

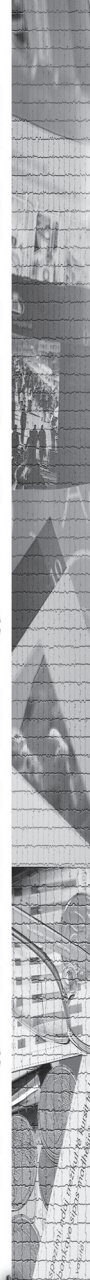
ALBANIA'S CURRENT  
ACCOUNT DEFICIT  
AND POLICY  
IMPLICATIONS

Ilir Vika\*

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*\*Ilir Vika, Research Department, Bank of Albania  
Email: [ivika@bankofalbania.org](mailto:ivika@bankofalbania.org)*

*Views expressed in this paper are those of the author and do not necessarily reflect those of the Bank of Albania.*

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## ABSTRACT

*This paper tries to assess the current account norm in Albania. For this reason, the study is based on the accounting framework developed by Lane and Milesi-Ferretti (2006) as well as the empirical framework that is based on panel data estimations. The “equilibrium” levels suggested by these methods are often dissimilar, thus the size of current account adjustment needs to be carefully interpreted. The paper aims to shed light also on possible implications that recent external deficit deterioration might have for monetary policy in concert with fiscal policy.*

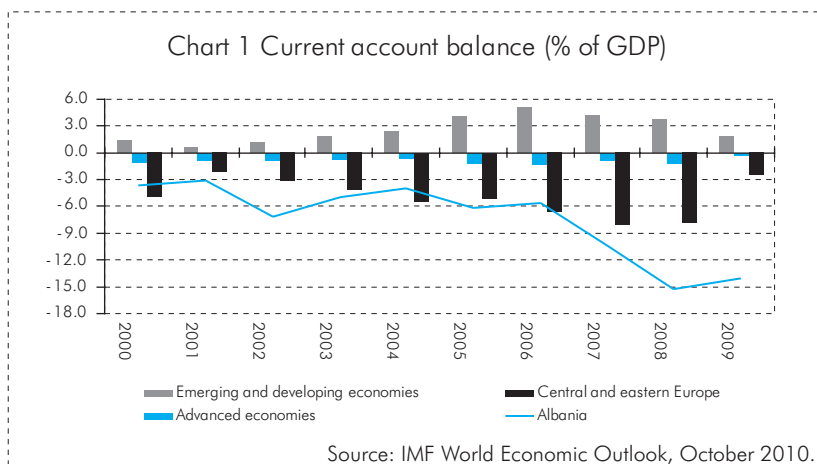
*Disclaim: Discussion Papers are considered as preliminary work that aim at stimulating debate and critical comments. Therefore, they express the views of the author and do not necessarily represent those of the Bank of Albania. I have benefited from invaluable comments by Altin Tanku, Erald Themeli and Eglent Kika (at the Bank of Albania), as well as from participants at the “4th Workshop on Economic Research in South-Eastern Europe”, organized by the Bank of Albania in November 2010.*



# 1. INTRODUCTION

The Albanian current account balance has deteriorated substantially in recent years. As a matter of fact, statistical figures indicate a widening of external deficit in double-digit levels during 2007-09, which are several percentage points above historical records, and also much higher than average figures for developing economies and countries in central and eastern Europe. For that reason, the deepening of current account deficit in Albania has raised questions whether its size can be explained by fundamental factors, or quick stabilizing measures are needed to bring it down.

About half of the current account deficit in the last decade has been covered by foreign direct investments. However, the external sector sustainability might face a hard time with gross foreign debt increasing from 23.6 percent in 2004 to 38.2 percent of GDP in 2009, and a fall in short-term debt coverage by reserves from 520 to 165 percent during the same period.<sup>1</sup> Further, the galloping year after year growth of bank loans in addition to recent increases in budget deficits call the attention to restrain or adjust the current account deficit.



<sup>1</sup> Source: The Bank of Albania's Balance of Payments Bulletin 2009, and author's calculations.

The performance of national savings and investments, divided into public and private sectors, gives the impression that large capital inflows in recent years have encouraged private consumption growth (by 6 percentage point of GDP) as well as public investment rise (about 2.5 pp). With the burden of principal and investment income payments rising quickly, improving the trade balance is essential to stabilize and reduce the external position in percent of GDP.

Assessing the sustainable or “normal” level of the external deficit serves, thus, as an additional measure among other indicators of financial stability to understand whether an external adjustment is necessary. One approach for assessing the current account norm is based on the Lane and Milesi-Ferretti’s (2006) accounting framework, in which external balance adjustment not only depends on the size of the external position and economic growth, but also on expectations about the rate of return on foreign assets and liabilities. A more sophisticated method for estimating the norm uses the econometric regressions on panel data to identify the long-run relationship between current account and its determinants.

Tanku, Ruçaj and Frashëri (2007) assess the current account sustainability in Albania by means of unit root testing. The authors adopt the procedure as proposed by Trehan and Walsh (1991), and Taylor (2002), and modify it to suit a developing country that is characterized by considerable inflows of remittances. After testing for stationarity in the current account during 1994 Q1 - 2006 Q4, TRF conclude that current account deficit in Albania is sustainable and does not call on drastic measures from monetary and financial policies.

This paper, relies on the two above-mentioned approaches, i.e. the accounting and empirical frameworks, to form a more realistic picture about the external position sustainability. The simple structure of the accounting framework makes its implications easily comprehensible. It also provides quick evaluation about the external balance sensitivity to output growth and a fall in the relative foreign debt return. While the evaluation derived from the accounting framework serves as a valuable benchmark,



econometric techniques rely on empirical regressions on various direct or indirect determinants of the current account, which are not necessarily restricted to the theoretical structure.

The assessment of the Albanian current account benchmarks according to these approaches suggests us that the deficit deepening in recent years is unsustainable. For that reason, this paper discusses in a compact section on the sacrifices that are needed should Albania undertake measures to adjust its deficit, and particularly the short-term implications for monetary and fiscal policies.

