Republic of Serbia
Fiscal Council

Proposal for Harmonizing Different Methodologies of Public Debt Coverage and Measurement in Serbia

Belgrade, 24 February 2012

Summary

In Serbia, public debt is differently defined in two laws: the Public Debt Law and the Budget System Law. According to the definition of Public Debt Law, public debt is a sum of the Republic debt and all the guarantees issued by the Republic for the borrowing. According to this Law, the public debt value at the close of 2011 was 45.1% of GDP. The Ministry of Finance publishes and interprets this figure as the public debt level in Serbia. However, according to the Budget System Law, which also defines the fiscal rule relating to the upper limit of the public debt, the public debt also includes total debt of the social insurance funds and the local self-government. For this reason, the public debt value measured in this way was at the end of 2011 somewhat higher and equaled 46.6% of GDP. The Fiscal Council's obligation is to adhere to the public debt definition as set forth in the Budget System Law.

Apart from these two definitions, there are also some relevant measurements of Serbia's public debt which give, as a result, two different values. The International Monetary Fund (IMF) has the most rigorous interpretation of the public debt in Serbia. Namely, apart from the broadest capture of general government it additionally includes some arrears in its calculation. Consequently, the level of the public debt according to the IMF was 47.9% of GDP at the end of 2011. Slightly less rigorous is the methodology used in the European Union (Maastricht criterion). According to this methodology, the public debt coverage also relates to general government, but non-activated guarantees for the borrowing which the government issues to other legal entities are not included in the debt. In conformance with Maastricht, the public debt level at the close of 2011 was 42.5% of GDP. Starting from November 2011, the Ministry of Finance has also been publishing this figure on its website.

The view of the Fiscal Council is that it is necessary to harmonize the Public Debt Law and the Budget System Law with respect to different capture and measurement of the public debt, and that such uniformly calculated public debt value needs to be in official use by all relevant government institutions. For this reason, the Fiscal Council conducted a research the purpose of which was to offer a proposal for improving Serbia's public debt coverage and Measurement Methodology. The basic criteria used in forming the proposal were the economic justification and compliance with applicable international standards.

The Fiscal Council's proposal for harmonization of Serbia's public debt coverage methodology involves the following:

1) **Public debt comprises direct debt of general government** (including local self-government and JP „Putevi Srbije“), which is in conformance with the Budget System Law and applicable international standards. At the end of 2011, direct debt of general government amounted to 42.5% of GDP.
2) **Public debt includes activated guarantees**, which is in conformance with both existing Laws (Budget System Law and Public Debt Law) and all international standards. At 2011-end, activated guarantees equaled 0.96% of GDP.
3) **Public debt also includes a part of non-activated guarantees where a significant risk of activation is present**, i.e. the risk that the Republic will assume the obligation of debt servicing. The Fiscal Council proposes that at the time of issuance of each individual government guarantee, the probability of its activation should be assessed at the same time. Depending on the assessed risk, a certain portion of that borrowing would be included in the public debt (illustrative example: if the risk of activation of the guarantee issued for „JAT“ borrowing is 70%, the same percentage of the borrowing would be included in the public debt, while 30% would not be included). Such an approach is

optimal in economic terms and is in line with the recommendations of international institutions concerning the necessity of estimating the risk of guarantee activation. The Fiscal Council holds that the guarantees in accordance with the appraised risk should be included in the public debt; the illustrative assessment of the Fiscal Council is that at the end of 2011 the part of non-activated guarantees that needed to be included in the public debt was 1.14% of GDP.

