INSIGHTS ON THE EVOLUTION OF FISCAL DISCIPLINE IN THE EUROPEAN UNION

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Abstract: *Fiscal discipline is a highly discussed subject in EU politics, media and the general public. But, as a part of a bigger picture – the fiscal integration process, fiscal discipline doesn't appear from sudden; instead it evolves over time through carefully thought steps and decisions. In this paper we discuss the evolution of fiscal discipline components over time and how they correlate inside the EU framework, sample period being 1994-2015. As our analysis proves, EU governments are more than ever committed in maintaining sound public finances and fiscal discipline through the implementation of fiscal rules at a national level, and also by accompanying the rules with independent enforcing and monitoring institutions. In order to make the commitment more credible, EU states have also introduced sanctions for non-compliance and automatic correction and sanction mechanisms.*
Keywords: *fiscal integration, fiscal rules, fiscal discipline, evolution*

INTRODUCTION AND LITERATURE REVIEW

Concerns about fiscal discipline and fiscal rules became more and more obvious after the Maastricht Treaty entered in force in 1993 and also more important as the most recent crisis stroke. As a heterogeneous formation of states, the UE needs to keep its public finances as solid as possible in order to ensure fast responses and balance in face of economic and financial shocks. The public debt crisis and the deterioration in budget deficits of most EU member states in 2010 made the issue of fiscal stability and fiscal discipline extremely relevant [1]. As some authors state, fiscal discipline and flexibility are the main principles governing budgetary policies [2]. Fiscal discipline allows the credibility of governments to strengthen, while flexibility is required to deal with country-specific shocks.

Fiscal discipline in a monetary union can be even more challenging, as the lack of central fiscal authority makes this objective harder to reach [3]. Some authors even ask the question: what kind of fiscal policies in a monetary union? [4] Same authors state that national governments of member states should be subjected to additional budgetary discipline compared to stand-alone countries. The main reasons for this targets moral hazard and the common pool argument. But, other studies contradict this statement, data revealing that intense fiscal rules can reduce the capacity of national governments to deal with asymmetric shocks and makes them more vulnerable to financial instability [5]. This case may be related to the fact that government revenues and spending are both directly influenced by fluctuations in income, spending, transactions and employment [6]. As so, introducing harsh fiscal rules limits the power of governments to respond to shocks regarding the mentioned economic indicators.

As we have proven on other occasions [7], fiscal rules tend to have a negative impact on public debt, leading to higher levels. Also, an increased number of institutions that supervise budgeting leads to the same effect. As so, more rules and institutions do not necessary lead to positive results regarding fiscal policies, but, their absence would not contribute with anything also. For example, although fiscal rules bring with them higher public debt levels, they also bring smaller public deficits for EU member states, as shown in our previous work [8].

In order for states to lower public debt to GDP ratio fiscal adjustments are required [9] but, in order to maintain the solidity of the public finances, the fiscal discipline and fiscal rules should not get of the site of EU governments.

Nevertheless, fiscal rules can play a vital role in promoting fiscal sustainability over both the economic cycle and the longer term [10], by setting limits for public spending, debt and deficits levels, thus creating a credible commitment for fiscal discipline. In order to analyse the evolution of fiscal rules and discipline as a part of the fiscal integration process in the EU we propose two key hypotheses for validation:

H1: the fiscal integration process has evolved over time as countries became more disciplined and engaged in follow the same fiscal guidelines;

H2: as the fiscal integration process has evolved, so did the fiscal discipline of countries denoted through strong positive connections between our chosen variables.

