

# IMPACTS OF FISCAL IMBALANCES AND FISCAL ARRANGEMENTS ON SOVEREIGN BOND YIELDS

The paper aims to investigate the impacts of fiscal imbalances and fiscal arrangements on sovereign bond yields. We apply recent data of IMF concerning the quality of fiscal rules and the effectiveness of fiscal councils and we analyse cases of developed and developing countries, pointing out characteristic features for each case. Our research shows that while fiscal imbalances have positive correlation on interest rates of sovereign bonds, the level of quality and strength of fiscal arrangements provided by fiscal rules and fiscal councils have negative impacts.

## INTRODUCTION

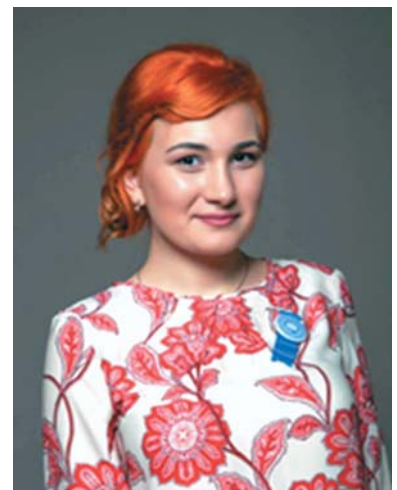
The issue at hand have been drawing growing attention from economists and policy-makers over the last decade since fiscal default became a problem even for EU member countries. The financial crisis showed once more that in bad times, it becomes crucial that the government has a possibility to stimulate an economy. Although, the government is definitely interested in the possibilities of borrowing money, especially during economic slowdowns, the readiness to cover the debt as well as the cost of indebtedness is the considerable issue. If the government faces high bond yields, it means that borrowing money is too costly and thus it becomes controversial whether it is worth to borrow or not. However, as mostly in bad times the money resources is crucially necessary for the economy, governments are obliged to borrow even if they face high costs to serve debts. Yet, when fiscal indebtedness increases, the probability of the default of the country also increases and investors require more revenues to cover their risks. So, government may face quite high bond yields, which is definitely not desirable condition. Furthermore, if the risk of default is considerably high, accepting even very high interest rates, the government might still have difficulties in finding possibilities to borrow the money. Hence, sovereign bond yields and conditions of borrowing as well as the readiness to serve the debts is the very important direction to be covered by the economic policy. Thus, we found considerable to investigate influential factors on sovereign bond yields. Among such impact generators, we stress on fiscal indebtedness and fiscal arrangements provided by fiscal rules and fiscal councils.

The influence of fiscal imbalances on bond yields is not the new concept. It is already well known that generally fiscal deterioration causes an increase in long-term interest rates. However the effect of fiscal institutes was not investigated systematically until now. Our motivation to work on the problem was mainly caused by the recently released dataset of IMF measuring the quality of fiscal rules in 87 countries. The dataset firstly was prepared in 2012 and now it covers the data for 2013 as well. Besides, we review the role of fiscal councils as we find that these newly introduced institutions are not systematically studied yet. Hence, including the role and importance of fiscal arrangements in our analyses, our research aims to elaborate impacts on sovereign bond yields from the two directions. On the one hand we analyse impacts of fiscal deterioration on bond yields while on the other hand we include effects of fiscal arrangements, precisely fiscal rules and fiscal councils in our analyses. So, we review the role and importance of these fiscal institutions to show their possible impacts on determination long-term interest rates.

We analyses the practical experience accumulated through the recent years. We try to report main characteristics of the problem in developed and developing countries separately as the difference of the levels of economic development does not allow us to generalize conclusions made for industrialized countries. So, we review the case of European countries and Japan as examples of industrialized countries and Georgia as



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an example of a developing country. This approach gives us possibility to compare conclusions made for each direction and to point out several characteristic features for each case.

### BRIEF LITERATURE REVIEW

The influence of fiscal indebtedness on sovereign bond yields is not a new concept. We might review quite rich literature in this direction confirming that there is a positive correlation between fiscal indebtedness and sovereign bond yields. In other words, an increase of the level of indebtedness of the country increases the probability of default and finally results in increased interest rates.

Among other researches who confirm this positive correlation between indebtedness and bond yields, we might consider papers about US experience, precisely the work of Gale and Orszag (2004) where authors provide regression analyses concluding the positive influence of expected future deficits on long-term interest rates.

Akitoby and Stratmann (2006) while elaborating impacts of fiscal indiscipline on long term interest rates in developing countries confirm that high probability of default leads an increase in interest rates that finally results in increased costs of debt. The authors provide the following formula to illustrate the above-mentioned statement:

$$(1+r^*)=pd \times w + (1-pd) \times (1+r)$$

where  $r$  – the lending rate,

$r^*$  - the risk-free interest rate,

$pd$  – the probability of default,

$w$  – the payment for the lender in case of default.

Thus, higher probability of default raises interest rates to compensate the higher risk of default investors might face while lending the money. The process finally results in increased costs of indebtedness.

As for European experience, it is considerable the paper of Faini (2006) testing the impact of fiscal imbalances on bond yields for EMU countries. The author exhibits a peculiarity of EMU area, that the budget deficit changes in one country have an impact not only on the interest rates of that particular country but on the overall level of interest rates in the whole EMU area.