The paper is structured as follows. Section 2 briefly describes the accounting framework proposed by Lane and Milesi-Ferretti (2006), next it analyses the dynamics of external adjustment by means of sensitivity tests, and then makes projections about future trade and current account balances. Section 3 evaluates the current account benchmark using estimates from selected studies, which have paid particular attention to estimating these norms for the Eastern European economies. Section 4 tries to identify the factors that have led to deficit deterioration by estimating a model of the trade balance, with the aim of shedding light on the role of economic policies to bring down deficit. Section 5 provides the concluding remarks.

## 2. THE ACCOUNTING FRAMEWORK

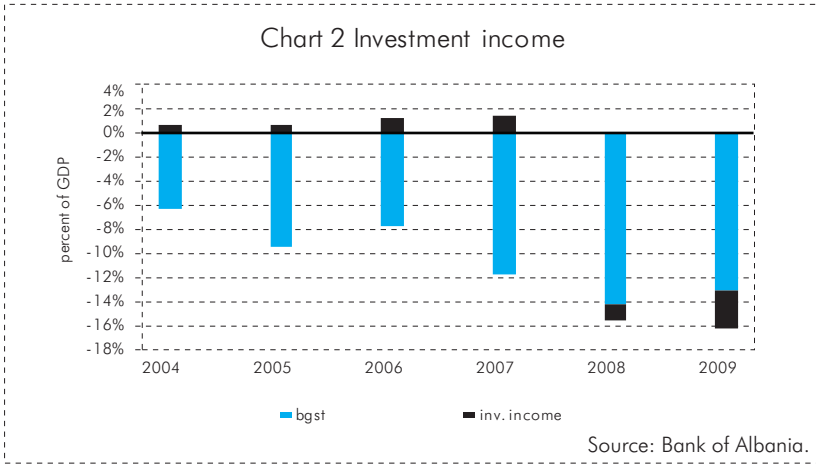
Based on Lane and Milesi-Ferretti (2006), the balance of payment identity at time  $t$  can be re-written to express the change in net foreign assets  $b$  as follows:

$$b_t - b_{t-1} = ca_t + k_t + kg_t + z_t - \frac{g_t + \pi_t}{(1 + g_t)(1 + \pi_t)} b_{t-1} \quad (1)$$

where  $b_t$  represents net foreign assets expressed in domestic currency.  $ca_t$ ,  $k_t$  and  $z_t$  are the current account, capital account, and errors and omissions, respectively.  $kg_t$  represent capital gains/losses on net foreign assets (including here the exchange rate revaluation effects), derived from changes in the stock of net foreign assets less net cross-border financial flows (including reserves). All indicators are deflated by GDP, hence expressed in small letters.  $g_t$  denotes real GDP growth, while symbol  $\pi_t$  indicates domestic inflation.

The last term in equation (1) can be used to make a rough computation about the required current account balance that would stabilize the external position of the economy. For instance, if a country is expected to have an annual nominal growth of 9 percent and its current account deficit stands at 6 percent of GDP, net foreign liabilities have to stabilize at about three-fourth of GDP (excluding capital transfers, capital gains and errors).

If the current account balance remains constant, increases in foreign liabilities will require an improvement of trade balance such that it can compensate for higher interest payments. Investment income component in Albania was shown positive during the period 2004-2007, and has since turned negative to the worsening of the current account deficit. As Chart 2 shows, the bulk of foreign deficit results from the negative balance of goods, services and current transfers (BGST).



Let us separate investment income item from the current account,

$$CA_t \equiv BGST_t + \underbrace{i_{At}A_{t-1} - i_{Lt}L_{t-1}}_{invest.income} \quad (2)$$

where the  $BGST_t$  term now consists of the remaining items in the current account.  $A$  and  $L$  are foreign assets and liabilities respectively, while  $i_A$  and  $i_L$  denote their nominal yields. Let us define  $K_{At}$  ( $K_{Lt}$ ) as the ratio of capital gains to foreign assets (liabilities) at the beginning of the period, such that  $K_{At}A_{t-1} - K_{Lt}L_{t-1} = KG_t$ . Then, the real rate of return on foreign assets (expressed in domestic currency) will equal  $r_{At} = \frac{1+i_{At}+K_{At}}{1+\pi_t} - 1$ , and in the same way we find the real rate of return on foreign liabilities  $r_{Lt}$ . By substituting equation (2) in (1), the latter can be rewritten as:

$$b_t - b_{t-1} \equiv bgst_t + \frac{r_{Lt} - g_t}{1 + g_t} b_{t-1} + \frac{r_{At} - r_{Lt}}{1 + g_t} a_{t-1} + k_t + z_t \quad (3)$$

The above structure reflects some important notions. The first term on the right-hand side shows that trade balance surplus improves the net external position. In the same way, if liabilities yield a return rate that exceeds economic growth ( $r > g$ ), net external position will again increase. In this case, a debtor country would need to improve its trade balance to ensure against everlasting liabilities to GDP. Lastly, differential rate of returns on foreign assets and liabilities ( $r_A - r_L$ ) would be important if financial integration is high.

Equation (3) can again be rewritten such that aggregates are splitted into their respective “debt (D)” and “equity (E)” (where E includes portfolio investment and FDIs):

$$b_t - b_{t-1} \equiv bgst_t + \frac{r_t^{EA} - g_t}{1 + g_t} a_{t-1}^E + \frac{r_t^{DA} - g_t}{1 + g_t} a_{t-1}^D - \frac{r_t^{EL} - g_t}{1 + g_t} l_{t-1}^E - \frac{r_t^{DL} - g_t}{1 + g_t} l_{t-1}^D + k_t + z_t \quad (4)$$

There are several factors that explain the differential in the rate of return between foreign assets and liabilities. The exchange rate is one of them and can often have considerable effects, which may be different depending on the net position. For a small developing country like Albania, foreign debt and external assets are typically denominated in foreign currency, while the investment item (incl. portfolio and FDI investment) in foreign liabilities are denominated in domestic currency. Exchange rate depreciation, in this case, can have negative implications the higher the external debt in foreign currency, but they can be positive if assets exceed debt.