DATA AND METHODOLOGY

Nevertheless, fiscal rules can play a vital role in promoting fiscal sustainability over both the economic cycle and the longer term [10], by setting limits for public spending, debt and deficits levels, thus creating a credible commitment for fiscal discipline. In order to analyse the evolution of fiscal rules and discipline as a part of the fiscal integration process in the EU we propose two key hypotheses for validation:

We used in our analysis data composed of 28 countries, meaning the member states of the European Union, the sample period being years 1994-2015 (annual records). Data regarding our variables was collected from Eurostat and the Fiscal rules database provided by the European Commission. In order to analyse the evolution of the fiscal integration process and the fiscal and budgetary discipline of the EU member states, we have taken into account the next related descriptive variables: Number of countries which have implemented at a national level a Balanced Budget Rule (BBR) regarding their general or central government (ImplementedBBR); Number of countries which have implemented at a national level a Public Debt Rule regarding their general or central government (ImplementedPDR); Number of countries which have implemented at a national level a Public Expenditure Rule regarding their general or central government (ImplementedPER); Number of countries which have implemented at a national level a Public Revenues Rule regarding their general or central government (ImplementedPRR); Number of countries which have an Independent Enforcement Body for their BBR (IEBforBBR); Number of countries which have an Independent Monitoring Body for their BBR (IMBforBBR); Existence of sanctions for non-compliance regarding the BBR for policy-makers (SanctionsBBR); Existence of an Automatic Correction and Sanction Mechanism Regarding the BBR (AutoCorrectionSanctionBBR); Number of states which register a public deficit level lower than 3% of their GDP (PublicDEF3); Number of states which register a public debt level lower than 60% of their GDP (PublicDEBT60); Number of states in which the growth level of their public expenditures is lower than the growth level of their GDP (GRPEvsGRGDP).

First, we analysed how all these variables evolved over time, a positive evolution being related to an increased number of EU members that implemented, have or register them. This part of our analysis is presented in graphics 1 to 4 in section Preliminary analysis. Second, we analysed the correlation that establishes between our chosen variables in order to identify if there is a strong connection between them and if that connection is a positive or a negative one. This part of our further analysis is depicted in section Empirical results.

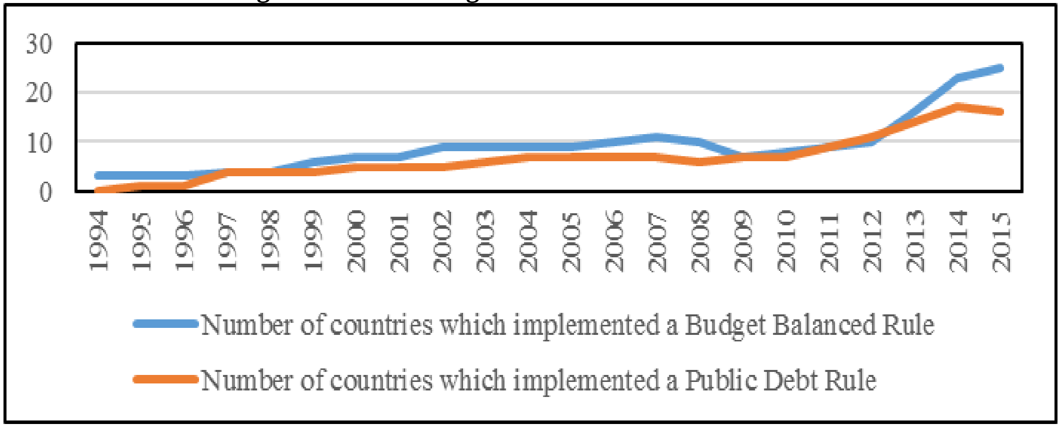
ANALYSYS

Preliminary analysis

As we've presented our variables and methodology in the previous section of the article, we will continue with presenting a preliminary insight on how the fiscal integration process evolved over time in the EU, how members of the European Union reacted to the crisis and before from a fiscal discipline standpoint, and what are the measures that they've taken in order to gain more solidity and balance regarding their fiscal policies and constraining their policy-makers.

The evolution of the fiscal integration process has been, is and it will be marked by the existence of fiscal rules. Two extremely important rules are those which target public deficits and public debt. These two rules can be found in EU treaties as The Maastricht Treaty, SGP (Stability and Growth Pact) and the most recent Fiscal Compact that entered in force in 2013. In order to achieve the so desired fiscal stability and solidity of the public finances, these two rules need to exist in national legislation, to be correctly implemented, respected and overseen.