Among influential factors besides fiscal institutions and fiscal conditions, Fiscal Affairs Department of IMF (2009) takes into consideration domestic savings and access to global capital inflows. It concludes that the overall impact of higher deficits on interest rates is greater in countries with low domestic savings and with less than full access to global capital inflows.

We might also consider papers studying the influence of fiscal institutions. In order to underline that fiscal rules present the significant topic in this case, we may review the State of Public Finances Cross Country Monitor (November 2009) prepared by the Staff of Fiscal Affairs Department of IMF, stating that fiscal rules play the main role in large fiscal adjustments. The IMF remarks that fiscal rules can define the quality and the size of fiscal discipline. That is why they were often reformed in many countries over time due to meet necessary changes to sustain consolidation efforts.

Von Hagen (2012) states that fiscal rules support to strengthening fiscal discipline, moreover their effectiveness rises when the economic policy keeps the strong attachment to the fiscal rules and when there are no escape possibilities from these rules.

More recently, the paper of Brzozowski and Siwinska-Gorzela (2013) presents the much more complete research as together with considering fiscal imbalances it includes fiscal rules as other source of impacts. This paper reports an empirical evidence that evaluates how fiscal deterioration might push bond yields up, and at the same time, what possibly could be caused by fiscal rules within a given country economy. Authors are testing the hypothesis whether strong fiscal rules can pay a government off in a future by the means of significant implications imposed by a given policy. Based on the regression analyses estimating impacts for industrialized countries for the time period 1985-2010, the research confirms the positive relationship between fiscal indiscipline and bond yields while on the other hand figures out the apparent opposite impacts of fiscal rules on interest rates.

As for fiscal councils, being still newly established institutions, their impacts are not systematically studied yet. However we might consider the paper of Debrun and Kumar (2007) which incorporates the impacts of fiscal rules and fiscal councils on fiscal performance. Authors provide cross-country evidence on the effectiveness of fiscal councils for fiscal discipline for EU countries. The paper shows that fiscal rules are associated with higher fiscal performance and fiscal councils contribute better enforcement of fiscal rules.

### FISCAL RULES AND FISCAL COUNCILS

#### *Fiscal Rules*

Finding out new sources for strong impacts on bond yields, it is interesting how the fiscal rules can be evaluated to use them for further researches in this direction. According to the definitions provided by IMF, a fiscal rule imposes a long-lasting constraint on fiscal policy through numerical limits on budgetary aggregates. Fiscal rules typically aim to correcting distorted

incentives and containing pressures to overspend, particularly in good times, thus they ensure fiscal responsibility and debt sustainability. To assess the level of quality and strength of fiscal rules in each country, IMF (2012) released a new dataset providing evaluation of the use and design of fiscal rules covering national and supranational fiscal rules in 87 countries from 1985 to end-August 2012. The dataset is updated for 2013 as well (Kinda, Kolerus, Muthoora and Weber, 2013). According to the legal basis, coverage, escape clauses, as well as enforcement procedures, and fiscal responsibility law, IMF provides numeric values from zero till five to identify the quality level of fiscal rules in each country.

So we tried to review the first working paper on this issue (Schaechter, Kinda, Budina and Weber, 2012) to explain the nature of fiscal rules. As we found out, we may distinguish four main types of fiscal rules:

- Debt rules (DR) set an explicit limit or target for public debt in percent of GDP;
- Budget balance rules (BBR) constrain the variable that primarily influences the debt ratio while being largely under the control of policy makers;
- Expenditure rules (ER) set limits on total, primary, or current spending;
- Revenue rules (RR) set ceilings or floors on revenues.

While examining these rules, Fiscal Affairs Department of IMF defines that expenditure rules are not linked directly to the debt sustainability objectives, as they do not constrain the revenue side. According to the same logic, staff of the department argues that revenue rules are not directly linked to the control of public debt, as they do not constrain spending. Moreover, authors of the paper state that setting ceilings or floors on revenues can be challenging as revenues may have large cyclical component, fluctuating widely with the business cycle. Thus, revenue rules alone could result in pro-cyclical fiscal policy, as floors do not generally account for the operation of automatic stabilizers on the revenue side in a downturn or ceilings in an upturn for revenue ceilings.