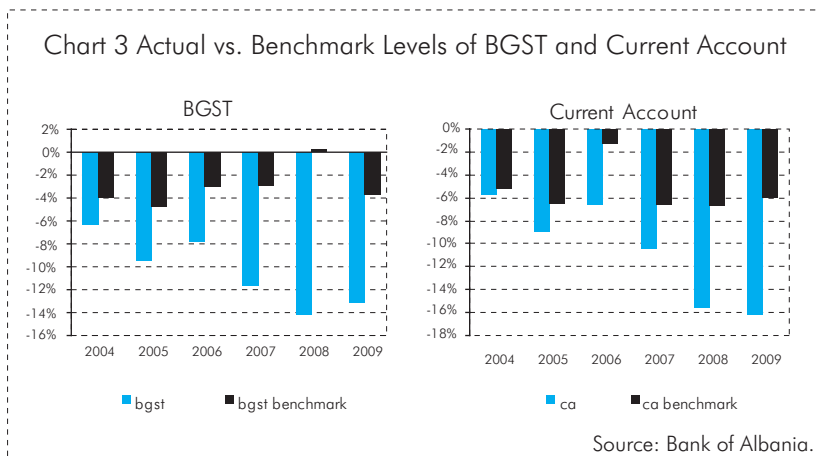
#### *Assessing the trade and current account norms*

In this subsection we attempt to assess a reasonable norm for the trade balance (including transfers and remittances) and current account in Albania, which would stabilize net external position. The domestic economy is assumed to grow at about 3.6 percent in the post-global financial crisis period. Considering the dominant role in the region, euro area data is taken as a proxy for the international economy. Other simplistic assumptions include: real average rate of return on debt assets ( $r^{DA}$ ) is equal to the real yield on two-year government bonds in the euro area; real rate of return on equity assets ( $r^{EA}$ ) is one percentage point higher than euro area growth; real rate of return on debt liabilities ( $r^{DL}$ ) is 1.5 percentage point above the return on debt assets, reflecting the default risk premium plus the exchange rate risk for Lek-denominated securities; finally, return on equity liabilities ( $r^{EL}$ ) is about one percentage point higher than domestic economic growth.

Net capital flows in the form of grants for investment in the public and private sectors amounted to around 1 percent of GDP during the period 2007- 2009, therefore this ratio is for simplicity projected to stay at this level in the analysis. Similarly, the errors

and omissions item is projected to retain its average ratio of 1.6 percent of output. Annual capital gains, on the other hand, are shown more volatile and thus are assumed to equal zero in the next period. Lastly, assets and liabilities in equation (4) are defined as stabilized at the previous year level ( $a_t = a_{t-1}$ ;  $l_t = l_{t-1}$ ). Also, to assess the trade ( $bgst^s$ ) and current account ( $ca^s$ ) balances in line with stabilized net foreign assets to GDP, it is assumed that  $b_t = b_{t-1} = b^s$ .

Chart 3 shows deviations of actual trade and current account deficits from their computed norms. The deterioration in the net external position in recent years seems to have been associated with substantial divergences from stabilizing norms of both, the trade balance (above 11pp) and the current account balance (around 9pp). Further, a glance at the chart suggests us that developments in the external position are more related to movements in the trade balance, implying that the necessary deficit correction should come from improvements in the latter.



### *The sensitivity of norms*

It is of interest to also assess the sensitivity of our computed norms if economic growth and the rate of return on debt instruments differ from the baseline levels. Table 1 presents the results for three optimistic scenarios in 2011. The first scenario gauges the

impact of a 1 percentage point reduction in debt returns. The second scenario tries to measure the effects of doubling economic growth to 6 percent, which is often perceived to be the potential domestic growth. The last scenario assesses the sensitivity of norms to simultaneous changes in previous scenarios.

The trade and current account balances appear to be negatively affected in our scenarios. If the difference in debt returns is narrowed by 1pp it will widen the trade deficit that would stabilize external position by 0.3% of GDP. The current account norm does not change in this case as evidenced from equation (1). Next, faster economic growth is shown to lower the current account norm by 0.77% of GDP and have a minor impact on that of trade deficit. Also, the combined shocks do not seem to considerably change the “normal” level of trade balance. This implies that the size of adjustment should be bigger to improve the external balance.

Table 1 Sensitivity of BGST and CA norms

Scenarios	Effects on BGST	Effects on CA
a) difference between debt returns narrows by 100 basis points	Negative, lowers BGST by 0.3% of GDP	No change (as in eq. 1)
b) domestic econ. growth rises from 3.6 to 6 percent	Negative, lowers BGST by 0.08% of GDP	Negative, lowers CA by 0.77% of GDP
c) both (a) and (b) happen simultaneously	Negative, lowers BGST by 0.3% of GDP	Negative, lowers CA by 0.77% of GDP

Apart from the sensitivity to initial assumptions it is relevant to gauge the response to changes in the exchange rate. With the exception of equity liabilities, the rest of net foreign assets in the small economies of the Eastern Europe are considered to be mostly denominated in foreign currencies. *Ceteris paribus*, a (sudden) change in the exchange rate by  $s$  percent would change the ratios  $a_t$  and  $l_t$  in equation (4) by  $v_{A_t} a_t s$  and  $v_{L_t} l_t s$ , respectively, where  $v_{A_t}$  ( $v_{L_t}$ ) is the ratio of foreign assets (liabilities) in foreign currency to total assets (liabilities). In this case, the net foreign asset position as a function of the new exchange rate would change by  $(v_{A_t} a_t - v_{L_t} l_t) s$  percent of GDP [i.e.,  $b_t(E^*) = b_t(E) + (v_{A_t} a_t - v_{L_t} l_t) s$ ].