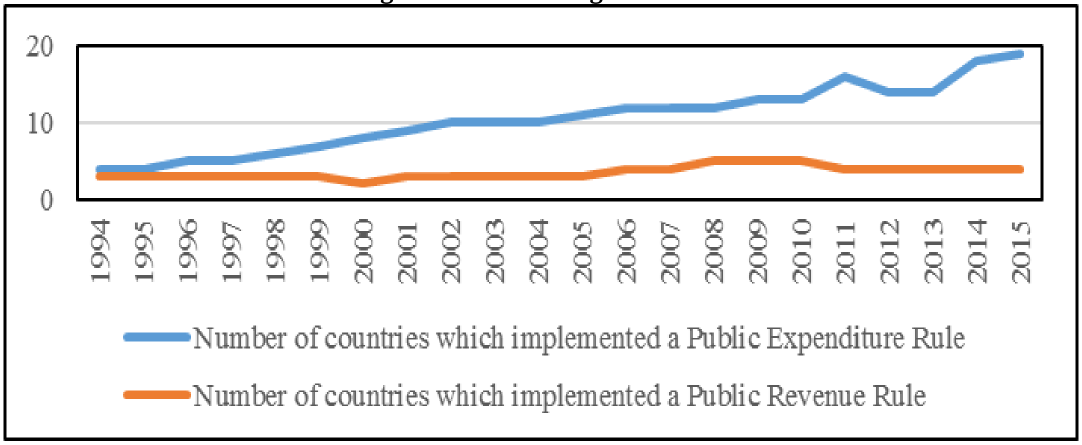
Graphic 1 Evolution of the number of EU members which implemented a Budget Balance Rule and a Public Debt Rule for their general or central government 1994-2015



Source: Author calculations

As our first graphic depicts, the number of EU states that implemented these rules has growth over the two analysed decades, with the exception of years 2008 and 2009. As the crisis emerged, countries become unable to respect these two specific rules, due to fast rising levels of debt and deficits. Some of them even suspended the rules, especially the one regarding balanced budget. EU member states didn't expect such a powerful swift in their budgetary positions, as levels of public expenditures increased in order to save economies and fiscal revenues hit a high fall due to low economic activity, stopped investments and problems regarding financial systems. Nevertheless, as the situation was stabilized, and most importantly, after learning a harsh lesson regarding the importance of maintaining solid public finances as a key to maintain economic and financial stability, more and more countries implemented the two fiscal rules, especially the one regarding balanced budgets. Also, as the graphic clearly shows, the signing of the Treaty on Stability, Coordination and Governance had a huge impact in 2013 when in entered in force. Most of the EU member states have now implemented a Budget Balance rule (25 to be more precise), and 16 have implemented at a national level a rule that regulates the evolution and dimension of their public debt levels.

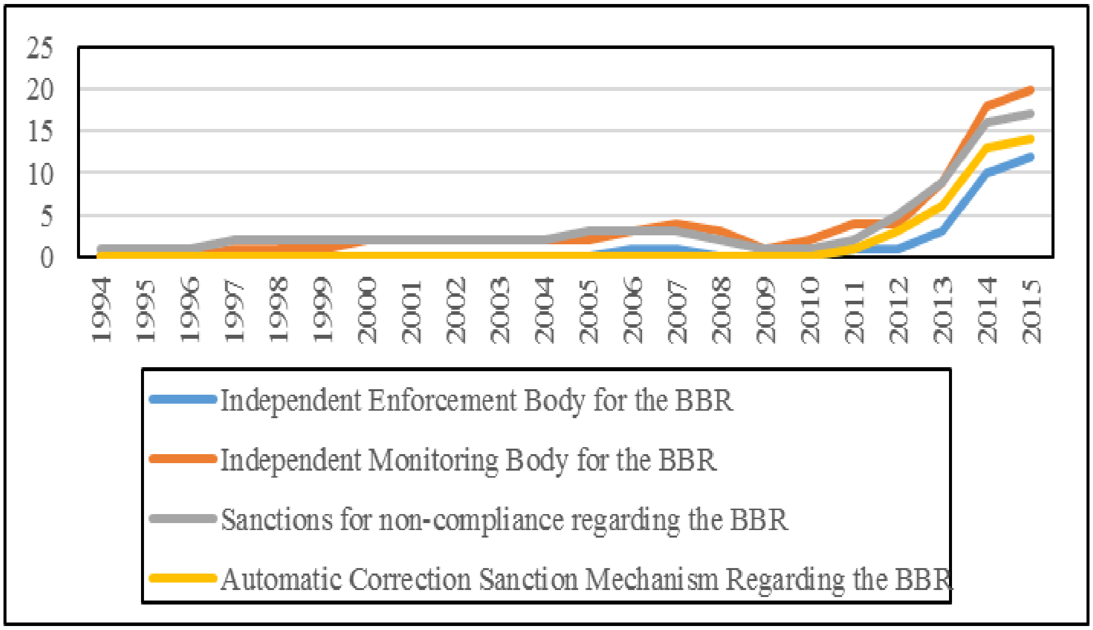
Graphic 2 Evolution of the number of EU members which implemented a Public Expenditure Rule and a Public Revenue Rule for their general or central government 1994-2015