4) **Public debt does not include non-activated guarantees where the risk of their activation is not significant.** The companies such as JP EPS, JP EMS, JP „Nikola Tesla" Airport, Flight Control Agency, Fiat automobili Srbija, etc. are current in repaying their guaranteed debts and there is not a significant risk that the burden of their repayment will have to be borne by the Republic one day. The Fiscal Council holds, therefore, that such obligations need to be excluded from the public debt of Serbia. Moreover, such interpretation is in conformance with the EU methodology; however, the current regulations in force as well as the IMF methodology (for Serbia, but not for other countries as well) classify all issued guarantees in the public debt. The Fiscal Council's estimate is that issued guarantees which were not to be included in the public debt at the close of 2011 equaled 1.96% of GDP.
5) **A part of arrears presenting a pronounced risk of becoming a direct debt of general government is included in the public debt.** The analysis made by the Fiscal Council has shown accumulated arrears within general government which exceed the potential for their servicing from current revenues of some budgetary beneficiaries/government levels. It is therefore believed that it will only be possible to settle such arrears by a government borrowing, that is they essentially constitute the public debt. Inclusion of arrears is neither envisaged by applicable legal regulations nor by EU methodology; however, the IMF includes a part of the arrears in the calculation of the public debt in Serbia, which the Fiscal Council takes as appropriate. According to the Fiscal Council's estimate, about 0.9% of GDP of arrears should be included in the public debt of Serbia.
6) **Public debt is a gross debt of general government,** which means that the government's borrowing for deposits (as was the case in 2011) undoubtedly pertains to public debt. The concept of gross debt represents an internationally accepted standard, it is compliant with the valid legal regulations in Serbia, and there is no reason for making changes in that regard.

If public debt were calculated according to the criteria proposed by the Fiscal Council, the public debt level in Serbia would at 2011-end be at the level of 45.5% of GDP, which is slightly above the public debt measured according to the Public Debt Law (45.1% of GDP), and by about one percentage point of GDP lower than the public debt measured according to the Budget System Law (46.6% of GDP).

In monitoring the public debt share in GDP in the course of a year, the Ministry of Finance applies an internationally non-standard practice – it divides the public debt by gross domestic product that yet needs to be achieved. The public debt to GDP value - which is disclosed in the course of the year - is for this reason usually lower than the real one because GDP in the future is generally somewhat higher than the current value (particularly when one takes into account that the GDP in question is in nominal and not in constant prices). This means the following in the concrete case – the public debt to GDP ratio published in January 2012 was calculated as the real public debt value at the close of January divided by (estimated) GDP value in the whole of 2012, although 11 months remain until the end of the year.

Apart from the systematic underestimation of the real public debt value during the year, the application of the described methodology also leads to additional problems: 1) the public debt to GDP ratio seemingly drops abruptly at the beginning of each year, and then rises during the year somewhat faster than it is supposed to – which explains the inconsistency in the monthly series of the public debt share of GDP. 2) Forecasts of GDP future trend may be highly unreliable. Thus, the estimate of GDP growth of 1.5% in 2012 is currently used for calculation of the public debt to GDP ratio. The Fiscal Council recalls that it is already now almost certain that the planned growth of economy will not be achieved in 2012. If the economic growth in 2012 is 0.5% (as currently expected) the public debt share in GDP from January 2012 will be automatically revised and raised by 0.5 percentage points.

The Fiscal Council proposes that as the GDP value (relative to which the public debt ratio is calculated) the GDP in the preceding twelve months from the date for which the public debt level is observed should be taken (*rolling year*), rather than the GDP that has yet to be achieved. Such methodology for measuring the public debt to GDP ratio would ensure not only the consistence of monthly data but also the compliance of quarterly and annual data about the public debt to GDP ratio with international standards, which presently is not the case.

Introduction

The public debt level and it's pace are the important indicators of fiscal and economic stability of a country, and the current economic crisis has additionally accentuated the importance of public debt management. How challenging this issue is can be illustrated by the fact that the public debt of Serbia registered a rapid growth in the preceding three years (from about 30 to 45% of GDP). Since 2010, in Serbia there has been in application the fiscal rule concerning the public debt so that the newly introduced public debt upper limit had drawn attention of the public to the trends in this area. When in the second half of 2011 the public debt approached the upper limit and when the National Bank of Serbia and the Ministry of Finance were disclosing different data about the public debt to GDP ratio in that period, the interest in the issue additionally strengthened. For all of the above, it is understandable why the public debt level and pace in Serbia are carefully monitored and analyzed.

