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The Impact of the Public Debt Structure in the European Union Member Countries on the Possibility of Debt Overhang

Summary

The aim of the article is to indicate the significance of the correlations between the volume of public debt and its structure and also to indicate the activities in the institutional and instrumental sphere which should assist the indebted European Union countries, those from the Eurozone in particular, in reducing their debt by optimising its structure. In the modern globalised world whether debt overhang changes into a debt avalanche growing according to the snowball effect depends at the given time on the combination of the size of the debt, its structure, each country's individual specificity and international settings. Establishing a certain chamber of independent fiscal institutions under the supervision of both the European Commission and the European Parliament would have certain image advantages and practical advantages in terms of proper monitoring of the public debt structures in the EU countries.

Key words: public debt structure, debt overhang, independent fiscal institutions

1. Introduction

The situation of the southern members of the Eurozone in the last decade has manifested a regularity known for years which accompanies a sharp increase in the level of public debt. A country in such a situation may attempt to limit the rate of debt growth, but it is not capable of reducing its volume immediately or of refraining from incurring further debts in particular.

The radical austerity policy requested by creditors worsen the economic crisis and a country is even less likely to pay its old debts without incurring new ones. It results in the occurrence of public debt overhang, in the sense that a significant debt places limits on economic growth and a weaker economic growth impedes the debt reduction.

The aim of the article is to indicate the significance of the correlations between the volume of public debt and its structure and also to indicate the activities in the institutional and instrumental sphere which should assist the indebted European Union countries, those from the Eurozone in particular, in reducing their debt by optimising its structure. Arguments in favour of activities affecting the investment structure from the perspective of proportions between domestic and foreign investors, and between different categories of foreign investors will be presented in the paper, also the issue of the development of the term structure of public debt will be raised.

The author claims that the current research on debt overhang and proposals aiming at limiting it focus on the total debt size and not enough attention is paid to its structure. One of the reasons can be the fact that a universal solution for the whole group of countries the existing public

debt overhang concerns is being sought. In the modern globalised world whether debt overhang changes into a debt avalanche growing according to the snowball effect depends at the given time on the combination of the size of the debt, its structure, each country's individual specificity and international settings.

Appropriate monitoring of the public debt structure should provide detailed information for the national and EU authorities to take appropriate decisions that will limit the harmful effects of debt on economic growth. For this reason, it seems priority to create in all of the European Union countries appropriate independent fiscal institutions that would ensure the flow of detailed, current and complete data on the debt structure. National governments are not always willing to do so for political reasons.

Probably the awareness of the public debt structure in the EU countries itself will not prevent further debt crises from happening, but it may help to reduce the scale and effects of such crises owing to faster signalling threats and more precise indicating the weaknesses and needs of the countries requiring help.

In a country with a public debt overhang, the problem of the structure of this debt should be treated with particular seriousness. The higher the level of the debt, the more important the characteristics of the debt components are for the likeliness of the given country to repay it. In this article, it is assumed that debt overhang manifests itself when the relation of public debt to GDP amounts to over 90% [as cited in Reinhart and Rogoff 2010, p. 573], though the phenomenon of debt overhang seems to be more qualitative than quantitative in nature and any parameterisation can be debatable [Kobayashi 2015, p. 251]. In principle, the paper concentrates on general government debt, including government debt (sovereign), local government debt and the debt of pension funds. In some issues, special attention can be drawn to sovereign debt, particularly where it is forced by the data availability.