Source: Author calculations

As history has proven, especially years 2008-2011 of crisis, only enforcing the Budget Balance Rule (BBR) and the Public Debt Rule may not be enough to maintain sound public finances. The two fiscal rules that came to enhance the framework are the Public Expenditure Rules and the Public Revenue Rule. These two rules tell governments how they should design their fiscal and budgetary policies in order to achieve sound public finances, and regulate the dimensions of the two indicators. Graphic number two depicts our analysis on the number of EU members that have implemented at a national level these rules for their general or central government. We need to point out from the begging that from these two rules, the most important one is the rule that targets governmental spending, because if the expenditures overcome revenues, then countries plunge into deficits and have to balance their budgets by lending, thus influencing debt levels in a negative term. Although the number of EU members that have implemented at a national level a revenue rule hasn't modified to much over time, variation seeing from 2 EU countries that implemented the rule (year 2000) to 5 EU member states (2008-2010) in the crisis period as the need to collect more public revenues become more and more pressing to cover deficits and higher debt levels, we cannot state the same about the expenditure rule. While in 1994, only 4 countries had implemented at a national level a public expenditure rule, in 2015 almost 20 countries have implemented a similar rule. Although the evolution of the number of countries which implemented this rule was clearly influenced by the increasing number of EU member states over time, when comparing to the evolution of states that implemented revenue rule the difference in notable. This difference is given as we stated before because of the higher impact that expenditures have on debt and deficit levels on one hand, an on the other hand because of the EU treaties and the need to control the policy-makers in order to restrain the growth rate of expenditures in order to maintain equilibrium and sound public finances.

Graphic 3 Evolution of existing Independent Enforcement Bodies, Independent Monitoring Bodies, Sanctions for non-compliance and Automatic Correction and Sanction Mechanisms for the Budget Balance Rule in EU member states 1994-2015