**Table 1 Properties of Different Types of Fiscal Rules<sup>1</sup>**

| <i>Type of rule</i>                   | <i>Pros</i>  | <i>Cons</i>  |
|---------------------------------------|--|--|
| <i>Debt rule</i>                      | <ul style="list-style-type: none"> <li>▪ Direct link to debt sustainability;</li> <li>▪ Easy to communicate and monitor.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ No clear operational guidance in the short run as policy impact on debt ratio is not immediate and limited</li> <li>▪ No economic stabilization feature;</li> <li>▪ Rule could be met via temporary measures;</li> <li>▪ Debt could be affected by developments outside the control of the government.</li> </ul> |
| <i>Budget balance rule</i>            | <ul style="list-style-type: none"> <li>▪ Clear operational guidance;</li> <li>▪ Close link to debt sustainability;</li> <li>▪ Easy to communicate and monitor.</li> </ul>  | <ul style="list-style-type: none"> <li>▪ No economic stabilization feature;</li> <li>▪ Headline balance could be affected by developments outside the control of the government.</li> </ul>  |
| <i>Structural budget balance rule</i> | <ul style="list-style-type: none"> <li>▪ Relatively clear operational guidance;</li> <li>▪ Close link to debt sustainability;</li> <li>▪ Economic stabilization function;</li> <li>▪ Allows accounting for other one-off and temporary factors.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Correction for cycle is complicated especially for countries undergoing structural changes;</li> <li>▪ Need to pre-define one-off and temporary factors to avoid their discretionary use;</li> <li>▪ Complexity makes it more difficult to communicate and monitor.</li> </ul>                                    |
| <i>Expenditure Rule</i>               | <ul style="list-style-type: none"> <li>▪ Clear operational guidance</li> <li>▪ Allows for economic stabilization;</li> <li>▪ Steers the size of government;</li> <li>▪ Relatively easy to communicate and monitor.</li> </ul>                              | <ul style="list-style-type: none"> <li>▪ Not directly linked to debt sustainability since no constraint on revenue side;</li> <li>▪ Could lead to unwanted changes in the distribution of spending if, to meet the ceiling, shift to spending categories occurs that are not covered by the rule.</li> </ul>   |
| <i>Revenue rule</i>                   | <ul style="list-style-type: none"> <li>▪ Steers the size of government;</li> <li>▪ Can improve revenue policy and administration;</li> <li>▪ Can prevent pro-cyclical spending.</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Not directly linked to debt since no constraint on expenditure side;</li> <li>▪ No economic stabilization feature.</li> </ul>   |

1 Source: IMF, 2012.

Thus we might conclude that Debt Rules and Budget Balance Rules have the strongest and direct connection with public debt. Based on these findings, we may report that while studying the effects of fiscal rules on bond yields, these two types of fiscal rules should surely taken into account as the most important ones measuring the quality of fiscal rules.

### *Fiscal Councils*

Fiscal councils are newly introduced institutions to ensure higher fiscal discipline in a country. According to the definition of IMF, a fiscal council is an independent public institution informing the public debate on fiscal policy. In addition, a fiscal council can perform one or several of the following functions: (i) contribute to the use of unbiased macroeconomic and budgetary forecasts in budget preparation (through preparing forecasts, or proposing prudent levels for key parameters), (ii) identify sensible fiscal policy options, and possibly, formulate recommendations, (iii) facilitate the implementation of fiscal policy rules, and (iv) cost new policy initiatives (Debrun, Kinda, Curristine, Eyraud, Harris, and Seiwald, 2013). In other words, fiscal councils have the functions to control fiscal policy yet, they are not decision makers but only facilitators.

Despite being newly established, impacts of fiscal councils are already remarkable enough to encourage lots of countries to introduce the same institutions. In the European Union, we may find the Treaty on Stability, Coordination and Governance, mandating an “independent body” at the national level to monitor national fiscal policy rules and produce macroeconomic and budgetary forecasts used for budget preparation in each euro area member state (Debrun, Kinda, Curristine, Eyraud, Harris, and Seiwald, 2013). Additionally establishment of fiscal councils in developed countries such as Australia and Canada and emerging and developing countries such as Croatia, Serbia, Romania and Africa have encouraged other countries to create the same legislative bodies.

Yet, it is still controversial whether fiscal councils can be regarded as substitutes of fiscal rules or not. As functioning of both fiscal rules and fiscal councils is dedicated to keep discipline in fiscal policy and fiscal imbalances, we may think that instead of considering them as substitutes we should state that fiscal councils and fiscal rules can reinforce each other. Moreover, following the above-mentioned definition of fiscal councils, we can conclude that the role of fiscal councils can be linked to fiscal rules; as in a fact, they should control adherence to fiscal rules and in such a way support them to operate systematically. Thus, we might distinguish three categories of countries: (i) countries where fiscal councils are prior to fiscal rules; (ii) countries where fiscal rules are prior to fiscal councils; (iii) countries where fiscal councils and fiscal rules operate together accordingly. However, countries which belong to the last category have the optimal results proving that in case of the coordinated operation of fiscal rules and fiscal councils, government can achieve decreased costs of borrowing money even in bad times.

## EMPIRICAL ANALYSES

In our attempt to test the above-mentioned statements about positive relationship between fiscal imbalances and long term interest rates as well as negative correlation between the quality of fiscal institutions and sovereign bond yields, we would like to review cases of industrialized countries and developing countries separately as the difference in the levels of economic development does not give us the possibility to generalize conclusions made for industrialized countries.

### *Industrialized Countries*

In order to test a hypothesis whether fiscal deterioration pushes bond yields up in industrialized countries, we would like to consider examples of EU countries. For our analyses we use the dataset provided by Eurostat on interest rates of 10 year sovereign bonds and general government gross debt calculated as the percentage share of GDP. According to the latest data, in 2013 the lowest interest rates on sovereign bond yields were recorded for Germany, while the highest record addresses to Greece<sup>1</sup>. Thus we decided to elaborate the issue at hand for these two countries.

The Figure 1 illustrates the dynamics of general government gross debt and the Figure 2 – the dynamics of sovereign bond yields for Germany and Greece in the time period 2002-2013.