2. Classifications of Public Debt Structure as a Reflexion of Potential Complexity of the Problem of Debt Overhang

In the case of the European Union member states, and of the Eurozone countries in particular, the amount of approaches to public debt structure outlined below should be seen as a multidimensional matrix of potential differences in the quality of individual countries' public debt and in consequence differences in the abilities to repay it and to preserve financial stability. It is obvious that in good economic times the differences in the structure of government debt of individual countries do not influence the variation in those countries' capacities to service the debt as much as during economic downturn. Diversification of the debt structure between countries belonging to the area of economic and political integration, particularly when combined with a significant amount of debt and an ageing society, can in a crisis situation complicate and delay helping countries in crisis, hindering creating universal anti-crisis instruments and solutions, which would be more effective thanks to the economy of scale [INTOSAI 2010, p. 6]. In the case of the Eurozone, the existence of individual national policies of public debt management, of its structure in particular, with a unified monetary policy can lead to difficulties in effective use of this policy for anti-crisis activities [ECB 2012, p. 51].

Based on approaches used by statistical offices and described in the literature on the subject, public debt structure can be classified by [Holtfrerich et al. 2015, p. 18; Owsiak 2008, p. 246]:

- the type of public entity being the debtor – as above, government debt, local government on various levels debt and the debt of pension funds,
- what country the creditor (investor) comes from – from the debtor's (resident's) country, from a foreign country (non-resident), and also a more detailed description of the creditor's country of origin according to continents, groups of countries or names of countries,
- the type of creditor's activity – financial and non-financial institutions and households (often combined with the criterion of the creditor's country of origin) with the possibility of describing more detailed categories,
- the place of debt issuance – national debt and foreign debt,
- the currency of debt payment – national currency and foreign currencies, most frequently US dollar, euro, Swiss franc and others, recently more and more often Chinese yuan,
- the type of interest – fixed, variable, or indexed interest rate,
- initial agreed and actual remaining residual maturity of debt (maturity of the debt obligation) – short-term debt, medium-term and long-term liabilities,
- general government debt before consolidation and after consolidation, that is after netting out mutual payables and receivables by the entities of the public finance sector,
- actual public debt (balance sheet liabilities) and contingent debt (off-balance sheet liabilities, e.g. guarantees),
- in the European Union countries which have not unified the domestic methodology of calculating public debt with reporting for the needs of the EU, a debt calculated according to the Excessive Debt Procedure and a debt in the domestic context (for example in Poland) can be distinguished.

Less frequently in practice the following types are used:

- gross and net debt (after deduction of payments from other entities),
- a productive debt (transformed into assets that can secure or even generate payment of the debt) and a deadweight debt (consumed),
- a nominal debt (initial capital without indexation or capitalisation) and a real debt.

Obviously, it is not a complete list of approaches to the internal structure of public debt, but only a reminder of basic classifications of this structure, which can be referred to further in the article. The following two examples of criteria for public debt classification indicate the existence of considerable differences between the European Union countries in the currency and term structures of debt.

A detailed comment on the all the above classifications would go beyond the scope of this paper, however the features of a correct structure of public debt most often include the following [Kuhle 2013; Picarelli 2015]:

- as small a share of foreign investors as creditors as possible, as well as a small portion of debt issued abroad,
- a small share of debt in foreign currency,
- as long maturity period as possible,
- a big share of fixed-interest debt,
- a big share of productive debt in relation to deadweight debt.

In principle, a possibly significant share of potential debt, e.g. concerning sureties, in relation to actual debt is preferred, however it can significantly depend on the unique character of a given country. The situation is similar when it comes to the relationship between government debt, local government debt and pension funds debt [[Kuhle 2013, p. 322]. Debt before and after consolidation, gross and net debt, nominal and real debt as well as compliance with EDP rules or domestic requirements concern first of all the way debt is calculated. However, discrepancies that appear at the time of calculation can also be of informative character and indicate the risks of rapidly increasing burden on economy with the repayment of debts in a crisis situation [Nelson 2013, p. 11].