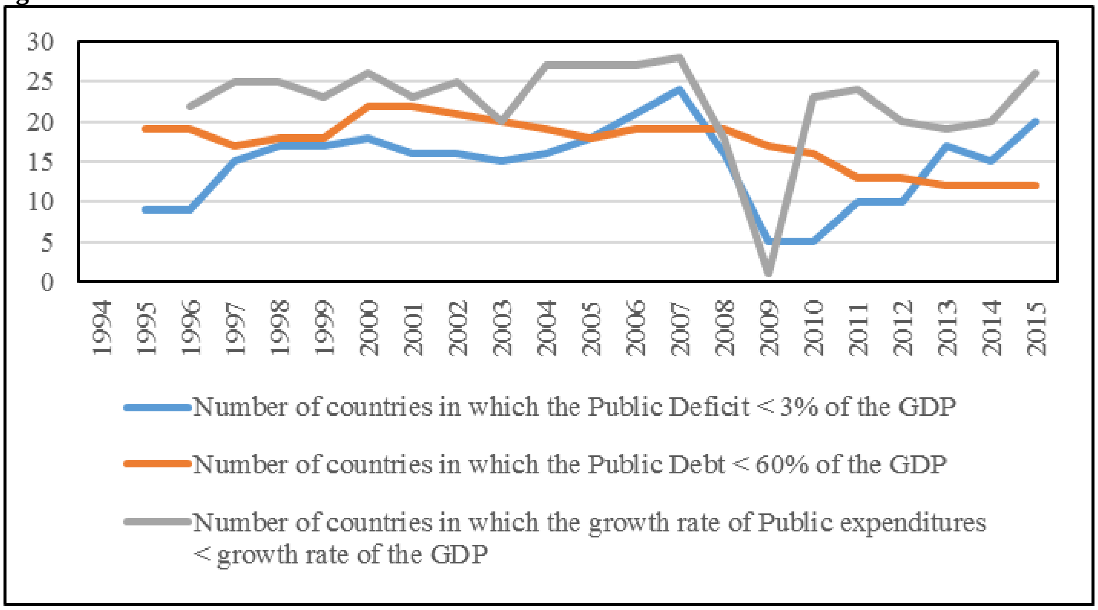


Source: Author calculations

As we've seen so far, more and more EU member states implement rules that regulate fiscal and budgetary policy-makers in order to achieve sound public finances on the long run. But, rules become in most cases partially inefficient because of the lack of monitoring and enforcement bodies, and sanction and correction mechanism. In our point of view, a child needs more than rules (EU governments in this case). It also needs its parents as guiders and enforces of the rules, as governments need the four indicators depicted in our third graphic. As strange as our comparison seems at a first glance, it only depicts the deep truth. Governments are lead and have in their membership politicians, that don't always care about the soundness of the public policies, general welfare and especially respecting rules, as they see them more as guidelines rather than laws. As so, the need for monitoring and enforcement bodies is an obvious one, and a more necessarily one for independent bodies. Also, non-compliance for rules, especially for the Budget Balance Rule (as it influences public expenditure and revenue levels, and also debt levels) needs to be sanctioned, because if there are no consequences, there is no compliance. As our graphic indicates, little attention was given to these aspects until the middle of 2000', and also more and more attention was given starting with years 2010-2011. As the crisis emerged and leaved more and more wounds in EU budgets, economic policies and economies itself, the need to constant oversee compliance to existing rules became obvious.

While between 10 and 15 EU member states introduced an automatic correction and sanction mechanism for non-compliance with the BBR and an independent enforcement body, over half of EU members have introduced sanctions for non-compliance regarding the BBR and have an independent monitoring body (20 states in 2015).

Graphic 4 Evolution of the number of EU member states which have a Public Deficit < 3% of their GDP, Public Debt < 60% of their GDP and a growth rate of their public expenditures smaller than the growth rate of the GDP 1995-2015



Source: Author calculations

Our last graphic depicts the evolution of three of the most common indicators for public finances solidity and allows us to analyse if and when the previous mentioned rules and mechanism we're taken into account by governments.

First of all, we need to remember that during the crisis most of EU member states stopped taking into account mentioned rules or weren't able to comply with them due to the economic downfall. For example, while most of EU states were able to maintain their public deficit below 3% of their GDP and a growth rate of their public expenditures under the growth rate of their GDP, situation changed in years of the recent crisis, begging with years 2007 and 2008, the year 2009 being the worst from this perspective (only 1 country was able to maintain the growth rate of their public expenditure smaller than the growth (most downfall) of their GDP. As governments struggled to maintain economic activity and give an impulse to their economies, expenditures went up too fast, while revenues go down. As the effects of the crisis passed, and countries started to recover through different measures, the situation balanced, in 2015 over 20 EU members presenting a growth rate of their expenditure smaller than the growth rate of their GDP, and exactly 20 members kept their public deficit under 3% (in compliance with the BBR).

Unfortunately, the crisis showed us how vulnerable EU economies are to shocks, how weak the solidity of the public finances is, and that states need to take further actions in order to prevent this disaster repeat itself – previous graphics indicate indeed that measures are taken and that rules and mechanisms are implemented in order to maintain stability in the future.