Analysis of the public debt in Serbia is also important because of the certain non-congruence of the laws where the public debt definition and management are determined. Namely, the capture of public debt is differently determined by the Public Debt Law and the Budget System Law. Moreover, domestic legal definitions of public debt differ from international standards. It is necessary, therefore, to point to these differences and to the direction of coming closer to generally accepted international practice. Finally, also desirable is improvement in the areas of public debt statistics and in informing the general public about different aspects of the public debt in Serbia.

Starting from the above elements, the Fiscal Council is pointing to the potentials for improvement of the existing legal framework in the area of public debt, and the modes for adequate monitoring, calculation and reporting on public debt in Serbia. Making an objective and internationally comparable public debt picture represents a basis for a timely response to and responsible management of public debt.

The Fiscal Council concludes that the public debt methodology adjustment can be done by adequately encompassing various public sector units when calculating public debt, by correct selection of public debt components, as well as by adequately estimating the GDP necessary for the calculation of the public debt to GDP ratio.

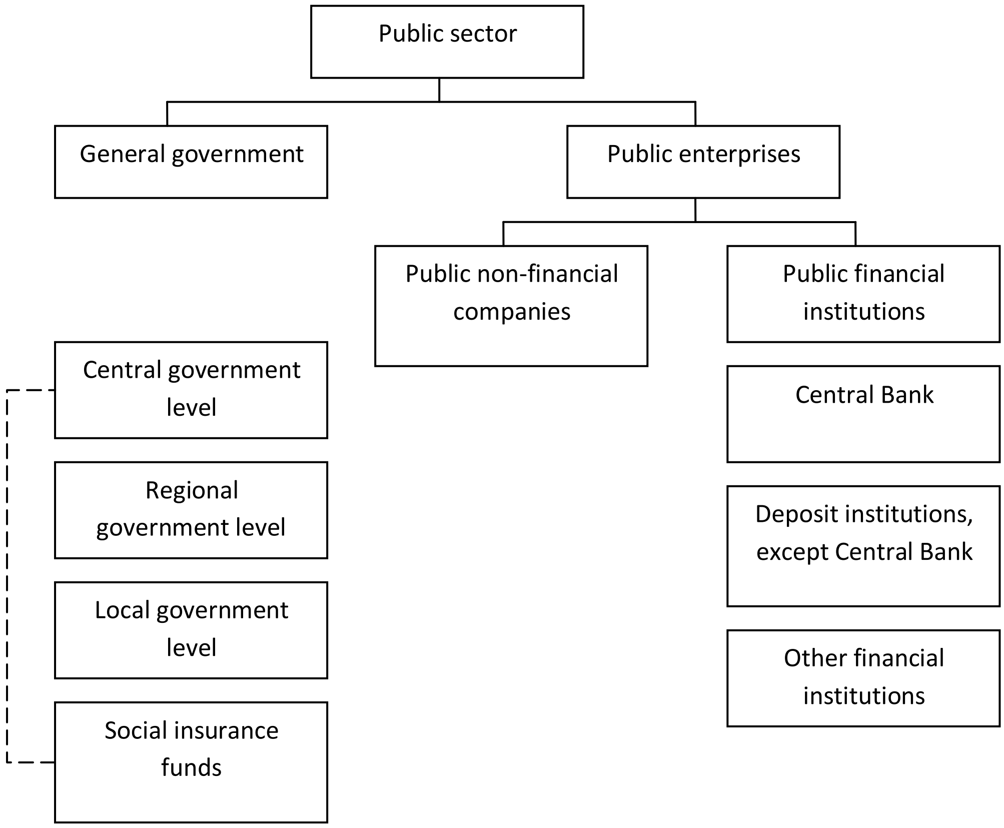
Difference between Public Debt and Public Sector Debt

The difference between the public debt (*general government debt*) and the public sector debt arises from the different captures of institutional units of which general government and public sector consist. It is therefore necessary to first define the units making up the general government sector and those that are a part of a more broadly defined public sector.