The results indicate that trade and current account norms are hardly sensitive to foreign exchange movements. A (sudden) lek depreciation of 10 percent would worsen the external position by only 0.18% of GDP, while the reactions of  $ca_t$  and  $bgst_t$  norms appear more neutral (Table 2). The marginal sensitivity of these norms should not come as a surprise, if we recall that the size of debt liabilities is just above that of foreign assets.

Table 2 Effects of ten percent depreciation

	Net foreign assets	BGST	CA
Norm	-25.25	-2.15	-4.25
Exch. rate effect	-0.18	0.04	-0.01

Note: in percent of GDP.

It has been clear in the analysis that sustainability of net foreign assets  $b^s$  is a crucial factor for the assessment of trade and current account balances. Nevertheless, the choice for  $b^s$  is to some extent arbitrary, since in reality there is no explanation why an economy has to stabilize NFAs and components at the actual ratios, which in Albania are generally lower than in the Eastern European economies.

Table 3 presents the sensitivity of  $ca$  and  $bgst$  norms to various levels of foreign liabilities and their structural changes. The trade balance norm seems to be very responsive to the structural composition (scenario 1 vs. 3) and somewhat less to the external position level (scenario 1 vs. 2 and 4). On the other hand, the current account norm appears immune against structural changes, but reacts to different levels of external position.

Table 3 Sensitivity to alternative levels and structure of the net foreign assets

Scenarios	(1)	(2)	(3)	(4)
Equity assets	1	2	15	60
Debt assets	28	55	28	60
Equity liabilities	24	47	37	60
Debt liabilities	30	60	30	60
Net foreign assets	-25	-50	-25	0
Norms				
BGST	-2.1	-1.5	0.5	-0.7
CA	-4.2	-5.7	-4.2	-2.8

Note: all numbers are in percent of GDP.

Table 4 Composition of net external position (percent of GDP)

	2003	2004	2005	2006	2007	2008	2009
Net foreign assets	-4.6	-5.2	-7.6	-12.9	-16.6	-25.3	na
Equity assets	0.0	0.1	0.1	0.2	0.4	1.2	na
Debt assets (incl. reserves)	27.0	28.5	29.1	31.5	29.5	27.5	na
Equity liabilities	7.1	10.6	13.0	20.0	22.0	23.4	na
Debt liabilities	24.5	23.2	23.7	24.7	24.5	30.5	na
Real growth	5.8	5.7	5.7	5.4	6.1	7.7	3.3



### 3. THE EMPIRICAL FRAMEWORK

The current account (CA) is determined by the difference between national savings and investment. Therefore, the estimation of current account norm through econometric techniques uses a set of variables that influence the long-term savings and investment position. The current account has been considered in the empirical literature as smoothing consumption. For Nason and Rogers (2006), the current account deficit reflects expectations for increasing net output in the future, therefore in their model of the current account balance they focus on the variables that are useful for predicting net output changes. On the other side, the intertemporal approach proposed by Sachs (1981) and extended by many others treats the current account behaviour from the savings-investment perspective, where domestic consumption is smoothed across time by lending or borrowing from abroad.

To estimate the equilibrium, or the “normal/structural” current account level we can make use of econometric regressions with panel data, which use time series data for a large number of countries. Using a large database enables us to get better estimates for the long-run relationship between current account balances and economic fundamentals. In our analysis for Albania, we have borrowed the estimated parameters from other research studies undertaken in important institutions (including the parameters in the analysis of macroeconomic balance by the Consultative Group for Exchange Rates (CGER) at the IMF, and particularly from papers that were focused on the Eastern European economies.

Before presenting the empirical estimates generated by different authors, let’s take a look at expectations about the long-run relationship between the current account and its potential determinants, as are commonly assumed in the empirical literature.

*Fiscal balance.* Improvement in the government budget balance increases national savings and thus it is expected to have a positive impact on the current account. It is only in the case of full Ricardian equivalence – where private savings fully compensate changes in public savings – that the current account would not be affected

by fiscal balance developments. The impact of the latter depends on the ability of private sector to fulfil its liquidity needs. A more developed financial system and with few liquidity restraints would allow for more compensation of private savings, thus reducing fiscal effects on current account.

*Demographics.* Demographic indicators gain importance because of their influence on national savings. A higher percentage of inactive and economically dependent population lowers domestic savings and hence the current account. The impact of demographic changes is typically captured by the following three proxy variables: *population growth*, *the old age dependency ratio* (which in the case of Albania has been constructed as individuals above the age of 65 to those between 14-65), and the *young age dependency ratio* (constructed as young people (14-) to those between 14-65 years old).

*Net foreign assets (NFA)*, deflated by GDP. A country's wealth, approximated by the NFA level can affect current account in two opposite directions. On one side, relatively high NFAs allow for maintaining a substantial trade deficit without jeopardizing the country's solvency. On the other side, rising NFAs may imply higher income flows from abroad, which would improve the current account balance. The reaction of the latter would thus depend on the relative size of these effects, though empirical findings have often favoured the second view. The NFA variable enters the model with its value at the beginning of the period in order to avoid the possible causality from CA to NFA.

*Fuel balance*, in percent of GDP. Increases in fuel prices lead to the current account deterioration of a net fuel importing country, *ceteris paribus*, hence a positive relationship.

*Investment*, in percent of GDP. Higher investments often have an inverse relationship with the current account, since higher demand is usually associated with falling net exports.

*Income per capita.* Low income countries normally import physical and financial capital to build infrastructure and speed

up its economic convergence, which initially intensify their current account deficit. As the economy develops, income per capita grows and encourages current account improvement.

*Economic growth.* Real growth tends to worsen the CA balance if the country is growing faster than its trading partners that are at similar development stage and if growth is supported by foreign financing. In addition, if higher economic growth is perceived as permanent, households are likely to increase consumption to the detriment of savings.