EMPIRICAL RESULTS

Table 1 Correlations between our key variables

		ImplementedBBR	ImplementedPDR	ImplementedPER	ImplementedPRR	IEBforBBR	IMBforBBR	SanctionsBBR	AutoCorrectionSanctionBBR	PublicDEF3	PublicDEBT60	GRPEvsGRGDP
Implemented BBR	Pearson Correlation	1										
	Sig. (2-tailed)											
	N	22										
Implemented PDR	Pearson Correlation	,936**	1									
	Sig. (2-tailed)	,000										
	N	22	22									
Implemented PER	Pearson Correlation	,864**	,917**	1								
	Sig. (2-tailed)	,000	,000									
	N	22	22	22								
Implemented PRR	Pearson Correlation	,383	,460*	,642**	1							
	Sig. (2-tailed)	,079	,031	,001								
	N	22	22	22	22							

IEBforBBR	Pearson Correlation	,907**	,801**	,679**	,243	1						
	Sig. (2-tailed)	,000	,000	,001	,276							
	N	22	22	22	22	22						
IMBforBBR	Pearson Correlation	,963**	,885**	,767**	,300	,982**	1					
	Sig. (2-tailed)	,000	,000	,000	,175	,000						
	N	22	22	22	22	22	22					
SanctionsBBR	Pearson Correlation	,935**	,865**	,695**	,222	,975**	,986**	1				
	Sig. (2-tailed)	,000	,000	,000	,320	,000	,000					
	N	22	22	22	22	22	22	22				
AutoCorrectionSanctionBBR	Pearson Correlation	,907**	,842**	,683**	,246	,982**	,980**	,989**	1			
	Sig. (2-tailed)	,000	,000	,000	,271	,000	,000	,000				
	N	22	22	22	22	22	22	22	22			
PublicDEF3	Pearson Correlation	,344	,186	,068	-,317	,242	,282	,296	,175	1		
	Sig. (2-tailed)	,127	,420	,769	,162	,291	,215	,192	,448			
	N	21	21	21	21	21	21	21	21	21		

PublicDEBT 60	Pearson Correlation	-,644**	-,796**	-,696**	-,509*	-,661**	-,692**	-,696**	-,729**	,182	1	
	Sig. (2-tailed)	,002	,000	,000	,018	,001	,001	,000	,000	,430		
	N	21	21	21	21	21	21	21	21	21	21	
GRPEvsGRGDP	Pearson Correlation	,027	-,096	-,180	-,519*	,045	,044	,045	-,018	,616**	,179	1
	Sig. (2-tailed)	,911	,687	,448	,019	,850	,853	,849	,939	,004	,450	
	N	20	20	20	20	20	20	20	20	20	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Source: Author calculations

Table Number 1 depicts our detailed analysis on the links between fiscal rules, enforcement and monitoring bodies, correction and sanction mechanism and different variables related to the state of public finances (public debt, public deficits and difference between the growth rate of public expenditures and the growth rate of the GDP).

We continued our preliminary analysis in order to analyse how our chosen variables influence each other and answer the question: is it a positive or negative influence. Also, our deepened analysis allows us to further confirm our two hypotheses: the fiscal integration process has evolved over time as countries become more disciplined and follow the same guidelines and that fiscal integration implies more and more discipline denoted through positive links between our variables.

One of the most important variables is the implementation at a national level of the balanced budget rule – as it exercises an influence on most of the other variables. The implementation of the BBR at a national level by more and more EU member states can be positive linked (strong positive correlation) with variables such as the implementation of a public debt rule, of the public expenditure rule, existence of independent enforcement and monitoring bodies regarding compliance with the BBR, existence of sanction and correction mechanisms and the levels of the public debt. The strong connection with all these variables depicts a clear fact: setting up fiscal rules isn't as simple as it would seem at a first glance. In order for a fiscal rule to achieve its potential (positive effects on specific indicators), other pieces of the puzzle need to be established or implemented. As stated in previous paragraphs, in order for a rule to become 'fully functional' it needs at least one independent enforcement body, an independent monitoring body (that also enhances reporting), sanctions and correction mechanisms in order to achieve compliance and correction if let's say, a temporary shock hits an economy. So, treaties aren't near far enough in order to achieve sound public finances, mainly because governments are lead and composed of politicians who don't always follow the general welfare, or aren't economic specialists.