As we can notice, Greece is an excellent example to present how an increase in fiscal indiscipline can push long term interest rates up. The Figure 1 shows that the considerable increase in government debt started since 2008. To be more precise, the increase during only four years from 2007 till 2011 was 62,9 percentage point. Since 2009 when government debt reached 129,7%, interest rates started increasing together with annual increase in fiscal deterioration. Finally, in 2012 they reached 22,50% as a response to the 22 percentage point increase in government debt in the previous year. The fact that the increase in interest rates followed to the increase in government indebtedness underlines that causality of these changes comes from the increase in government debt. We should also notice that financial crisis considerably supported to get such dramatic results however interest rates apparently reflected the increase in fiscal indiscipline.

1 See the Figure 1 and Figure 2.

Figure 1.  
General government gross debt in percentages of GDP in 1995-2013<sup>1</sup>.

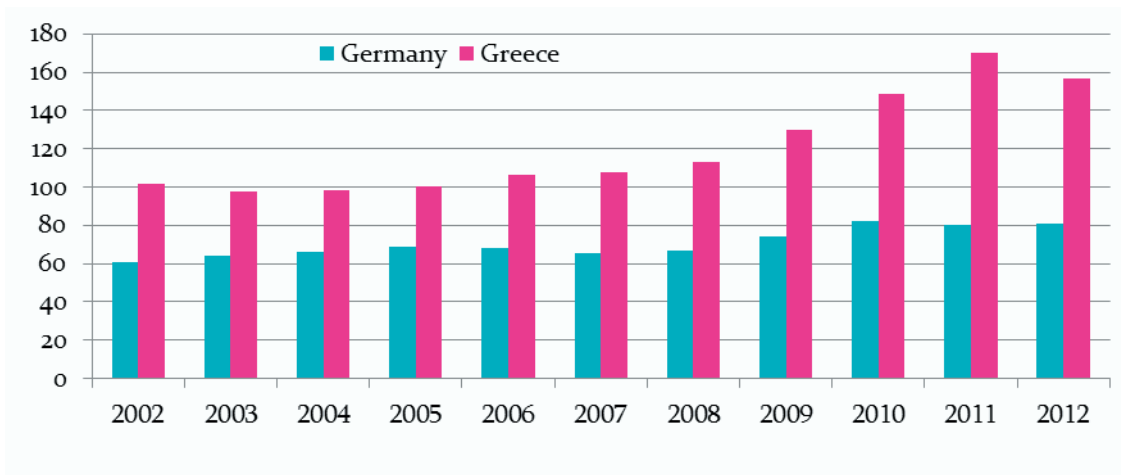
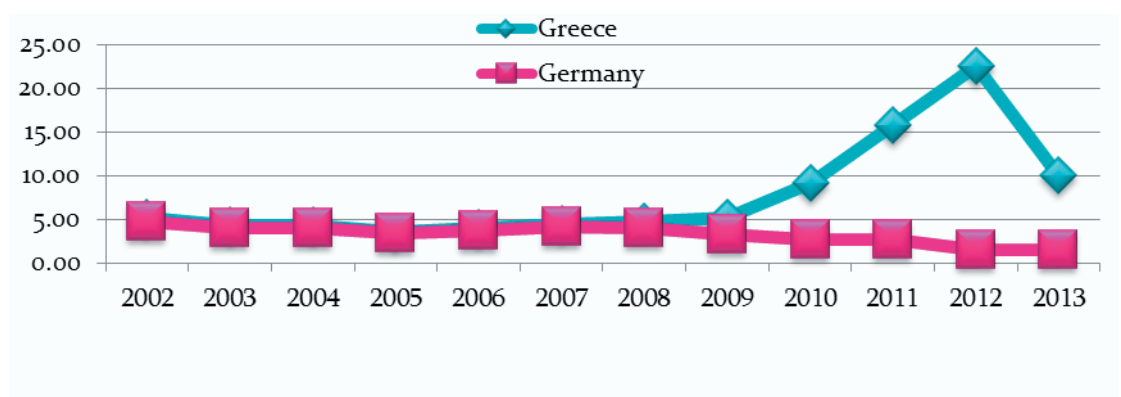


Figure 2. Annual data of 10 year's maturity government bond yields in 1995-2013<sup>2</sup>.



1 Source: Eurostat - [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=irt\\_lt\\_mcby\\_a&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=irt_lt_mcby_a&lang=en).