The debt structure according to currencies and dates of repayment is most often analysed. In the Eurozone countries, debt in Euro is so dominating that with respect to this group of countries the currency structure of public debt does not seem to constitute a problem. The situation in the EU countries outside the Eurozone can be different. In 2016 the debt in foreign currencies amounted to 28.7% of the total debt in Hungary, 35.1% in Poland, 44.8% in the Czech Republic, 52.4% in Romania, 76.5% in Croatia and 82.1% in Bulgaria [Eurostat Database, table: gov_10dd_dcur]. However, in relation to the Eurozone countries, the structure of foreign investors (non-residents) according to their investment currency needs to be taken into account. If almost 70% of the debt of Slovenia, Finland, Estonia and Lithuania and over 70% of the debt of Austria, Latvia or Cyprus are in the hands of non-residents, then despite the domination of the debt in euro, the currency risk can be hidden in character. It will happen if other currency, like US dollar, yen or yuan, is the initial and target currency for large enough part of those investing in debt denominated in euro [Harms and Lutz 2014, p.17].

In 2016 the portion of the short-term debt with a residual maturity of less than 1 year in the total debt amounted to over 10% in only 7 countries of the EU, however, three countries with a high level of debt in relation to GDP can be found in this group and they are France, with short-term debt of 10.1% with 96% in the relation to GDP, Italy 13.1% and 132.6% respectively, and Portugal 16.7% and 130.4% respectively. Sweden has the highest in the EU share of short-term debt of 21.6% but with 41.6% of GDP. Attention should be drawn to Hungary, whose debt in relation to GDP amounts to 74.1% but the share of the short-term debt to as much as 18.5% [Eurostat 2017, p. 3]. Combining in good times a relatively big short-term debt with a big debt held by non-residents (those operating with currencies other than euro in particular) can in the time of crisis lead to increasing deterioration of the term and investor structure. Economic difficulties of a given country mean a more considerable risk of loss for investors and they become less willing to give long-term loans with low interest rates, and then a country with an unstable economy is forced to borrow more, at higher costs and for a shorter period of time from foreign countries [Pienkowski 2017, p. 13-14]. It causes a growing absorption of national financial resources, which are no longer available for the development of economy [Holtfrerich et al. 2016]. It is one of the examples of a situation which gives rise to conditions causing negative influence of debt on economic growth, that is activation of the mechanism of debt overhang.

3. An Illustration of the Problem of Public Debt Term Structure

At this point the example of Russia, a country outside the European Union, is chosen as a starting point. The countries known as PIIGS (Portugal, Italy, Ireland, Greece and Spain) in the European Union constitute a heterogeneous group in terms of the initial level of public debt at the beginning of the last financial crisis (e.g. in 2007 in Ireland the debt in relation to GDP amounted to 23.9% and in Greece 103.1%, according to Eurostat Database, table gov_10dd_edpt1). What is more,

a fast growth of the debt in those countries was largely generated by factors outside the structure of the debt itself, particularly the term structure, like problems of the banking sector and of the real estate market in Ireland and in Spain. Those factors diverted researchers' attention away from the potential influence of the initial structure of public debt on the debt growth rate and the possibility of limiting the scale of the collapse of public finance in the crisis-stricken countries.

The circumstances of the occurrence of the crisis in Russia in 1998 can serve as an illustration of the importance of an adequate structure of public debt for a country's financial stability. August 1998 is considered to be the time when the crisis started. In the earlier years of 1995, 1996 and 1997, the rate of Russia's public debt to GDP amounted to 50%, 48% and 50% respectively, only to grow to 75% at the end of the crisis 1998 [Pinto and Ulatov 2010, p. 14]. The fiscal deficit in relation to GDP remained at the levels of 2.2%, 2.5%, 2.4% and 1.3% respectively. However, the debt servicing costs in relation to GDP grew from 3.6% in 1995 to 5.9% in 1996, and in the years 1997-1998 it remained at the level of 4.6%. As a proportion of budget revenue, it amounted to 28%, 47%, 38% and 43% respectively.

