

## THE STRUCTURAL DEFICIT – A NEW MEASURE FOR FISCAL DISCIPLINE IN THE EURO AREA

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### **Abstract:**

*The aim of this paper is to assess the importance of the new limit for the government deficit in order to improve fiscal discipline in the Economic and Monetary Union in Europe. Since the introduction of the single currency there have been debates regarding the lack of fiscal integration. The monetary integration process triggered the centralization of monetary policies while the fiscal policies remained at national level. Although the member states of the euro area were subject to restrictions imposed by the Stability and Growth Pact in order to provide an assurance against asymmetric shocks, the recent financial crisis revealed high levels of public deficits. Thus, the measures were not enough to establish an environment of fiscal discipline in the currency area and the currency area proved to be suboptimal. Therefore, new limits were imposed through the Treaty of Stability, Coordination and Governance in the Economic and Monetary Union. This study will provide a clear understanding of the concept of structural deficit, measures used to quantify it and the shortcomings of this indicator. Furthermore, it will show that, despite the limits of the indicator, it represents an improvement in achieving stability in the euro area.*

**Key words:** structural deficit, one-off measures, convergence, fiscal indiscipline, optimality

**JEL classification:** H62, H86, F36

### **INTRODUCTION**

The optimum currency area theory states that, in order to benefit from joining a currency area, the member states have to fulfill certain criteria. One of these criteria, qualified as a political criterion, refers to fiscal integration. According to Mongelli, fiscal integration has three dimensions: the degree of fiscal convergence, the capacity to act as a shock absorber through fiscal stabilizers and the public risk sharing facility (Mongelli, 2002). While the dimension referring to fiscal transfers was never satisfied in the euro area, the other two criteria should have been fulfilled as a result of the existence of the Stability and Growth Pact. The recent financial crisis clearly demonstrated the fact that provisions of the previously mentioned pact were not enough to assure fiscal convergence and financial stability.

The existence of high levels of debt and deficits in several member states of the Economic and Monetary Union in Europe, like Portugal, Ireland, Greece and Spain, is seen as a threat to the survival and the stability of the single currency. Therefore, the euro area is not an optimum currency area and this situation recalls for new measures that can re-establish the trust in the fiscal discipline in Europe.

The lack of fiscal integration clearly suggested the necessity of promoting more precautions economic policies in times of economic expansion, acting for preventing the accumulation of imbalances. This behavior provides the incentives for creating safety measures that will allow an adequate reaction to significant negative shocks.

On 1 January 2013, the European leaders agreed that The Treaty of Stability, Coordination and Governance in the Economic and Monetary Union should enter into force. Also named *the new budgetary pact*, *fiscal compact* or *the agreement upon budgetary stability*, the treaty was signed at 2 March 2012, at the Reunion of the European Council, by 25 member countries, except the United Kingdom and Czech Republic. The new elements brought by the treaty mainly refer to *targeting the structural deficit* and *anchoring the commitment to fiscal discipline in the national legislation*.

The articles 3 and 4 of the treaty establish rules for the fiscal policy in the Economic and Monetary Union. In order to ensure sound public finances, the member states must fulfill the following requirements (TSCG, 2012):

- country-specific medium-term budgetary conditions;
- a limit of 0,5% of GDP at market prices for the structural deficit;
- surpassing the 60% limit of GDP for the public debt triggers a reduction of the debt by 0.5 every year.

The aforementioned rules allow exceptional measures. The latter refer to an unusual event that cannot be controlled by the contracting party and which has a major influence upon the financial position of the public administration or times of major economic recession, with the condition that the temporary deviation of the contracting part does not alter the fiscal sustainability on medium term.

A state's decision regarding whether or not to ratify the Treaty on Stability, Coordination and Governance should take into consideration that fact that it represents a necessary condition in order to benefit from financial assistance in the framework of the new programs under the European Stability Mechanism.

## **DATA AND METHODOLOGY**

One of the most debated measures introduced by the fiscal compact refers to the new limit for the structural deficit. Although the limit is clear, there are several problems regarding the conceptual framework of the indicator, the methodologies used in order to estimate it and the differences in estimations made by some international institutions.