The implementation of a public expenditure rule is significant correlated with the implementation of a public debt rule. So, rules aren't always implemented as a single piece of a bigger picture. In order to achieve sustainable public policies, rules come as a package of constraints that regulate limits or boundaries that should not be crossed. Also, there seems to be strong connection between the implementation of the public expenditure rule and the implementation of a public revenue rule, existence of independent enforcement and monitoring bodies for the BBR, implementation of sanction and correction mechanisms regarding the BBR in EU member states and the levels of public debt.

There also seems to be a strong connection between the implementation of a monitoring body and an enforcement body for the BBR, and between these two and sanction and correction mechanisms and public debt levels. So, as a new monitoring or enforcement body arises as a backup power for the BBR, sanction and correction mechanism accompany them. In fact, it would be highly improbable for governments and policy-makers to be sanctioned for non-compliance if there are no enforcers. First, the monitoring body keeps a close eye on the evolution of the balance of the budget, and if long-term deviations manifest themselves as a result of wrong decisions, policy-makers are sanctioned and the correction mechanism is activated in order to bring back equilibrium and to maintain the solidity of the public finances. Also, only the existence of independent monitoring and sanction bodies has a positive influence on the balance of the public budgets, as they send a clear message to policy-makers: comply or pay.

Maintaining debt levels less than 60% of the GDP is also clearly connected with our other chose variables except public deficits. As so, it would seem that as more rules, monitoring and enforcement bodies, and sanctions and correction mechanism are taken into account and implemented, the more likely there is a change and EU debt levels are kept under the 60% of the GDP limit. This positive influence represents a drop of hope for future lower debt levels being registered through the European Union.

What is extremely surprising is that the variable Number of countries which have a public deficit of 3% isn't connected with the other variables, especially as we've expected with the budget balance rule. This is quite an unexpected result, mainly because most of our variables are linked to compliance with the BBR (implicit with deficit levels under 3%). The only strong connection that can be established is between maintaining deficits under 3% of the GDP and the growth rate of the public expenditure. As states restrain the growth rate of their expenditures under the growth rate of the GDP, the correlation between public expenditures and revenues leads to equilibrium, and thus to balanced budgets.

CONCLUSIONS

The European Union, as a heterogeneous formation of European states, represents a dream that became true, a reason and an impulse for further collaboration and integration. In this context, a common ground for discussions is being represented by the fiscal integration process and the solidity of public finances. These two concepts, fiscal integration and solid public finances are related to the point that they intertwine on the case of the EU. In order to achieve future economic stability, all EU members need to contribute by enhancing the solidity of their fiscal and budgetary policies, using a particular strange path engaged by fiscal integration: using fiscal rules as constraints on policy-makers.

It was our goal for this article to offer an insight on the development of the fiscal integration process, in particular on the evolution of certain variables highly related to the solidity of the EU member states public finances, solidity rendered through variables such as low public debt and deficits levels and maintaining the growth rate of the public expenditures under the growth rate of the GDP. Both of our hypotheses were confirmed: the fiscal integration process has evolved in a positive manner over time and EU member states became more disciplined and more careful regarding the solidity of their public finances.

First, we analysed how our chosen variables evolved over time (years 1994-2015), depicted by the number of countries which implemented them at a national level, the main focus being the BBR (Balanced Budget Rule), as it exerts influence on all our other variables, as our analysis proved. Analysing data from 1994 until 2015 regarding all EU member states, it is clearly that countries evolved in a positive matter as the fiscal integration process got deeper. First, as our graphics depict, more and more EU member states implemented a rule regarding the balance of their budgets, a rule regarding debt levels or public expenditure levels. Second, while in 1994 only 4 states had implemented a public expenditure rule for the general or central government, in 2015 19 states had implemented such a rule.