2 Source: Eurostat-<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsdde410&plugin=1>.

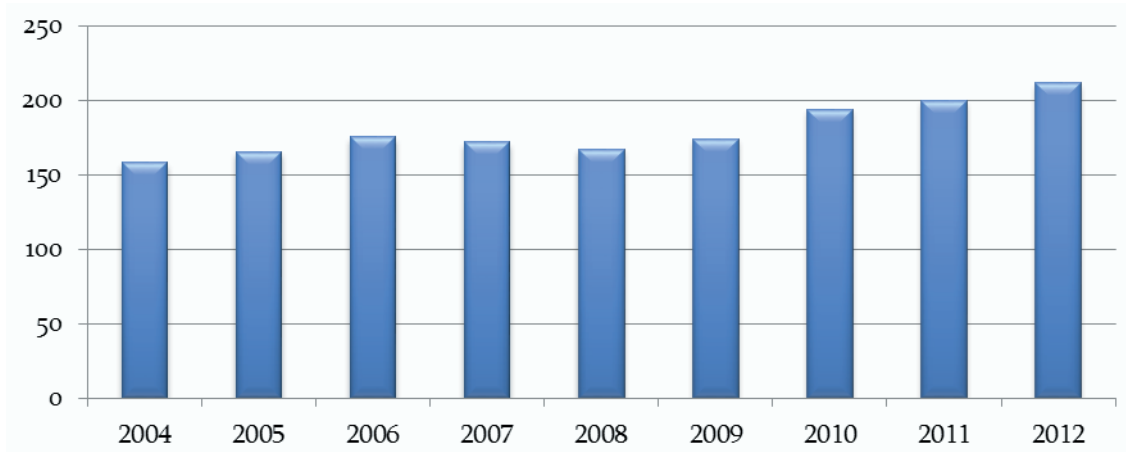
As for impacts of fiscal institutions, Greece does not have national fiscal rules. The country only follows supranational rules – BBR and DR according to the Maastricht Criteria (1992) and euro area (2001). Based on the evaluation of IMF Working Paper (Kinda, Kolerus, Muthoora and Weber, 2013) a number of institutional reforms are underway. Moreover, under the “fiscal compact”, the government commits to adopt a structural budget balance rule according to which the deficit should not exceed 0.5 percent of GDP. Besides that, the country will adopt automatic correction mechanism in its constitution or equivalent legislation. As for fiscal councils, they do not operate in Greece according to the Working Paper of IMF (Debrun, Kinda, Curristine, Eyraud, Harris, Seiwald, 2013). To conclude, an example of Greece confirms that the relationship between fiscal indiscipline and bond yields is strictly positive. Additionally, as the country has neither national fiscal rules nor fiscal councils the positive effects of fiscal indebtedness is not balanced by expected negative effects of these fiscal institutions. As a result an increase in fiscal indebtedness has direct positive reflections of on long-run interest rates.

On the contrary, Germany presents the case where public indebtedness is characterized by stable level. Although, the remarkable increase had place in 2009 by 7,7 and in 2010 by 8 percentage points, both cases were caused by the financial crisis. However, since 2011 the government debt started decreasing. That is why investors did not have a reason to lose any kind of reliability towards the country. The process was finally reflected in the decreasing trend of bond yields. Additionally, based on evaluation of IMF, Germany is the country out of 5 countries which has adopted national fiscal rules on the constitutional level. Precisely, BBR operates on the constitutional level which ensures the highest strength and quality of the rule. Additionally, country has national ER on political commitment level. As for fiscal rules, German Council of Economic Experts functions in the country since 1963. It ensures the implementation of existing fiscal rules. To conclude, Germany presents an excellent

example on the one hand enlightening that the fiscal discipline ensures decreasing trend in interest rates and on the other hand the case exhibits that strong fiscal rules and functioning of fiscal councils have negative impacts on sovereign bond yields.

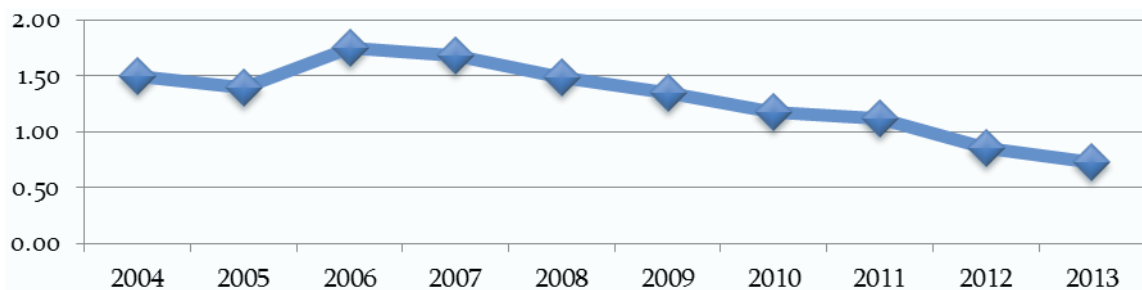
In line with considering industrialized countries, we would like to review the case of Japan because of its exceptional characteristics. First we should notice that this case presents an interesting example as Japan’s fiscal deficit is considerably high. In 2012 public debt to GDP ratio reached 212 %.

Figure 3.  
Government Debt to GDP Ratio of Japan (presented in percentages)<sup>1</sup>.



Hence, we should predict substantial increase in yields, whereas actual yields still remain the lowest among advanced economy countries. According to the latest statistics, in 2013 the bond yields encountered only 0,72 %. Such a small figure states that the country apparently enjoys the lowest cost of indebtedness while already possessing high amount of government debt.

Figure 4.  
Government Bond Yields of Japan <sup>2</sup>.



To explain this phenomenon, we tried to elaborate this issue with connection to fiscal institutions. First of all, we should notice, that compared to other countries Japan has long history of fiscal rules dating back to 1947(Sugimoto and Ueda, 2013). However, according to IMF evaluation, ER operates based on political commitment and BBR on the statutory basis and finally their coverage is evaluated on the central government level. It is remarkable, that PAYGO, The Fiscal Management Strategy introduced in 2010, is not described in the dataset. Actually, it is a pay-as-you go rule, implying that any measure that involves increases in expenditure or decreases in revenue needs to be compensated by permanent reductions in expenditures or permanent revenue-raising measures. However, as PAYGO does not set numerical limits on large budgetary aggregates it is not considered as provider of procedural rules and thus finally it is missed in the dataset. As for fiscal councils, they are presented by the Japan Fiscal System Council, operating since 1950. However, the impacts of this system are not strong as the strategy and policy determined by it is not stable and is changed frequently. Thus, because the country often modifies and reforms rules without any sanctions fiscal institutes cannot be considered as the main explanatory factor of bond yield tendencies in Japan.