The problems related to quantifying the structural budget deficit are not new. A study conducted by the Deutsche Bundesbank in 1997 provides a detailed assessment of the problems associated with calculating structural budget deficits. Recently, establishing a limit regarding the structural component of the government budget balance for the European countries led to a strong interest in assessing the empirical issues related to this restriction. The studies of Sawyer (2011), McArdle (2012), Reiss (2013) offer a critical assessment of the measure referring to the structural budget balance. Therefore, we consider that it is very important to provide a clear understanding of the structural deficit and its practical shortcomings.

First, we will define the concept and the elements used for its estimation.

The rest of the paper will focus on estimation techniques and various critics brought to them. In order to highlight the differences between the estimations of the structural deficit, we use the most recent data provided by the European Commission and the International Monetary Fund in various reports such as the European Economy and the World Economic Outlook.

## **STRUCTURAL BUDGET DEFICIT: CONCEPTUAL FRAMEWORK**

The introduction of the restrictions regarding the structural deficit in the new fiscal treaty has triggered a number of debates regarding its definition and the methods used to quantifying it. Furthermore, it is important to state that the notion of structural deficit is not new, the interest for this concept dating back to the 1930.

The structural deficit represents a fundamental indicator for nominal convergence, through reflecting how the public finances are administrated. Taking into consideration that some of the euro area member states have exceeded the 3% of GDP limit for the government's deficit, as a result of inappropriate public finances management, it has been decided to monitor a new indicator – the structural deficit.

A low level of government deficit or even a government surplus can hide the existence of high imbalances. This is the case when the budget balance is the result of a favorable conjuncture - high public revenues accumulated during economic expansion.

Therefore, the consolidated government deficit does not represent an appropriate indicator for evaluating the fiscal policy. It reflects both the influence of permanent factors and transitory ones, without allowing us to distinguish among them. In order to determine if the deficit or the surplus is temporary and cyclical or permanent and structural, the economists have developed the concepts of structural budget deficit and surplus and cyclical budget deficit and surplus.

The structural deficit represents the permanent component of the budget deficit. The permanent factors that influence the government deficit refer to stable elements of the public expenditures and revenues. Stable flows of expenditures and revenues are those that prevail under normal conditions, in the absence of external shocks, when the economy operates at its potential level, compatible with a low and stable inflation.

The notion of structural budget position is problematic in that it requires assumptions to be made on the level of potential output and its future path, and on the underlying structural savings and investment functions, which at best can only be assessed for the past but not for the future. (Sawyer, 2011).

The structural deficit can also be considered as the discretionary deficit of the public sector since it represents the result of the decisions taken by the government. Thus, the structural deficit reflects the fiscal position of the government. It indicates if the government's intention is to use the budget for extending the economic activity or to restrain the economic activity.

Therefore, the structural balance is used as an indicator of discretionary changes in fiscal policy - those evolutions due to adopted fiscal policies and not to the economic environment. The structural balance can be used to answer the following question: "how much of the changes in fiscal policies can be explained by the economic conditions and how much by the fiscal policies decisions?" (Isărescu, 2010).

Furthermore, the structural balance has the following practical application:

- serves at evaluating fiscal sustainability;
- allows the evaluation of the impact of fiscal policy on aggregate demand – quantifying the fiscal impulse;
- represents a normative indicator.

Cyclical budget deficit represents the temporary component of the budget deficit, influenced by the economic cycle. Also, this indicator represents the result of the difference between the actual production and the potential one. Fiscal revenues tend to decrease in recession and to increase during expansion. Contrarily, on the expenditures side, the increase appears in recession and the decrease during expansion. For example, the social transfers, especially the expenditures with unemployment benefits, tend to increase in times of recession and to decrease in periods of sustained economic growth. A cyclical surplus or deficit disappears when the economy moves back to full employment. The elimination of the structural deficit or surplus requires the government's action.

Estimating the structural deficit allows separating the permanent influences and the temporary ones from the government deficit and the evaluation of medium term orientation of the fiscal policy. Although there are numerous methodologies of determining the structural balance, all imply in essence the quantification of the excess/deficit in demand and the sensitivity of budget revenue and expenditures according to that. The structural balance is obtained after eliminating this component from the budget balance.