General government comprises the institutional units which provide for goods and services for personal or collective consumption on a predominantly non-market basis and which redistribute income and wealth by simultaneously accomplishing the political obligations and performing the role of an economic regulator. General government sector consists of the sub-sectors of central, regional and local governments and social insurance funds (social insurance funds can be classified into a separate sub-sector or may be viewed as a part of the government level that manages them and in the framework of which they operate, as is usual in international practice).

Public sector also comprises, apart from general government units, all institutional units controlled directly or indirectly by general government units. Thus, the public sector is composed of general government and all public non-financial companies and public financial institutions.

Public sector and its main components



In Serbia, *general government sector* comprises from the central government level (Republic), the regional government level (Autonomous Province of Vojvodina), the local government level (municipalities, towns and the City of Belgrade), social insurance funds, and JP „Putevi Srbije“. Organizations of compulsory social insurance or social insurance funds are: Pension and Disability Insurance Fund (PIO), Republic Health Insurance Fund and National Employment Office.

Central government may in a broader sense be also defined as a sum of the budgets of the Republic, social insurance funds and JP „Putevi Srbije“ (this public enterprise meets the criteria for pertaining to general government sector mentioned in Table 1.1, and is under the control of central government).

Public non-financial companies in Serbia are JP „Železnice Srbije“, JP EPS, JP EMS, JP „Srbijagas“, JP JAT, JP „Nikola Tesla“ Airport, Flight Control Agency, and others, while *public financial institutions* include the central bank (NBS), deposit institutions except the central bank (commercial banks in state ownership, for example, „Komercijalna banka“) and other financial institutions (Development Fund, insurance companies, for example, „Dunav osiguranje“, etc.).

Public debt comprises only the debt of general government units (domestic and foreign debt of central, regional and local government levels and social insurance funds), while the public sector debt includes the debt of general government, public non-financial enterprises and public financial institutions. Due to frequent dilemmas in the professional and general public concerning the public debt coverage, it is important to note that the debt of the central bank is not a part of the public debt, but a part of public sector debt. The National Bank of Serbia does not belong to general government sector so that Serbia's debt to the IMF is only partly included in the public debt. A smaller portion of the debt – allocation funds of about EUR 460 million – represents the debt of the Republic and is a part of the public debt, whereas the larger portion of the debt to the IMF (around EUR 1.6 billion), intended for ensuring external liquidity, belongs to the NBS debt and is not included in the public debt.

Sector classification of institutional units

In order to establish whether an institutional unit belongs to general government sector, public sector or a group comprising the sectors of private companies, households and non-profit institutions, it is necessary to answer the following two questions. First, whether a given institutional unit is public or private, which depends on who is controlling it or who determines its general business policy? Second, does the institution operate under market or non-market conditions, and the criterion for this is whether 50 or more percent of production costs is covered by sales under review during a period of several years. Depending on the answers to these two questions, an institutional unit can be classified in one of the three sectoral groups presented in Table 1.1.

Table 1.1 Criteria for Institutional Unit Sectoral Belonging

		Is it under government control?	
		Yes	No
Is its source of funding mainly the sale of goods and services?	Yes (market-based)	Public enterprises sector	Private companies, households or non-profit institutions
	No (non-market based)	General government sector	

In Serbia, JP „Putevi Srbije“ belongs to general government sector as this enterprise does not generate a larger portion of income in the market but is dominantly financed from the budget. In order to adequately capture the general government sector in Serbia, it is important to consider whether some additional public enterprises meet the conditions necessary for their inclusion in the general government sector (for example, JP „Železnice Srbije“).