1 Source: Trading Economic - <http://www.tradingeconomics.com/japan/government-debt-to-gdp>.

2 Source: Eurostat-<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsdde410&plugin=1>.

For further elaboration, we may review statements of Gruber and Kamin (2010) while examining fiscal processes in Japan, analyzing that issuance of Japanese government debt does not boost required yields. They explain this phenomenon by the home bias of Japanese investors and the entrenched nature.

Thus, we see that countries might differ importantly from each other by special economic conditions which cause further complications of possible explanations of the issue at hand.

**Developing Countries**

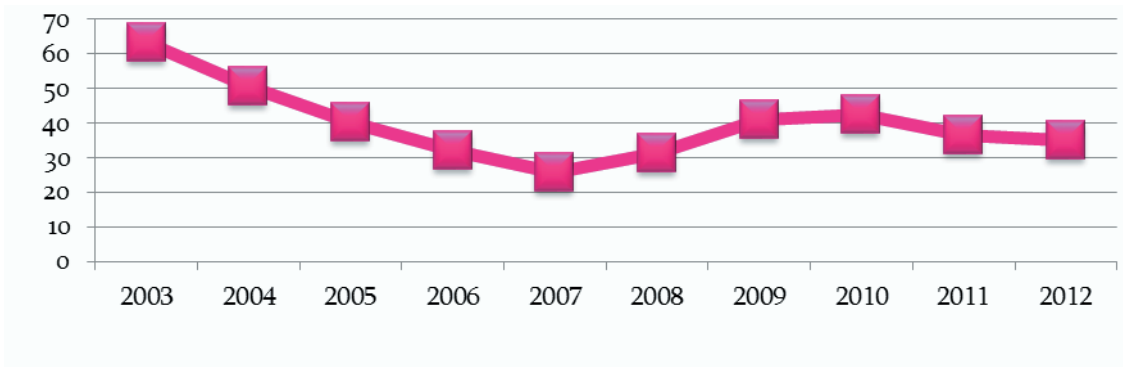
To present the more complete picture of fiscal imbalances, fiscal institutions and their impacts on sovereign bond yields we would like to review the conditions in developing countries as well.

The feasibility of the topic can be the current absence of relevant data for all developing countries. We should clarify that we do not have problems with collecting data, but we have problems with availability of the necessary data. Unfortunately, some developing countries still do not have well formed fiscal rules in order to evaluate their quality. Yet, we should state, that countries are more likely to provide legislative framework in this direction especially after the financial crisis. So in the nearest future we may expect to increase the number of emerging countries that will provide relevant data for the research. Currently, as we checked in IMF dataset, there are 47 developing countries which have at least one type of fiscal rules<sup>1</sup>.

Based on the intuition stated in case of developed countries, we may expect to keep positive dependence between fiscal imbalances and bond yields. However, as we refer to developing countries we should take into our account the growth and the amount of real GDP. The reason is that generally a growth rate may be considerably high because of a very low initial level of GDP, while despite the high growth rate the GDP itself may still remain small in comparison with developed countries. So we should take into consideration that despite the fact that several countries have high GDP growth rates they are still characterized with small real GDP or small GDP per capita in case of highly populated countries (for example India). It means that facing low level of real GDP level, investors consider a country to be economically weak which is associated to higher risks of government default. Thus, the impact of the deterioration of fiscal deficit should have much stronger impacts on sovereign bonds than it may have in any developed countries. However, we cannot state this intuition until we examine the concrete example of a developing country. So we would like to bring an example of Georgia. The Figure 5 and the Figure 6 present the dynamics of the government debt and 10 year interest rates on sovereign bonds respectively.

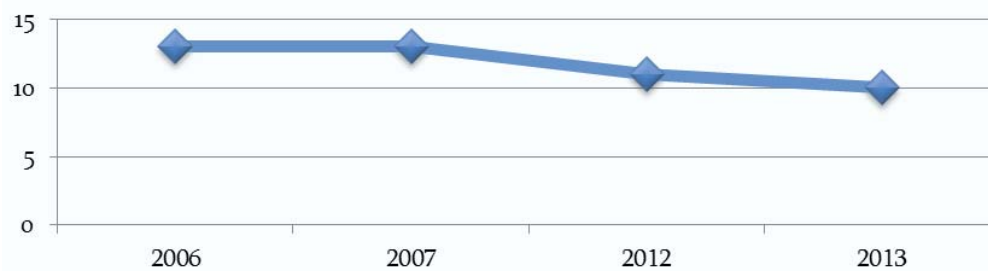
**Figure 5.**

**Government Debt to GDP Ratio of Georgia, (presented in percentages)<sup>2</sup>.**



**Figure 6.**

**10 Year Interest Rates on Sovereign Bonds of Georgia, (presented in percentages)<sup>3</sup>.**



1 See the full list in Appendix.

2 Source: Ministry of Finance of Georgia - <http://mof.ge/DebtFinance>.

3 Source: Ministry of Finance of Georgia - <http://mof.ge/DebtFinance>.

We might notice that while public debt was increased in the last years, long-run interest rates are more or less stable in the last 4 years. Why do not we have strong correlation between fiscal imbalances and bond yields? We may consider two cases. First, interest rates are enough high in comparison with developed countries, so as the initial base is already high the further increases cannot be impressive. To illustrate our statement let us compare interest rates in Georgia and in Japan in the period of 2012-2013. In case of Georgia, the least figure is 10, 1 % while in case of Japan the latest figure reaches only 0,72 %<sup>1</sup>.