*Financial integration,* measured as the sum of foreign assets and liabilities in percent of GDP. Some may argue that a developed financial system should encourage more savings. Others view that such a sophisticated system reflects credit restraints and has thus lower savings. In fact, there is no clear theoretical explanation for the impact of financial integration on domestic investment.

*Trade integration,* constructed as economic openness in percent of GDP. Again, the impact of this variable is ambiguous. Economic openness is typically used as a proxy of trade barriers, but it can also reflect foreign capital attractiveness to the domestic economy.

*Income per capita squared,* often enters the model to control for a possible nonlinear relationship between per capita income and current account. This variable is useful for a low income country that has limited access to foreign capital markets, as opposed to a more developed economy.

*Civil liberties.* Sound institutions, enforcement of law and well-functioning of markets should attract investments and facilitate access to international capital markets.

*Foreign direct investment (FDI),* measured as FDI inflows deflated by GDP. Growing FDIs are likely to enlarge imports, thus worsening the current account deficit.

*Remittances,* deflated by GDP. Money sent by emigrants often makes an important income source, which may be spent or saved.

The long-term relationship between current account and its fundamental determinants is estimated by econometric techniques that use panel data for a large number of countries consisting of advanced and developing economies. The large and diversified sample is likely to increase the accuracy of the current account model in the long run.

The model parameters for the purpose of our analysis have been derived from two recent studies by Rahman (2008) and Ca' Zorzi, Chudik and Dieppe (2009) (henceforth ZCD), who have focused their attention on the Central and Eastern European economies. Nevertheless, the elasticities and explanatory power of their models are similar to other findings on the current account determinants, such as IMF (2008), Chinn and Ito (2007), Chinn and Prasad (2003), and so on.

The database of regressions by ZCD consists of 172 countries with time series data since 1980, while Rahman includes 21 industrial and 38 developing countries with data during the period 1971-2006. To avoid the cycles and data fluctuations, the authors have used 4-year non-overlapping averages, which enable 4 observations for transition economies, whose statistical data start from the beginning of the 1990s. The filtration of short-term dynamics of the data in this way reduces the biasness that results from not taking into account the dynamics of individual countries, and enables the finding of longer-term links among variables by avoiding cyclical and temporal factors.

In fact, ZCD have done a huge empirical work in an attempt to include an optimal number of the current account determinants and testing at the same time for the sensitivity of parameters to various model specifications. This has comprised over 8000 different models, which have at the end been compared and selected on the basis of minimizing the problem of omitted variables, better parsimonious regressions, as well as pure statistical AIC and SBC criteria. Since there is the possibility that none of them might be true, the authors have applied the Bayesian estimation that deals with the problem of parameter and model uncertainty by attaching various probabilities to the models and then weighting them accordingly.

Table 5 Estimated elasticities from selected current account regressions

	(1)	(2)	(3)
Fiscal balance	0.290	0.230	0.220
Relative income	0.004	0.003	-0.006
Population growth	-0.729	-0.650	-0.630
Fuel balance	0.113	0.390	0.440
Initial NFA	0.038	0.023	0.028
Economic growth	0.055	-0.140	-0.179
Old age dependency	-0.049	-0.040	-0.040
Young age dependency	-0.074		
Investment	-0.148		
FDI inflow		-0.610	
Investment climate			-0.010
Civil liberties	0.007		
Openness	0.014		
Financial integration	0.001		
Relative income squared	0.001		
Adjusted R-squared		0.56	0.54
No. of observations	1512	246	246

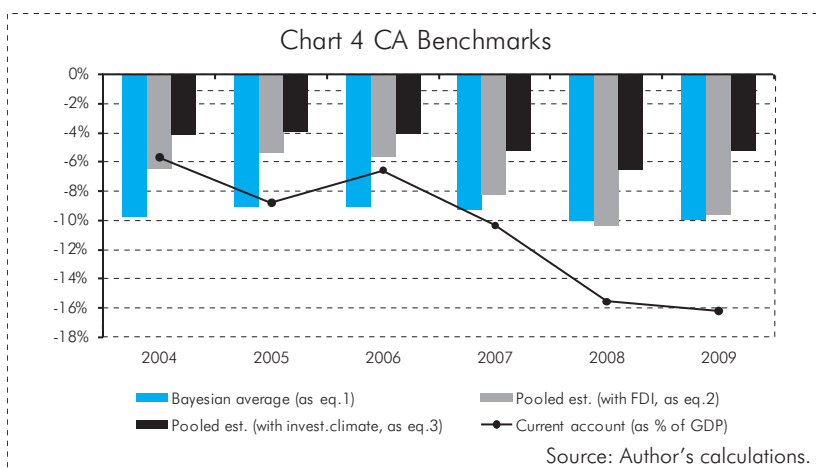
Notes: Coefficients in column (1) are based on Bayesian method, Table 11 in ZCD (2009); Coefficients in (2) are based on Pooled estimation, Table 4 in Rahman (2008); FDI in column (2) is replaced by investment climate; Pooled estimates on the 4-year non-overlapping averages. Robust estimates are reported in bold.

Table 5 shows the model parameters that were borrowed to calculate the current account norm for Albania, which have been generated by pooled OLS estimations. Column 1 contains the coefficients derived from the Bayesian method by ZCD (2009), based on 1512 observations. Whereas coefficients in the next two columns correspond to the findings by Rahman (2008), that were generated from two regressions specially built for 13 emerging European countries, in an effort to test for heterogeneity among these countries with similar economies in the rest of the world.

A quick view at the coefficients reveals that almost all common variables in the three equations have a clear positive or negative impact on the current account. The magnitude of the coefficients is also not so different (for instance, net foreign assets vary from 2.3% to 3.8%). However, relative income and particularly economic growth show nonconformity (forming a contrast from +5.5% to -17.9%), although it is only coefficients with negative sign (hence, in line with expectations) that are statistically significant.