Public debt is most often calculated according to the concept of gross debt so that overall value of financial liabilities is not reduced by the value of government financial assets (government deposits, credit extended by the government, shares, etc.). Gross debt relates to all obligations in the form of borrowing instruments defined as financial liabilities of a borrower to a lender under interest and/or principal at a certain point of time in the future.

Financial assets in the possession of general government need to be also taken into consideration only for the needs of public debt analysis (risk management). Namely, a debt may have been incurred for the purposes of acquiring a property which will generate income intended for payment of liabilities. Net debt is equal to gross debt less financial property or is equal to the total value of financial liabilities less total value of financial property. As there is a significant difference among governments in the capture of financial property when calculating the net debt, it is necessary to take into account that the concept of gross debt is in wider use than the net debt concept, and that it represents a generally accepted international comparable measure of public debt.

In view of the above, the Fiscal Council notes that the internationally accepted public debt concept is – the gross debt of general government sector.

Public debt = gross debt of general government

Legal Regulation of Public Debt in Serbia

The basic law which governs the area of public debt in Serbia is the Public Debt Law. The Ministry of Finance follows up and announces the public debt value based on the provisions of this Law. According to the Public Debt Law, the public debt includes:

- the Republic's debt under contracts and securities,
- the Republic's debt under the guarantees issued by the Republic, as well as under assumed obligations to repay the debt based on issued guarantee (activated guarantee).

Direct borrowing represents a direct public debt. Issuance of guarantees represents an indirect liability as it is possible that a debtor (a public enterprise or another legal entity in whose name the government issued a guarantee) will not be able to pay the obligations. The guarantee will then be activated, and the original debt of the public enterprise would become a public debt of the government. The government issues guarantees in order to enable public (or private) companies to borrow under more favorable terms and conditions. In such a case, the debtor's risk is lower because the government guarantees to pay the debtor's liabilities if the debtor is not able to do so. Lower risk means a lower lending rate of interest, in which way the government indirectly enables a more favorable borrowing by entities in whose name it issues the guarantees. The other side of this relationship is the risk of the government having to assume the servicing of the guaranteed debt.

Therefore, according to the Public Debt Law, the public debt of Serbia consists of the Republic's direct debt and the Republic's indirect debt (guarantees issued to the local self-government, social insurance funds, public enterprises and other legal entities). Accordingly, the subject matter of the Public Debt Law is exclusively the direct and indirect debt of central government.

Public Debt Law

Public debt = Republic's direct debt + Republic's indirect debt (guarantees)

The Budget System Law defines the debt of general government level as direct debt of general government and indirect debt (guarantees) of general government. Fiscal rules concerning the budget deficit and public debt relate to general government level which consists, apart from central government level (Republic), of all other government levels (autonomous province and local self-government units), and social insurance funds. Accordingly, the capture as set forth in the Budget System Law is broader than the capture according to the Public Debt Law – general government level is taken into account and not just central government level, which is the definition that corresponds to international public debt standards.

Budget System Law

Public debt	=	Direct debt of general government (Republic, local, social insurance funds)	+	Indirect debt of general government (guarantees)

The purpose of the fiscal rules is to ensure a long-term fiscal sustainability of Serbia. They are defined by the Budget System Law and relate to general government level. If the debt of general government level exceeds 45% of gross domestic product (GDP) corrective mechanisms are put into motion (government adopts a program for debt reduction). In managing the public debt, it would be necessary to simultaneously take into consideration the level of general government and, therefore, the relevant public debt coverage is determined by the Public Debt Law. However, it is necessary to harmonize these two laws in a reasonable time period both mutually and with international standards.