Also, as we've stated over the article, the existence of rule isn't sufficient to ensure solid public finances, enforcement and monitoring bodies, sanctions and correction mechanisms being also necessary. Unfortunately, these instruments evolved in EU after years 2010-2011, after the crisis proven that having rules without related instruments that ensure compliance to them is inefficient.

While the number of states that register a public deficit lower than 3% of their GDP had a positive evolution until the crisis, and also after states started to recover (the worse year being 2009), less and less countries register a public debt level lower than 60% of their GDP, thus suggesting non-compliance with the debt rule stated also in treaties. Although it is clear that treaties signed by EU countries had an important contribution, there exists a need that the rules stated in treaties should be implemented at a national level with other specific mechanisms at hand.

As we've continued our preliminary analysis, we discovered that most of our accounted variables are correlated in a positive direction. For example, the implementation of the Budget Balance Rule at a national level can be positively linked (significant positive correlation) with other variables such as public debt and expenditure rules, existence of independent enforcing and monitoring bodies, existence of correction and sanction mechanisms and registered public debt levels. As so, formulating a fiscal rule as a constraint on policy-makers isn't enough, other variables and mechanisms need to be accounted. First, the rule needs to be formulated in a manner that it permits for states to comply with it. Secondly, the rule needs to be approved at the EU level and after implemented at a national level. And third, in order for a fiscal rule to become functional, it needs an enforcer, a monitoring body, and existence of sanctions for the policy-makers if they do not comply, plus a correction mechanism to re-establish the equilibrium.

What we found strange is that while the BBR mainly targets EU member states maintaining a public deficit lower than 3% of their GDP, we didn't find any correlation between the number of countries which have a public deficit lower than 3% of their GDP and almost all of the variables, including the specific rule. The only variable that can be linked to countries that register low deficits is the growth rate of public expenditures being smaller than the growth rate of the GDP.

As we have seen so far, the fiscal integration process, rendered through our depicted variables, registered a positive evolution over time. Nevertheless, in order to form a fiscal union and to achieve more solid public finances, the process must go on. New crises and shocks will strike EU economies in the future, and the more disciplined the policy-makers are, the smaller the impact will be, allowing for faster economic recovery and better crisis management.

References

1. Petkov, V.S., (2014). Advantages and Disadvantages of Fiscal Discipline in Bulgaria in Times of Crisis, *Vizja Press&IT*, Contemporary Economics, Vol. 8, 47-56
2. Buti, M., Franco, D., Ongena, H., (1998). Fiscal discipline and flexibility in EMU: the implementation of the Stability and Growth Pact. *Oxford Review of Economic Policy*, Vol. 14, 81-97
3. Duygun, M., Ozturk, H., Shaban, M., (2016). The role of sovereign credit ratings in fiscal discipline. *Emerging Markets Review*, Vol. 27, 197-216
4. De Grauwe, P., Ji, Y., (2014). How much Fiscal Discipline in a Monetary Union?. *Journal of Macroeconomics*, Vol. 39, 348-360
5. De Grawe, P., Foresti, P., (2016). Fiscal rules, financial stability and optimal currency areas. *Economic Letters*, Vol. 145, 278-281
6. Chote, R., Emmerson, C., Tetlow, G., (2009). The fiscal rules and policy framework. *The IFS Green Budget*, 81-111
7. Macsim, F.A., Oprea, F., (2015). Fiscal constraints in the European Union – When more is less?. *Scientific Annals of the "Alexandru Ioan Cuza" University of Iași*, Vol. 62, 19-28
8. Macsim, F.A., Oprea, F., (2015). Do Fiscal Constraints Actually Work in the EU?. *"Ovidius" University Annals*, Economic Sciences Series, Vol. 15, 458-463-
9. Gherman, A.M., Ștefan, G., (2013). Between fiscal discipline and economic recovery. The solutions problem. *Theoretical and Applied Economics*, Vol. 20, 127-146
10. Fiscal Commission Working Group of the Scottish Government, (2013). Fiscal Rules and Fiscal Commissions, *Scottish Government*, 1-78