Parameters before government budget and fuel balances are statistically significant and their magnitude suggests a sizeable link with the current account. Somewhat similar relationships are shown for domestic investment, foreign direct investment, and demographic factors. While civil liberties and economic openness have modest effects, financial integration seems to have a very limited explanatory power.

Applying the coefficients to the Albanian indicators, we can calculate the levels where the current account balance is heading to in the medium run. As it is shown in Chart 4, different models provide various norms for the current account equilibrium. The CA norm based on equation (3) parameters seems more conservative than the other two, maintaining an average ratio of minus 5% of GDP between 2004 and 2009. In comparison, the CA norm following the Bayesian estimates appears two times lower than the previous one and stands at around -10 percent of GDP. Equation (2), which involves the inflow of foreign direct investment, provides an unsteady equilibrium movement, where the CA deficit consistent with its fundamentals intensifies by -3.5 percent of GDP in recent years to reach the benchmark suggested by the Bayesian approach.



These benchmarks help us form an idea about the current account level that would be in harmony with its fundamental determinants. Actual CA balance has apparently been not so divergent till before

2007, while it has since then worsened and deviated by 5.5 to 9.5 percentage points from the benchmarks suggested by fundamental factors.

Table 6 displays the individual contribution of these factors. About half of the low benchmark as suggested by the Bayesian method (eq. 1) looks to be determined by domestic investments. Young age dependency, which is involved in this regression, is noted to have also played an important role. Similar to investment impact, the inclusion of FDI inflows has turned out to be an important factor in determining the current account norm as in equation (2). However, the contribution of net foreign assets is shown more limited and similar in all three equations. The fiscal balance performance accounts for a considerable contribution in all benchmarks, while fuel balance and economic growth show strong effects in equations (2) and (3). To summarize, the fall in the CA norms in recent years has been apparently led by developments in the government budget, international investment position, FDI inflows, and the fuel balance.

Table 6 Contributions to CA Benchmarks (percent of GDP)

Eq.	Year	Fis.	Rel. in.	Pop.	Fuel	NFA	Ec.	Old age	Yng. age	Inv.	FDI	Inv. Clim.	Civ. liber.	Open.	Fin. int.	R. in. sq.	Avg. CA Norm
(1)	04-07	-1.12	0.08	-0.29	-0.36	-0.24	0.29	-0.64	-2.89	-5.62			0.03	1.02	0.07	0.37	-9.3
	08-09	-1.82	0.09	-0.38	-0.50	-0.79	0.27	-0.68	-2.61	-5.42			0.03	1.17	0.08	0.50	-10.0
(2)	04-07	-0.88	0.06	-0.26	-1.25	-0.15	-0.74	-0.52			-2.69						-6.4
	08-09	-1.44	0.07	-0.34	-1.74	-0.48	-0.69	-0.56			-4.81						-10.0
(3)	04-07	-0.85	-0.12	-0.25	-1.41	-0.18	-0.95	-0.52				-0.04					-4.3
	08-09	-1.38	-0.13	-0.33	-1.96	-0.58	-0.88	-0.56				-0.04					-5.9

Note: Contributions to the CA norms are calculated as average value of the variable multiplied by coefficients in Table 5.

## 4. TRADE BALANCE RESPONSIVENESS TO LIQUIDITY AND POLICY IMPLICATIONS

The previous sections on trade and current account benchmarks pointed to a considerable divergence of actual deficits from their structural levels. They could continue to remain at such large negative values in the future and thus create abnormal imbalances if not kept under control. For that purpose, it is important to identify the factors that might have caused the external balance deviation, in search of shedding light on the efficacy of economic policies on reducing external deficit.

The selected coefficients from different studies in the section on empirical framework show the elasticities of current account with regard to the long-term determinants of savings and investment, which were generated using panel data regressions that involved developing and regional economies. These elasticities were used to form an idea about the sustainable level of current account in Albania. But in reality, actual CA balance might deviate from its estimated benchmarks, due to cyclical and short-term factors, as well as the structure and economic policies that might affect domestic exports but not necessarily savings and investment.

The size of the external deficit primarily reflects the unsatisfactory performance of national savings, but its deterioration in recent years suggests it may be driven by the credit boom in the second half of the past decade (Table 7). In the period 2001-2004, annual growth of bank credit to households and enterprises averaged 0.8 percent of GDP, while their cumulative growth in the five subsequent years was 7.8 and 14.1 percent of GDP, respectively. The credit surge, especially to private enterprises, should have encouraged the expansion of exports and demand for foreign goods and services. Albanian exports and domestic demand for imports grew on average 1.5 to 2 times faster from the mid-2000s till the time of global financial crisis, whose contagious nature affected the Albanian foreign trade in 2009.



The fiscal stance, in addition, appears to often influence the external sector performance. The gradual consolidation of government budget in the first half of the past decade and fiscal relaxation in recent years have been associated initially with positive, and lately with negative developments in the current account. In other years, this relationship might have been eclipsed by rapid credit growth, which has largely surpassed changes in the fiscal balance.

Table 7 Selected Economic Indicators

	2001	2002	2003	2004	2005	2006	2007	2008	2009
	percent of GDP, unless otherwise indicated								
Trade Balance (G&S)	-23.0	-26.1	-24.7	-22.3	-24.6	-23.6	-26.7	-26.7	-25.2
Current Account	-7.4	-9.5	-6.9	-5.8	-9.0	-6.6	-10.6	-15.5	-15.5
Investment	38.4	37.9	40.5	37.2	37.0	39.0	38.7	38.2	38.5
Gross national savings	31.0	28.4	33.6	31.4	28.0	32.4	28.1	22.7	23.0
Credit to private sector	4.8	6.2	7.3	9.3	15.7	22.4	29.8	35.4	37.6
Fiscal balance	-6.9	-6.1	-4.9	-5.1	-3.5	-3.3	-3.5	-5.5	-6.9
Real GDP growth (%)	7.9	4.2	5.8	5.7	5.5	5.4	5.1	8.1	3.3

Source: Instat, the Bank of Albania and staff estimates.