The problems with the increased burden caused by repayments are in the case of Russia placed on a breakdown of economic growth with simultaneous participation of short-term debt in public debt. In the years 1995-1998 the annual GDP growth amounted to -4.0%, -3.4%, 0.9% and -4.9% respectively. An average debt maturity was only 11 months, and at the same time over one third of the debt was in the hands of foreign investors [Congress, 1999, p. 8]. The ratio of short-term debt to reserves in December 1997 was 2.3, and a reversal of private flows during crisis over 20 billion dollars, just as much as during the big crisis in Mexico in the years 1993-1995 [Dadush et al., 2000]. It is a classic example of a situation in which, with it may seem a relatively safe level of public debt to GDP, a wrong term structure of debt becomes an accelerator of a debt increase deepening the problems caused by the breakdown of economic growth and hampers the growth in return.

4. Eurostat as a Source of Information on the Public Debt Structure in the EU Countries

A limited amount of comparable data compiled by Eurostat constitutes an important concern during examining the structure of public debt in the EU countries also in the context of debt overhang. The data set on the structure of the EU countries debts available with gov_dd_ggd online data code is not continued. A new set with gov_10dd_sdd online data code in the case of most EU countries except Malta and Croatia presents only the data from the years 2015-2016. Even for this period the data are not complete. About "Average remaining maturity of general government gross debt" data from 10 EU countries are missing. While the lack of older data can be justified by the differences between ESA97 and ESA2010 standards, which make the data according to both standards incomparable and therefore it should not be compared, such data gaps in current data concerning many EU countries are hard to justify. Moreover, the table entitled "average remaining maturity" includes only the data on the debt level in a given term category presented in millions units of national currency, which is irrelevant. These are only selected examples of gaps and inconsistencies in the data by Eurostat on the structure of the debts of the EU countries.

The available Eurostat database, which allows creating tables, is still a richer source of information on public debt structure than its text publications. So-called Eurostat newsrelease from the Structure of Government Debt series are in the form of announcements usually taking three pages with two graphs and one table [Eurostat 2017].

If there are such problems with the data on government debt structure, it is not at all surprising that Eurostat does not publish and does not even receive data on more advanced systems from the member states. The data concerning gross and net debt, nominal and real debt, productive and deadweight debt would be useful for the purpose of an in-depth assessment of the debts in individual countries. Also, information on public debt held by non-residents would be more useful if it showed shares of public and private non-residents and the degree of concentrating debt in the hands of for instance five or ten biggest investors-non-residents.

The above may lead to conclusions that detailed research on the condition of public debt structure and providing the data on this to external entities do not constitute priorities for Eurostat. Simultaneously, it is a threat for the quality of monitoring the risk of debt overhang like a snowball effect. For the below institutional solutions which support building safe structures of public debt in the EU countries to function properly, it would be essential to collect and make available more complex data on multithreaded structure of this debt by Eurostat.

5. Who Should Ensure the Appropriate Structure of Government Debt in the European Union Countries

In many EU countries fiscal councils (of fiscal responsibility), distinct from the central government, such as British Office of Budget Responsibility or Spanish Independent Authority for Fiscal Responsibility have been established. The European Commission maintains a database on its website [European Commission 2015] and it publishes Scope Index of Fiscal Institutions (SIFI). Variations in the SIFI index for institutions between 21 and 90 points out of 100 indicate the lack of uniform standards of controlling the fiscal activities of particular governments in the EU countries.

Taking into account the political character of the problem of public debt structure, it seems advisable to entrust fiscal institutions independent from the government with the role of monitoring in all the EU countries. Surely, a detailed scope of powers and obligations of such an institution is debatable, however, it is obvious that it cannot have extensive authority that would deprive the government of its powers. Independent fiscal institutions should first of all play the role of elements of an early warning system for phenomena increasing the risk of financial crisis in individual countries.