Public Debt International Standards

International public debt methodologies

The IMF's public debt methodology was published in the Government Finance Statistics Manual (current edition dating back to 2001, while a new edition of the Manual is under preparation), and that of the European Union in the European System of Accounts, ESA95. These two methodologies are the most important for Serbia, although there are also the methodologies of the World Bank, OECD and other institutions and organizations. Methodologies are revised and improved from time to time, and instructions are also published which put emphasis on the specificities of some public debt elements. Thus, the EU published in 2010 the Manual on Government Deficit and Debt: Implementation of ESA95. In 2011 was published the highly important joint paper - *Public Sector Debt Statistics: Guide for Compilers and Users* – of the IMF, EU, OECD, the World Bank and other important international institutions and integrations, which focuses on the topical characteristics of international standards and the directions of future changes in the public debt methodology.

In international frameworks, the important methodologies of public debt coverage and measurement have been defined by the International Monetary Fund (IMF) and the European Union (EU). In view of the significance of the IMF and EU for Serbia, it is important to see to what extent is the public debt methodology in Serbia congruent with these international standards.

There is no essential difference between the IMF and EU methodologies. Public debt is composed of direct debt of general government level (central, regional and local government levels and social insurance funds) and activated guarantees only. These two international methodologies exclude non-activated guarantees from the public debt, i.e. exclude the part of the guaranteed debt the servicing of which has not be taken over by the government.

International standards
Public debt = Direct debt of general government + Activated general government guarantees

One can note certain incongruence between domestic and international standards:

- The Budget System Law envisages the broadest coverage of public debt because the public debt is composed of direct debt of general government (all the levels, including local self-government and social insurance funds) and all guarantees (activated and non-activated) of general government;
- The Public Debt Law envisages a narrower coverage of public debt than does the Budget System Law because public debt does not include the debt of local self-government and social insurance funds for which the Republic has not given guarantees (local government and social insurance funds' non-guaranteed debt);
- International standards envisage a narrower coverage relative to the Budget System Law and the Public Debt Law because they capture activated guarantees only (issued but non-activated guarantees are not included), and relative to the Public Debt Law envisage a broader coverage as they include the debt of local governments and funds.

Table 1.2 Public Debt Coverage as per Government Levels and Debt Instruments

	Central government level	Local government level	Social insurance funds	Activated guarantees	Non-activated guarantees
Public Debt Law	+	–	–	+	+
Budget System Law	+	+	+	+	+
International standards	+	+	+	+	–

+ included in public debt; – not included in public debt.

Calculation of Gross Domestic Product for Calculating the Public Debt Level

Determination of public debt to GDP ratio requires, apart from the capture of debt instruments and institutional units for which the debt has been defined, a precise definition of the GDP that will be used as denominator in the calculation. Although, at the first glance, no dilemma needs to exist in practice when this issue is concerned, there are several possible approaches to the determination of the relevant GDP. For example, the difference which appears between the quarterly public debt data published by the Ministry of Finance and the National Bank of Serbia arises precisely due the difference in the used GDP.

The Ministry of Finances uses as denominator throughout the year the same GDP – GDP value estimate for current year. For example, for calculation of public debt to GDP ratio at the end of each month or quarter in 2012, the nominal debt amount will be divided by the same GDP value – GDP estimate for 2012. The National Bank of Serbia, on its part, uses the GDP realized in the previous four quarters as a denominator when calculating the public debt to GDP ratio. This means, for example, that the public debt value recorded at the end of the first semester of 2012 is compared with the GDP registered in the second half of 2011 (Q3 and Q4) and in the first half of 2012 (Q1 and Q2). Once again, according to the methodology used by the Ministry of Finance, at the close of the first semester of 2012 as denominator would be taken the GDP estimate for entire 2012. As GDP estimate for 2012 is in normal circumstances higher than the sum of the GDP realized in Q3 and Q4 of 2011 and in Q1 and Q2 of 2012, the relative value of the public debt according to the Ministry of Finance methodology will be smaller than the public debt relative value according to the NBS methodology. These two figures coincide only at the end of the year.