The recent negative external deficit in Albania is substantially away from normal ratios that were evaluated in the previous sections. In future, the Albanian economy will face the challenge of being able to reduce its deficit toward sustainable levels without jeopardizing growth and employment. If investment behaviour is shown more balanced and does not seem to have led to external balance divergence from norms, the medium-term policies should then focus on restructuring the private sector with the intention to increase national savings and turning the country in a more attractive destination for export-oriented FDIs. In the meanwhile, short-term economic policies should aim at keeping demand under control, so that negative balance with the rest of the world does not increase abnormally.

In this regard, fiscal and monetary policies should be harmonized and calibrated on the basis of their efficacy to control domestic demand. Next, our analysis will attempt to arrive at a trade-off between the size of fiscal contraction and credit growth restraint.

Because the bulk of current account deficit resulted from negative trade balance, our attention will focus on identifying the link between fiscal and credit developments and the trade balance movements.

For this purpose, we have estimated an empirical model for trade balance, along the lines of Kanda's (2006) model for Bosnia and Herzegovina. The static general equilibrium approach used by Kanda (2006) to identify the variables of interest and their impact on trade balance is an adaptation of the liquidity effect model as developed by Lucas (1990), Fuerst (1992), and Christiano & Eichenbaum (1995). In this model framework, a small open economy is represented by a household comprising four agents – a consumer, a firm, a bank, and the government – who is endowed with a fixed amount of capital and loanable funds, but may also receive grants and aid from abroad. The consumer owns the capital stock, while financial funds and aid are used by the bank. The firm rents capital from the consumer, and both of them purchase local and imported goods. On the other hand, the government relies on income taxes from the consumer but also transfers income to the latter. At the end of the period, the household pools all the resources again in a common place and pays debts. Another assumption in this framework is that exported and imported goods are imperfect substitutes, and the domestic economy is so small that its export and import prices are determined by foreign trading partners in foreign currency.

The trade balance (TB) is estimated in a reduced-form model as a linear function of bank credit flows to private enterprises (CFE), credit flows to households (CFH), fiscal income (FR), fiscal expenditure (FE), terms of trade (TOT), and capital stock (CAP). The GMM method is employed to control for possible effects of endogeneity among the variables. To capture the data dynamics, the explanatory variables have initially entered the model with several time lags, while statistically insignificant regressors were eventually removed. The final equation was specified as follows:

$$TB_t = CFE_{t-1} + CFH_{t-1} + FR_{t-4} + FE_t + TOT_t + CAP_{t-1} + c + s_1 + s_2 + s_3$$

and instrumental variables include

$CFE_{t-1} + CFH_{t-1} + FR_{t-4} + FE_{t-2} + FE_{t-3} + TOT_t + PFUEL_t + EUR_{t-3} + CAP_{t-1} + c + s_1 + s_2 + s_3$ , where PFUEL represents fuel prices, EUR is the lek/euro exchange rate, whereas  $c$  and  $s_1, s_2, s_3$  are the constant term and seasonal dummies, respectively.

Credit to households and fiscal expansion are expected to have a negative influence on trade balance. On the other hand, the net impact of credit to enterprises is ambiguous as it may give rise to export supply as well as demand for imported intermediate goods and services. A priori, better terms of trade are likely to improve the external trade balance, but in reality, the response will depend on the price elasticity of exports and imports and the export dependency to imported inputs. In the same way, growth of capital stock may foster both export supply and import demand.

Our econometric analysis covers the 2001Q1:2010Q3 period. The ADF test for unit roots indicates that all variables are integrated of order one  $I(1)$  (except CAP that is  $I(2)$ ), therefore they enter the equation in first differences.

The regression results in Table 8 show that all variables are statistically significant and have the expected sign. Our model specification seems to explain to a high degree developments in the balance of goods and services.<sup>2</sup> The test of overidentifying restrictions suggests that instrumental variables are exogenous, so the model does not suffer from problems of misspecifications. The good model fit is reinforced by its satisfactory performance in predicting the trade balance. For the last four quarters in the sample, the mean absolute percent error (MAPE) indicator was 2.8% of actual values. The Theil inequality coefficient (which falls between 0 and 1, with zero indicating a precise forecast) was only 0.017, and its ratios of biasness (0.116), variance (0.330), and covariance (0.553) point out the good predictive ability of the model to forecast the mean and variance of net exports.

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<sup>2</sup> Various estimations that used the real effective exchange rate as an explanatory variable instead of terms of trade showed similar responses with regard to policy related indicators.

Table 8 Regression Results (2001Q1:2010Q3)

Dependent variable: d(Trade Balance)	
Variables	GMM Coef.
C	-14453.5***
d(Credit flow to enterprises (t-1))	-0.7560***
d(Credit flow to households (t-1))	-1.3970***
d(Fiscal expenditure)	-0.2513**
d(Fiscal revenue (t-4))	1.1565***
d(Terms of trade)	461755***
d(Capital stock growth (t-1))	1.2190***

Adj. R<sup>2</sup>: 0.74

Test of overidentifying restrictions (Chi2 p-value,3df): 0.61

No. of observations after adjustment: 39

Note: \*\*\*, \*\* and \* imply statistical significance at 1%, 5% and 10% respectively.

The estimated parameters in Table 8 suggest that credit flows to households have a larger negative impact on trade balance than that of lending to enterprises. This draws the inference that the restriction of monetary policy for that reason would be more effective if it targets credit growth to households rather than enterprises.

The model also suggests that net exports are more responsive to bank credit growth than to government spending performance. The weaker link between fiscal and trade deficit prioritizes credit restriction as a more preferable policy to adjust the external trade imbalance. To manifest the relative strength of fiscal and monetary policies the estimated regression is employed to make the 2011 forecasts for net exports. Assuming that the tax burden is already high, we rely on government spending cutback as the only fiscal policy option. On the other hand, effects of bank loans are evaluated in total, and by retaining the same proportions of lending to households and enterprises as they were in the last two years. The obtained results show that a fiscal expenditure curtailment by 1 percent of GDP leads to balance of trade improvement by 0.25 percent of output. In comparison, a contraction of bank credit flows of 1 percent of GDP is expected to shrink the trade deficit in 2011 by 1.28 percent of GDP. Obviously, the credit tightening policy looks more effective in terms of its magnitude and timeliness.