However, what is more important, that is the nature of fiscal policy in developing countries. In order to identify the characteristics of fiscal policies in third world countries, we have elaborated one of the most interesting papers on this topic prepared by Ethan Ilzetzki and Carlos A. Vegh (2008). They use econometric tools: instrumental variables, simultaneous equations and time-series methods to examine dataset for 49 countries in the period of 1960-2006. They conclude that the fiscal policy is indeed pro-cyclical in developing countries. In order to clarify, pro-cyclical character means that developing countries follow fiscal policy which may even exacerbate the business cycle. Authors facing that kind of paradox find answers in two directions; first, because of imperfections in international credit markets developing countries have very limited possibilities to borrow in bad times and second, political economy mostly follows the idea that good times encourage fiscal activities, in other words the causality goes from the business cycle to fiscal policy. Furthermore, we investigated the issue by reviewing IMF report (Fiscal Affairs Department of IMF, 2009) finding out that mostly, emerging and developing countries are facing several constraints during crisis especially if they follow IMF arrangements. As a result, IMF fiscal affairs department concludes that countries both with and without arrangements are somehow constrained, yet countries with IMF arrangements are, on average, faced more binding constraints than countries without arrangements or countries with flexible credit line arrangements. So, we may expect that in emerging and developing countries there are other factors like the nature of fiscal policy and the constraints caused by imperfections of international credit market together with IMF arrangements which overall pose several further constraints for borrowing during economic downward. To conclude, developing countries might borrow in good times when investors' reliability is higher and thus the default risk is lower. That is why we can report, that the increase in fiscal indebtedness does not have as strong influence on bond yields as in case of industrialized countries.

As for fiscal institutions, Georgia is a typical developing country underlining once more that generally developing countries do not have systematically formed fiscal rules, thus it is definitely not possible to analyse their quality and strength. According to the dataset presented in the paper of Kinda, Kolerus, Muthoora and Weber (2013) fiscal rules are not presented in the Georgian legislative framework at all so we don't have negative impact generator institutions on bond yields. However, based on the Policy Paper of IMF (2013) Georgia Parliamentary Budget Office established in 1997 is named as the fiscal council in the country. Yet, as the country still faces the higher interest rates, it is obvious that an absence of fiscal rules does not enable fiscal council to work effectively. As a result, Parliamentary Budget Office does not have enough influence to cause the decrease in bonds yields. Hence, we might conclude that fiscal rules are the main impact generators and fiscal councils serve to strengthen their impacts. Thus, once more, on an example of a developing country we see that the simultaneous establishment of fiscal rules and fiscal councils might yield the higher and stronger impacts than in case they are not established or only one of them is introduced in the country.

## CONCLUSIONS

Finally, we would like to state that for both developed and developing countries fiscal imbalances are characterized by the positive correlation with interest rates of sovereign bonds. However in developing countries, because of pro-cyclical fiscal policy, no access to the international credit market together with IMF arrangements and constraints that developing countries face, deterioration of fiscal indebtedness does not have as strong impacts on sovereign bond yields as in case of industrialized countries. As for fiscal rules, for both developed as well as developing countries, we found the strong negative influence: the stronger the fiscal rules are the lower interest rates the government face. Furthermore we analyzed the functions and effectiveness of fiscal councils and concluded that in case of simultaneous establishment of fiscal rules and fiscal councils, the country can achieve more considerable decrease in the cost of indebtedness.

<sup>1</sup> See the Figure 4 and Figure 6.

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**Appendix**

**The list of developing countries possessing at least one type of fiscal Rules.**

**Source: IMF, 2013.**

|                            |                     |                                  |
|----------------------------|---------------------|----------------------------------|
| • Argentina                | • Ecuador           | • Nigeria                        |
| • Armenia                  | • Equatorial Guinea | • Norway                         |
| • Benin                    | • Gabon             | • Pakistan                       |
| • Botswana                 | • Grenada           | • Panama                         |
| • Brazil                   | • Guinea-Bissau     | • Peru                           |
| • Bulgaria                 | • India             | • Poland                         |
| • Burkina Faso             | • Indonesia         | • Romania                        |
| • Cameroon                 | • Jamaica           | • Russia                         |
| • Cape Verde               | • Kenya             | • Senegal                        |
| • Central African Republic | • Kosovo            | • Serbia                         |
| • Chad                     | • Mali              | • Sri Lanka                      |
| • Chile                    | • Mauritius         | • St. Kitts and Nevis            |
| • Colombia                 | • Mexico            | • St. Lucia                      |
| • Congo, Republic of       | • Namibia           | • St. Vincent and the Grenadines |
| • Costa Rica               | • Niger             | • Togo                           |
| • Cote d'Ivoire            | • Dominica          |                                  |