Another problem related to the concept of structural deficit is the simultaneously use of the term adjusted cyclical deficit. We consider that this approach is incorrect since the structural deficit requires the elimination of the cyclical component and also of the one-off and temporary measures. Therefore, the structural annual balance of public administration is the adjusted annual balance except the extraordinary measures and the temporary ones (Mourre et al., 2012).

Estimating the structural budget deficit requires the following stages:

- identifying and eliminating the one-off and temporary measures. Significant and non-recurrent measures can distort the analysis of fiscal position and must be excluded from the structural balance estimations;

- assessing the impact of the economic cycle on revenues and expenditures. The estimation of the cyclical component can be achieved through the aggregate method or through the disaggregate one.

- estimating the effects of other economic factors, like those related to raw materials. (Bornhorts et al., 2011)

The necessary elements for estimating structural deficit through the previously mentioned method are presented in *table no 1*. These values are determined by the European Commission and help determine the structural balance as GDP share for euro area countries during 2008-2013.

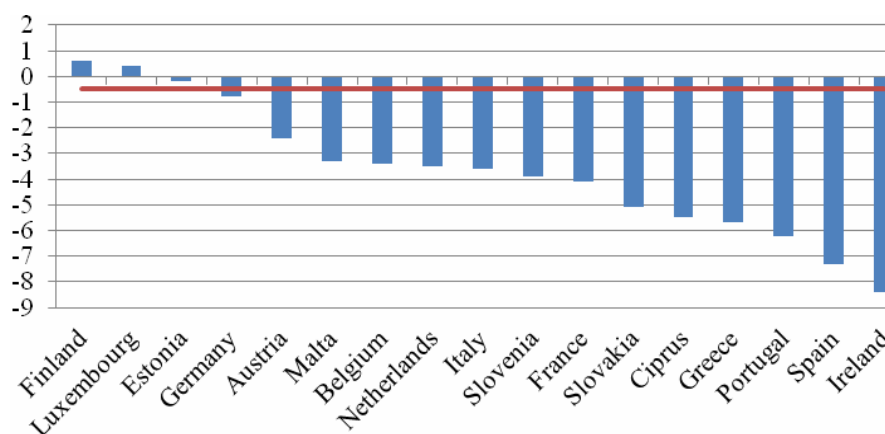
**Table no. 1. The general government budget balance for euro area countries (% of GDP)**

|                                       | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------------------------------|------|------|------|------|------|------|
| Total revenues (1)                    | 45.0 | 44.8 | 44.7 | 45.3 | 46.2 | 46.1 |
| Total expenditure (2)                 | 47.1 | 51.2 | 51.0 | 49.4 | 49.4 | 49.0 |
| Actual balance (3) = (1) – (2)        | -2.1 | -6.4 | -6.2 | -4.1 | -3.2 | -2.9 |
| Interest (4)                          | 3.0  | 2.9  | 2.8  | 3.1  | 3.2  | 3.2  |
| Primary balance (5) = (3) + (4)       | 0.9  | -3.5 | -3.4 | -1.1 | 0.0  | 0.3  |
| One-off measures (6)                  | -0.1 | 0.0  | -0.7 | 0.1  | 0.1  | 0.0  |
| Cyclically adjusted balance (7)       | -2.9 | -4.6 | -5.1 | -3.3 | -2.0 | -1.8 |
| Structural budget balance = (7) – (6) | -2.8 | -4.6 | -4.4 | -3.4 | -2.1 | -1.9 |
| Changes in actual balance:            |      |      |      |      |      |      |
| - cycle                               | -0.6 | -2.4 | -0.1 | 1.1  | -0.4 | 0.1  |
| - interest                            | 0.1  | -0.2 | -0.1 | 0.2  | 0.2  | 0.0  |
| - one-off measures                    | -0.1 | 0.0  | -0.6 | 0.8  | 0.0  | -0.1 |
| - structural budget balance           | -0.8 | -1.8 | 0.2  | 1.0  | 1.3  | 0.2  |

Source: European Commission (2012), *Report on public finances in EMU*, ([http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2012/pdf/ee-2012-4.pdf](http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-4.pdf)), p. 17

During 2008-2013, the structural deficit for the euro area was higher than the limit of 0.5% of GDP (table no. 1). This evolution can be explained by the major differences that appear in the situations of public finances for the member states. Countries like Ireland, Greece and Spain faced large levels of government deficit as a percentage of GDP.