Nevertheless, the monetary policy power might be mitigated in the face of capital account liberalization and the prevalence of foreign banks in Albania. The latter often maintain excess liquidity reserves and can also access ample liquidity funds from their parents. The administrative measures, such as capital controls, raising the required reserves, credit ceilings, etc, are generally thought of as undesirable. Not only it would revert the financial liberalization process to date, but also the efficacy of such policies is mixed, as the experience in many countries has shown. At the best, they would control credit growth in the short run, whereas the longer-term effects would be more limited and distort the financial market. Consequently, to avoid their undesirable and side effects, the administrative measures can only be temporary (Hilbers et al., 2005). In the same way, the prudential and supervisory measures – such as the eligible criteria for credit restrictions (e.g. loan-to-value and debt-to-income ratios), the guide to adequate bank margins in loan decision making, restriction for foreign currency loans to borrowers with income in foreign currency or those well-hedged, the rules on credit concentration in certain sectors or risk in certain credit categories (e.g. households vs. enterprises and mortgage vs. consumer loans) and so forth – might aid in slowing down credit growth, but to achieve that monetary/fiscal policy actions should first be wise and cautious.

On that account, a large duty in the short run falls also on prudent fiscal policies, which through their impact on national savings should help contain the external deficit. A discreet fiscal stance should additionally take into account all the supportive policies that may have led to the high credit demand (like subvening the interest rates or state warrants for mortgage loans), with the intention to get rid of the factors that may create excess borrowing.

In the longer run, however, bringing deficit back to norms would require profound structural reforms in the tradable sector. The role of exports in this respect would double in order to overcome the pressing for higher imports that come from improved income and wage pressures, in spite of sluggish credit and investment.

## 5. CONCLUDING REMARKS

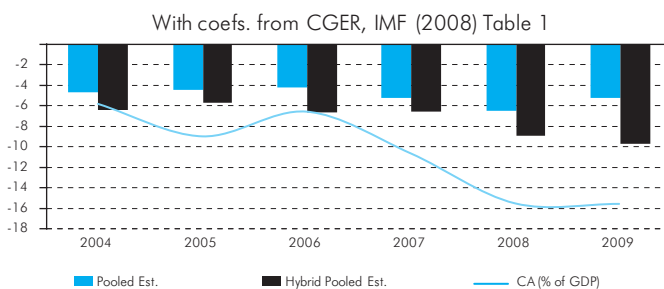
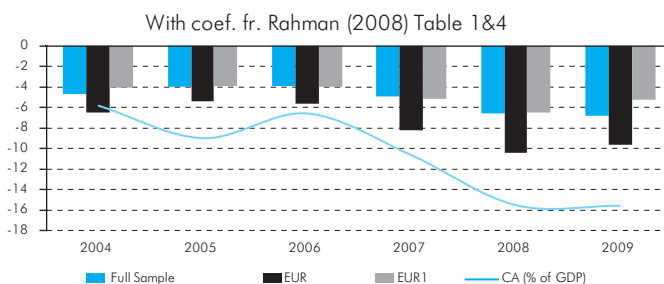
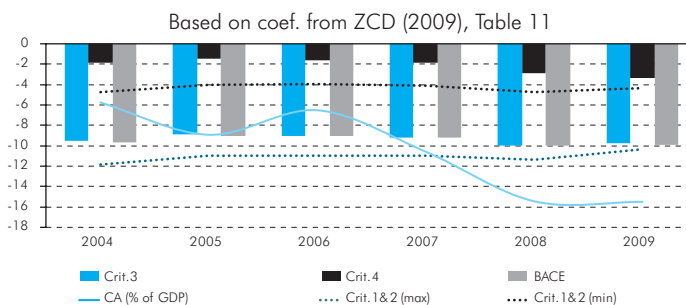
In the past decade, Albania has experienced relatively high growth rates that were often, particularly in recent years, associated with worsening of the external sector deficit and large capital inflows. The evaluated trade and current account benchmarks in this paper signal that actual levels of the deficits are unsustainable and their adjustment will be pressing in the medium term.

To form an idea about the current account equilibrium, we have applied two alternative methods, which are the external sustainability approach and the structural current account approach. Of course, none of them is complete as each has its own conceptual difficulties. The CA norm determined in the first method is particularly affected by the normative choice of net external liabilities. On the other hand, the second approach that applies panel data regressions is sensitive to model selection (Chart 5). As Ca'Zorzi et al. show through numerous empirical estimations, uncertainty from model selection according to different criteria is quite high. The authors find that not all coefficients are consistent with ex-ante expectations, and in addition to that important country specific factors may not be captured by a generalized model. Bearing in mind the difficulties that come from the respective assumptions and measurements of these methods, the prescript for the size of deficit adjustment toward evaluated norms should be reticent and circumspect.

Despite these, the difficulties with estimating CA norms do not make them ineffective: by all assessments, the years in 2007-2009 evidence considerable deficit divergence from normal levels. The recent strong increase in consumption, supported by the credit boom, seems to be the catalyst of the deficit exacerbation. If the Albanian economy is to reflect on improving its external balance, it will need to start sacrificing its aggregate demand, especially in the short run. Monetary policy actions could take the lead to lend a hand in this respect. However, if one considers the uncertainties connected with its administrative and prudential measures to target credit growth, it is necessary that prudent fiscal policies assume a sizeable burden of demand restraint. But having said that, in the medium term domestic economy needs to embark upon intense

restructuring or largely reorient its resources intending to improve national savings and promote exports.

Chart 5 Sensitivity of CA norms to various model specifications



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