Even if in all the EU countries independent fiscal institutions similar to each other in terms of their scope of functioning were established, the problem of the flow of information and coordination of their activities on the level of the European Union remains unsolved. One of the possible solutions could be entrusting the European Commission with such tasks by virtue of its competencies in connection with the Excessive Debt Procedure. Functioning within the frames of the European Commission, a special structure of the Directorate-General for Economic and Financial Affairs (EFCIN), as the name suggests, has a broad range of competencies including promoting economic growth, higher employment, stable public finance and financial stability [EFCIN 2017]. However, a question arises as to whether institutions whose correct functioning requires a specific autonomy from the national governments should be coordinated by the executive on the EU level. It should be noted however that the European Commission does not have such competencies in the scope of debt as the governments of the member countries and the general EU budget must be balanced. Nonetheless, establishing a certain chamber of independent fiscal institutions under the supervision of both the European Commission and the European Parliament would have certain image advantages and practical advantages.

Regardless of its institutional setting, an agency that would coordinate the functioning of independent national fiscal institutions and would be able to receive detailed, complete and comparable data on the countries' fiscal situation including the public debt structure from them, could attempt to develop new models of assessing the risk of budget bankruptcy similar to the models used for enterprises.

In the author's opinion, appropriate monitoring of the public debt structure by relevant institutions in the European Union member countries together with a good coordination of those activities at European Union level would contribute to faster and fuller recognition of threats to the financial stability of those countries. Creating such effective mechanisms is not however possible without a deeper political and not only economic integration. Autonomous tendencies, particularly visible in the activities of the Polish and Hungarian governments, make it even more probable to strengthen the monitoring of the public debt structure in hard core countries of a regrouped in the future multi-speed Europe.

6. Conclusions

The lack of sufficiently strong political integration in contemporary European Union interferes with the functioning of all possible protections against the occurrence of the debt overhang problem including the one generated by an inappropriate structure of this debt. While the monetary policy was unified due to the introduction of euro in 19 countries out of 28 current members, fiscal policy is difficult to be unified.

The diversity of public debt structures in the EU countries, not only in terms of the abovementioned criteria of the maturity date, currency and participation of foreign investors (non-residents), can become a potential source of the effect of debt overhang in the time of economic downturn. In the changeable in its nature economy of the EU countries such a situation must be expected all the time.

Even if the structure of public debt seems of secondary importance considering its size, remembering the examples of debt crises in countries outside the EU, particularly those starting with a relatively low level of debt in relation to GDP like in the beforementioned example of Russia, it is important to bear in mind the potential influence of the initial structure of debt on the speed and scale of the crisis growth. The more important it should be for the countries where now debt overhang appears considering the relation of debt to GDP of over 90% to take care of appropriate structure of government debt.

The lack of appropriately detailed and complete data on the public debt structure in the EU countries in the resources of such a specialised EU agenda as Eurostat on the one hand can be indicative of relative little attention given by the EU authorities to this issue, and on the other hand of the lack of discipline in sharing current and complete data by the EU member states. Regardless of the dominating reason, such a state of affairs makes it difficult to monitor appropriately the changes in the structure of the EU countries' debts in order for those countries and the EU authorities to react fast and well to symptoms of the risk of debt crisis with the mechanism of debt overhang in the background. Potential institutional solutions that would support the appropriate analysis of public debt structure in the EU countries will not be effective without ensuring the responsible institutions access to appropriately detailed, current and comparable data on the structure by the member states.

The EU countries still need a complete network of independent and reliable fiscal institutions that would ensure appropriate transparency of the national governments' activities in the area of building the public debt structure, analysing this structure and enabling the EU authorities to become familiar with the situation so that they could take necessary measures preventing any emerging debt crises. This is reflected by the abovementioned considerable variation Scope Index of Fiscal Institution. The European Commission itself, a subordinate agenda or an institution under the joint patronage of the European Commission and the European Parliament could be entrusted with the potential coordination of the flow of information from the EU countries to the EU authorities and supporting independent fiscal institutions.

Regardless of the solution adopted, improving the monitoring of public debt structure in the EU countries as an essential activity that is to reduce the risk generated by debt overhang requires further steps deepening both economic and political integration. Under the current circumstances it is a difficult challenge the European Union is facing.

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