In 2011, the European Commission's estimations of the structural deficits as a percent of GDP for every member state of the Economic and Monetary Union in Europe indicate very heterogeneous results between them (figure no. 1). The comparison indicates that only three of the member states fulfill the rule of 0.5% of GDP for the structural deficit.



**Figure no. 1. European Commission's estimations of the structural deficit for the euro area countries in 2011**

Source: European Commission (2012), *European Economy*, ([http://ec.europa.eu/economyfinance/publications/european\\_economy/2012/index\\_en.htm](http://ec.europa.eu/economyfinance/publications/european_economy/2012/index_en.htm))

Taking into consideration the fact that the structural deficit is determined by eliminating the cyclical components and the influences of the temporary and the one-off measures from the consolidated budget balance, we consider appropriate to provide a clear definition of those elements.

#### *Automatic stabilizers*

The income tax, value added tax, excise depend on the economic cycle of the economy. Also, some expenditure like employment benefits, compensations and other public benefits are influenced by the economic cycle.

The aforementioned revenues and expenditures contribute to smoothen the economic cycle. If the economy is in the recession phase, the reducing of public revenue will contribute to reducing the aggregate demand in the economy. During expansion, the revenues from the corporate income tax are rising; the income tax raises the aggregate demand.

The structural deficit is the position where the previously factors register a normal level. Automatic stabilizers increase the deficit in recession and reduce it in times of economic boom.

#### *One-off and temporary measure*

These measures are not related to changes in the economic environment, being the result of discretionary decisions of the fiscal authorities. One-off measures and temporary ones have a transitory effect that does not lead to a sustained change in the budgetary position.

In practice, despite a definition commonly agreed, there is not a common agreement upon identifying the one-off and temporary measures (The European Commission, 2006, p.114). This view is also shared by Bornhost et al. (2011, p. 30) that state in their guideline for calculating structural fiscal balances that, "While it seems straightforward, there are no universally accepted criteria for identifying one-off or temporary fiscal measures".

Excepting the obvious cases, like UMTS licenses, each measure has to be assessed individually, fact that has created debates. Some of the best known examples are: tax amnesties, sales of non-financial assets, exceptional revenues linked to the transfer of pensions obligations (European Commission, 2009).

### **ANALISYS OF THE METHODOLOGIES USED FOR ESTIMATING THE STRUCTURAL DEFICIT AND THEIR SHORTCOMINGS**

The literature in the field recommends two approaches for quantifying the structural deficit, namely:

- estimating the cyclically-adjusted measures of expenditures and revenues directly through a regression equation.

- estimating the structural deficit through a method that requires two stages: first the cyclical component of the government deficit is determined and then it is subtracted from the total deficit in order to calculate the structural component. This approach is used by the European Commission, the International Monetary Fund, the European Central Bank and the OECD. This requires a measure of the cyclical position of the economy and its connection with the budget components (elasticity).

According to the aforementioned methodology, the structural components of the budget are obtained by extracting the cyclical component from the current budget, using the following formula (European Commission, 2009):

$$CAB_t = B_t - B_t^c = B_t - \sum_j B_{t,j}^c$$

Where,

$CAB_t$  – the structural components of the budget (cyclically adjusted component)

$B_t$  – government deficit;

$B_{t,j}^c$  – cyclical components of the budget on revenues and expenditure categories

The cyclical component of each category of revenues and expenditure is by using the output gap and the estimated elasticity to DGP. The formula for estimating the cyclical component is:

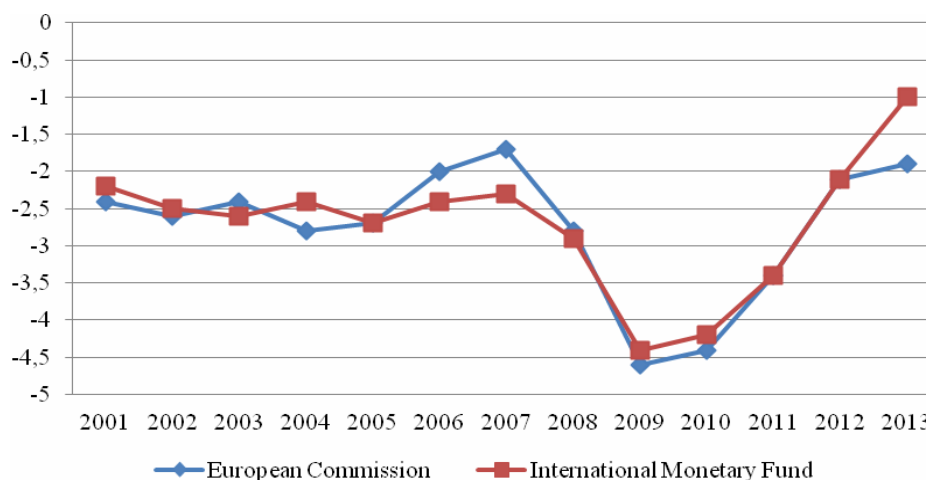
$$BC_j = B_{c,j} \times \alpha_j^{PIB} \times output_{gap}_t$$

This method of estimating the government deficit should be used by all member states of the European Union in order to obtain comparable results.

Measuring government's performance, as it is indicated by the structural deficit, depends crucially on the trust in estimating the cyclical deficit. Taking into consideration the numerous problems in measuring the cyclical deficit, the structural deficit should not represent a reliable measure of government's fiscal position or of the fiscal performance in general. (Snowdon and Vane, 2002) Thus, despite a clear definition that allows the delimitation of the government balance in structural and cyclical components, the methods of estimating the structural deficit are not easy. The most important difficulties are related to identifying the right measure for the cyclical measures, the temporary and the one-off measures and to estimate the output gap. Measuring the structural deficit is a contested field, both conceptually and empirically. The errors from estimating the structural deficit are high.

The problems related to quantifying the structural budget deficits were also emphasized in previous studies that showed how the methodological and statistical difficulties entailed in calculating structural deficits have far led to very diverse results and interpretations. (Deutsche Bundesbank, 1997)

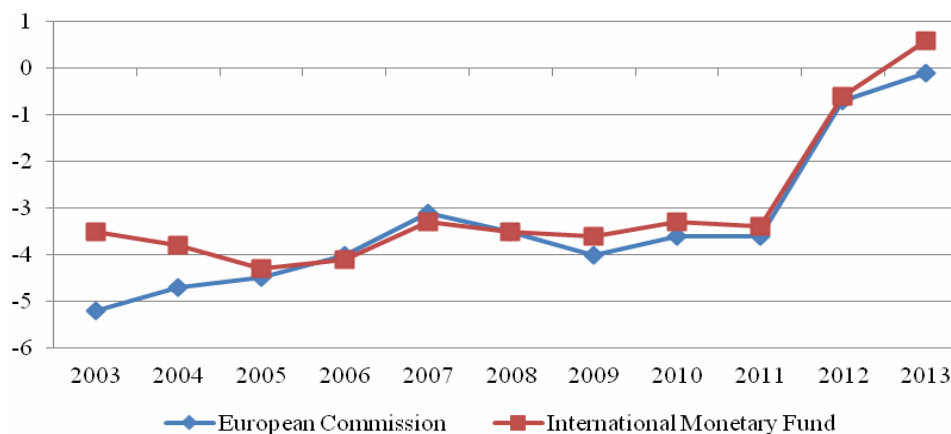
Although they use similar methodologies, the estimations made by the departments of statistics of the International Monetary Fund and of the European Commission are not always the same. In 2007, there was a gap of 0.5% between the estimations of both agencies for the structural deficit in the euro area (figure no. 2).



**Figure no. 2 The structural deficit in the euro area – estimations of the IMF and of the European Commission**

Source: European Economy, [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/european_economy/index_en.htm) and World Economic Outlook Report, external/ns/cs.aspx?id=29