Public debt to GDP ratio (approaches used in our practice)

1. $$\frac{\text{Public debt value according to Public Debt Law}}{\text{estimated GDP value for current year}}$$

   (Ministry of Finance)

2. $$\frac{\text{Public debt value according to Public Debt Law}}{\text{GDP value in four preceding quarters}}$$

   (National Bank of Serbia)

The first problem which results from the application of the Ministry of Finance methodology is that GDP is based on estimate and not on the GDP achieved and calculated. GDP value in 2012 is thus probably overestimated (real growth rate of 1.5% is still used although the latest estimate indicates a growth of only 0.5%). When GDP growth rate is adjusted downwards, that will automatically raise the public debt share in GDP in 2012 for all data published in the course of the current year – by at least 0.5 percentage points of GDP, according to the Fiscal Council's estimate. Also, as estimate of GDP nominal value is made, the inflation rate by the end of the year is also forecast and thus causes additional imprecision of the applicable methodology.

At the time of publishing the public debt data, international standard presents the utilization of the GDP that was achieved in the course of the preceding four quarters. This approach provides more objective and more consistent data about the GDP value, but also about the public debt to GDP ratio because abrupt changes of public debt indicators at the turn of two years are avoided. The additional problem in measuring the public debt share during the year, when as denominator is taken the same GDP value throughout the year, is the sharp fall of the public debt to GDP ratio at the turn of the next year (if GDP rises in nominal terms), even when the debt does not change in nominal terms. Thus, due to the shift to a new GDP, the difference of several percents of GDP appears between the public debt share in GDP at the end of December and at the end of January. In February 2012, the Ministry of Finance published the data which at a first look indicated a fall in the public debt – the public debt to GDP ratio at end-December 2011 of 45.1% of GDP and the ratio in January 2012 of 43.2% of GDP. However, nominal public debt remained practically unchanged in January against December, and the difference was only due to the change in the value of GDP.

Graph 1.1 illustrates the above remarks. Two paths of public debt are presented, while vertical lines show the relative values of the public debt in December (public debt at the year-end) and in January. The first mode of calculation corresponds to the Ministry of Finance methodology, and the second represents the proposal of the new methodology for calculating the public debt share in GDP. Once again, they differ according to the GDP value which is used in the calculation. The first path (full line) shows the public debt-to-GDP ratio on the basis of the Ministry of Finance methodology where estimated annual GDP value is used throughout the year. The second path (dashed line) presents the alternative pace obtained on the basis of the calculation of GDP achieved in twelve months that precede the moment of the public debt measurement (*rolling year*). In the Ministry of Finance approach a sharp fall in the public debt-to-GDP ratio is noted in January against December of the preceding year. The fall in the public debt share in GDP is particularly pronounced in January 2007 (5.1% of GDP), in 2008 (3.3% of GDP) and in 2011 (5.2% of GDP).[1] In the second approach, when GDP value achieved in the preceding twelve months is taken for measuring the public debt-to-GDP ratio (presented by dashed line in the graph), the public debt trend path is obtained which far better corresponds to the real value of the debt-to-GDP ratio in each month during the year. The use of this methodology for calculating the public debt-to-GDP ratio evades the appearance of the sharp fall at the beginning of the year and a systematic underestimation of the public debt-to-GDP ratio in all months during the year (except in December when the same result is obtained based on both methodologies, because at that point in time the values of GDP calculated in these two ways coincide). To conclude, it is essentially not advisable to take the same GDP for calculation of the public debt-to-GDP ratio throughout the year, i.e. the GDP estimate for current year, because in that way the relative value of public debt is underestimated.