## საბიუჯეტო დისბალანსისა და ფისკალური მუქანობების ზემოქმედება სუვერენული ობლიგაციების შემოსავლიანობაზე

იაშა (იაკობ) მესხია

ეკონომიკის მეცნიერებათა დოქტორი, პროფესორი, ივანე ჯავახიშვილის  
სახელობის თბილისის სახელმწიფო უნივერსიტეტის საერთაშორისო  
ბიზნესის კათედრის ხელმძღვანელი

თინათინ ახვლედიანი

ვარშავის უნივერსიტეტის საერთაშორისო  
ეკონომიკის პროგრამის მაგისტრანტი

### რეზიუმე

სტატიაში გამოკვლეულია სუვერენული ობლიგაციების შემოსავლიანობაზე ფისკალური დისბალანსისა და ფინანსური მუქანობების ზემოქმედების საკითხები. საერთაშორისო სავალუტო ფონდის მიერ დადგენილი ფისკალური წესების (ჩარჩო პირობები-შეზღუდვები ბიუჯეტის დეფიციტზე, ვალების მოცულობაზე და მათი მომსახურების ხარჯებზე) და ფისკალური საბჭოების (საბიუჯეტო-საგადასახადო პოლიტიკის, რეკომენდაციების, მაკროეკონომიკური პროგნოზების შემმუშავებელი დამოუკიდებელი სახელმწიფო ინსტიტუტები) ეფექტურობის შესახებ ბოლო პერიოდში გამოქვეყნებულ მონაცემებზე დაყრდნობით გაანალიზებულია განვითარებული და განვითარებადი ქვეყნების გრძელვადიანი სახელმწიფო ობლიგაციების შემოსავლიანობის ფორმირების თავისებურებები. კვლევამ გვიჩვენა, რომ იმ დროს, როდესაც ფისკალური დისბალანსის შედეგად სუვერენული ობლიგაციების საპროცენტო განაკვეთები დადებითი კორელაციით სახიათდება, ფისკალური შეთანხმებების ძალისა და ხარისხის დონეს, ფისკალური წესების გათვალისწინებით, უარყოფითი ზემოქმედება აქვს. განვითარებული და განვითარებადი ქვეყნების ფისკალური დისბალანსი ხასიათდება სუვერენული ობლიგაციების საპროცენტო განაკვეთების დადებითი კორელაციით. თუმცა, განვითარებადი ქვეყნებში, პროციკლური ფისკალური პოლიტიკის, საერთაშორისო საკრედიტო ბაზარებზე და სსფ-ს შეთანხმებებზე ხელმძღვანელობისა და სხვა ენდოგენური შეზღუდვების გამო ფისკალური დავალიანების გაუარესებას არ აქვს ისეთი ძლიერი ზემოქმედება სუვერენული ობლიგაციების შემოსავლიანობაზე, როგორც განვითარებულ ქვეყნებში. რაც შეეხება ფისკალურ წესებს, როგორც განვითარებულ, ისე განვითარებადი ქვეყნებში იგი ძლიერი ნეგატიური გავლენით ხასიათდება: რაც უფრო ძლიერია ფისკალური წესები, მით უფრო დაბალია საპროცენტო განაკვეთები. ნაშრომში გაანალიზებულია აგრეთვე ფისკალური საბჭოების ფუნქციები და ეფექტურობა და გაკეთებულია დავასკვნა, რომ ფისკალური წესებისა და ფინანსური ინსტიტუტების ერთობლივად, შეთანხმებულად მოქმედების დროს, ქვეყანას შეუძლია მიაღწიოს ფინანსური დავალიანების ბევრად უფრო მნიშვნელოვან შემცირებას.

საქართველოში, ისევე როგორც მრავალ განვითარებადი ქვეყანაში, დამოკიდებულება ფისკალურ დისბალანსსა და სახელმწიფო ობლიგაციების შემოსავლიანობას შორის სპეციფიკურია. საქმე იმაში მდგომარეობს, რომ რეალური მთლიანი შიდა პროდუქტის დაბალი დონის გამო, ინვესტორები საქართველოს სუსტად განვითარებულ და დეფოლტის მაღალ რისკიან ქვეყანად მიიჩნევენ. აქედან გამომდინარე თვლიან, რომ ბიუჯეტის დეფიციტის გამწვავებამ შეიძლება ძლიერი ნეგატიური გავლენა მოახდინოს სუვერენული ობლიგაციებზე, ვიდრე ნებისმიერ განვითარებულ ქვეყანაში. ფაქტობრივად უკანასკნელ წლებში საქართველოს სახელმწიფო ვალის ზრდას თანახლდა მეტ-ნაკლებად სტაბილური მაღალი საპროცენტო განაკვეთები და არამდგრადი ფისკალური წესები. შესაბამისად, პარლამენტის საბიუჯეტო ოფისი, როგორც ფისკალური საბჭოს ფუნქციების შემსრულებელი, საკმარის ზემოქმედებას ვერ ახდენს სუვერენული ობლიგაციების შემოსავლიანობის კლებაზე და ბიუჯეტის დეფიციტის შემცირებაზე.

№3 აპრილი 2014