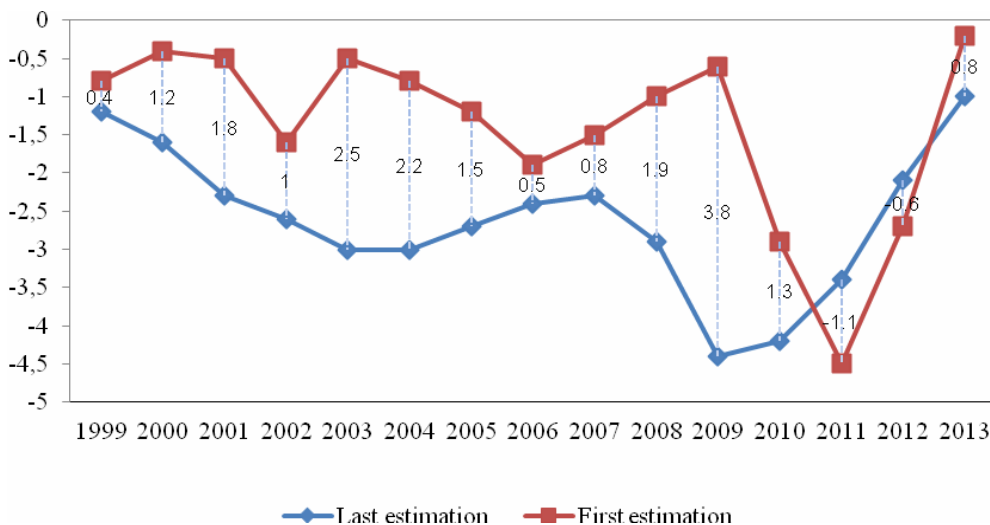
More significant differences are registered when we observe the estimations for one single country (figure no. 3). In 2003, the difference between the estimations of the structural deficit is close to 2% of GDP.



**Figure no. 3 The structural deficit in Italy – IMF and European Commission estimations**

Source: European Economy, [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/european_economy/index_en.htm) and World Economic Outlook Report, external/ns/cs.aspx?id=29

Another problem related to estimating the structural deficit, besides the differences between the estimations of the various agencies, is that, sometimes, the same institution can re-examine the indicator and provide new values for it (MacArdle, 2012). The International Monetary Fund published revisions of the level of the structural deficit (figure no. 4); between the first and the last estimation being significant differences. The highest level was registered in 2009 – a difference of 3.8 percentage points between the first and the last estimate of the structural deficit for the euro area.



**Figure no. 4 Differences between the estimations of IMF regarding the structural deficit in euro area countries**

Source: International Monetary Fund (2012), *Coping with High Debt and Sluggish Growth*, World Economic Outlook Report, [Online] available at <http://www.imf.org/external/pubs/ft/weo/2012/02/pdf/text.pdf>.

The limit of 0.5% of GDP for the structural deficit, as stated in the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, requires a higher precision that can be achieved in practice. In many cases, the retrospective approach of estimations for a certain moment determines changes with significant values or there are differences between the estimations of several agencies. Although in theory the analysis of the structural deficit seems to offer a better image of the fiscal discipline, the practical problems make difficult the use of this indicator. Also, may seem inappropriate to fine some states based on an indicator that cannot be determined with precision.



## CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

The effects of the current financial crisis revealed important shortcomings regarding the functionality of the euro area, indicating the fact that it does not represent an optimal currency area. Some member states faced high levels of government deficits that required substantial interventions from the European authorities and the International Monetary Fund.

In order to restore confidence in the fiscal discipline of the member countries of the Economic and Monetary Union, the European policymakers had to provide new solutions. The Treaty of Stability Coordination and Governance represents an improvement by providing high limits for fiscal indicators.

In this study we have focused on the concept of structural deficit and its implications and we have identified significant problems related to the conceptual framework and the implementation of the methodologies used to quantify it. The results show that the measurement of the structural deficit is inevitable imprecise taking into account the shortcomings regarding the definition of one-off and temporary measures and the difficulty in estimating the cyclical component of the fiscal balance.

By highlighting the issues associated with calculating the structural deficit we tried to emphasize the importance of taking them into consideration in evaluating the values for each country, especially when the non-compliance with the requirements leads to the obligation to pay a fine.

Taking into consideration the concern to ensure fiscal discipline in the European and Monetary Union we consider that there is a need for further improvements in estimating the structural deficit. Moreover, a special attention should be given to the theoretical foundation of the limit of 0.5 of GDP for this indicator.

## ACKNOWLEDGEMENTS

This work was supported by the European Social Fund in Romania, under the responsibility of the Managing Authority for the Sectorial Operational Program for Human Resources Development 2007- 2013 [grant POSDRU/CPP 107/DMI 1.5/S/78342].

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