composition of FDI inflows has modified. The share of equity inflows (including privatization receipts) shrank from 59 percent in 2004 to 10 percent in 2008, whilst intercompany loans have become more prominent, increasing from 13 percent to 54 percent in the same period. The difference, i.e. reinvested earnings, stayed generally constant. If we focus on its distribution in the main economic sectors, the manufacturing industry was the principal recipient of direct foreign investment inflows. In 2008 this accrued 29.2 percent of the total (within it, the metallurgical industry acquired the biggest chunk of 13.2 percent respectively). In the services sector, the large population and getting higher living standards have attracted considerable FDI flows in financial intermediation and insurance, quadrupling the FDI stocks in this zone as a share of GDP between 2003 and 2006. The raise in insurance can also be attributed to the introduction of a voluntary pension pillar in 2007 and of a compulsory second pension pillar in 2008. Moreover, both wholesale and retail trade, and real estate and business activities doubled their FDI share as a percentage of GDP over the same period. The data provided by the Trade

Register show that the end of 2008 the main investor countries (in terms of subscribed share capital) were: Austria (21.4 percent), the Netherlands (16.3 percent) and Germany (11.7 percent). The rest of the current account deficit was more than covered by „other investment", being mainly loans and currency deposits. The capital account has remained slightly positive and stood at 0.4 percent of GDP in 2008, partly reflecting the inflow of EU funds. Significant privatization receipts and the NBR foreign-exchange reserve requirements for credit institutions have also lead to a fast accumulation of reserve assets.

3. The derivation of the current account deficit which maintains the share of external debt in GDP constant

Ex ante sustainability is implicit in the following model because it aims to determine the current account deficit which is consistent with maintaining a constant share of debt in GDP. The intertemporal solvency is defined as a situation in which the country as a whole, and each economic unit within the country, including the government, obey their respective intertemporal budget constraints. In the context of the overall economy's resource constraint, the current account clearly plays a crucial role, since it measures the change in the net foreign asset position country.

The current account identity can be rewritten, recalling that the current account position corresponds to the variation in the stock of foreign assets, as:

$$s_t p_t^\circ F_t - s_t p_{t-1}^\circ F_{t-1} = p_t (Y_t - C_t - G_t - I_t) + i_t^\circ s_t p_{t-1} F_{t-1}$$

where F is the stock of net foreign assets, denominated in foreign goods, s, p and p° the nominal exchange rate, the domestic and foreign GDP deflator, Y,C,G,I are real GDP, private and government consumption and investment. The trade balance (TB) is the difference between GDP and expenditure.

Dividing both sides by nominal GDP and rearranging, one obtains:

$$f_{t+1} - f_t = \frac{1}{(1+\gamma_y)(1+\varepsilon_t)} [tb_t + f_t (r^\circ - \varepsilon_t - \gamma_t - \gamma_t \varepsilon_t)]$$

where lowercase letters indicate the ratio of the variable to nominal GDP, γ is the rate of real growth and ε the rate of real appreciation of the domestic currency.

The next stage consists in determining the level of trade deficit that is compatible with maintaining a constant ratio of external debt in GDP. Thus in "steady state", $f_{t+1} = f_t = ... = f$ and the relation becomes:

$$0 = \frac{[tb_t + f_t(r^\circ - \varepsilon_t - \gamma_t - \gamma_t\varepsilon_t)]}{(1+\gamma_y)(1+\varepsilon_t)}$$

$$tb_t = -f_t(r^\circ - \varepsilon_t - \gamma_t - \gamma_t\varepsilon_t).$$

Doisy and Hervé (2003) modify this formula in order to consider the fact that a considerable part of the countries' external deficit is financed by an almost non-debt creating instrument such as flows of foreign direct investment. If FDI is taken into account, the sustainable current accounts as a percentage of GDP can be written as:

$$\overline{ca} = -f_t(r^\circ - \varepsilon_t - \gamma_t - \gamma_t\varepsilon_t) - fdi,$$

where fdi is the ratio of net FDI and other inflows such as EU transfers to GDP.

In order to determine the current account deficit, which is sustainable by maintaining a constant share of external debt in GDP there were assumed the following values (see Table 3): $f = 53.3$ percent; $r = 5$ percent and for each variant e ($e_I = 2.5$ percent and $e_{II} = 2.75$ percent) was calculated as the difference between nominal appreciation and domestic inflation (annual average 2009-2010) and estimated inflation in the euro area.

Table 3

Variant I Source: The projection of the main macroeconomic indicators, Romanian National Commision of Prognosis (January 2009)	Variant II Source: Economist Forecast, European Commission (autumn 2008)
The assumed values : f=53,3% r=5% Average values: 2009-2010 γ=3,5% e=2,5 % fdi=3,3% **CA = -2,72%**	The assumed values : f=53,3% r=5% Average values: 2009-2010 γ=4,8% e=2,75% fdi=4,5% **CA=-3,08%**

The average values obtained for the period 2009-2010 ($\overline{ca}_I = -2.72$ percent, $\overline{ca}_{II} = -3.08$ percent) are lower than the current account deficit existing in reality, which reflect that the continuing manifestation of deficits over the calculated levels will be reflected in a further increase of external debt with negative impact on its sustainability. The assumptions are strong, and the results are sensitive to the values taken into account.

4. Conclusions

The Romanian economic and financial environment has lately recorded a noticeable progress, yet the gaps in comparison with some Central European countries are still considerable in some aspects.

The Romanian foreign balance of payments showed a progressive worsening of the current account from 3.3 percent in GDP in 2002 to 13.9 percent in GDP in 2008. Despite the fact that the economics theory suggests keeping the deficit up at most 6 percent in GDP, the experience of some new states joining the European Union, has emphasized that, as the outside credibility grew and the economic performances improved, the amount of the capital investments which is the main source of support for the import goods raised, which lead to the going down the current account.

Although now over 90 percent of the financial account is being covered up by direct and portfolio investments, still the relatively high level of the current account deficit needs not being given additional impulses that are correlated with the growth of the public and private consumption.

Sustainability of current account deficit is reviewed in the light of external debt sustainability – the model seeking to determine the current account deficit which is consistent with maintaining a constant share of external debt in GDP. Thus, the existence of deficits above the calculated levels will be reflected in increasing the external debt, which will adversely influence its sustainability.

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