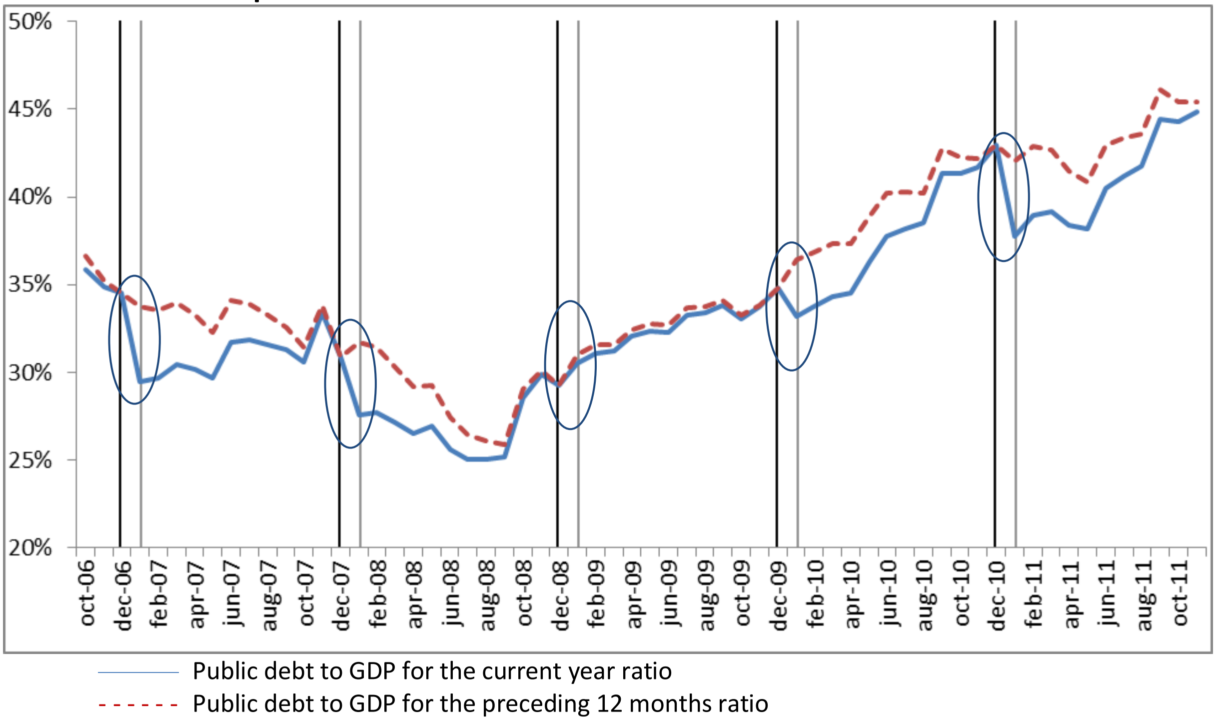
In international practice (European Union – Eurostat, The Slovak Republic, Poland, etc.), the public debt-to-GDP ratio at the end of the year (annual public debt figure) is taken as a relevant figure based on which measures are taken for public debt reduction, i.e. the ratio of the public debt value as at 31 December and GDP for current year. Data about the public debt-to-GDP ratio during the year (quarterly and monthly data) are used only for indicative monitoring of the public debt trend. Precisely for the reason that the figures of the relative public debt during the year (quarterly and monthly debt-to-GDP ratio) need to

[1] In January 2010, this fall was slightly smaller (1.6%) due to the slower growth of GDP, while in January 2009 the public debt-to-GDP ratio increased as a consequence of the real drop of GDP in 2009 and nominal depreciation of the dinar by about 6% in January 2009 against December 2008.

indicate the public debt pace, which is their basic role, these values have to be correctly indicated in order for their role of indicator to be meaningful.

When monthly data about the public debt are concerned, since the Ministry of Finance also publishes the data about the public debt on a monthly basis, by analogy with international practice the GDP achieved in the preceding 12 months would need to be taken as denominator[2] rather than the GDP for the current year as done thus far.

Graph 1.1 Public Debt-to-GDP Ratio for Different GDP Values



Which value of GDP should be used in calculating public debt to GDP ratio? - For annual data (basic annual figure): GDP value in the year under review. - For quarterly data: (indicator of public debt trend during the year): GDP value in the preceding four quarters. - For monthly data (indicator of the public debt trend during the year): GDP value in the preceding twelve months (*rolling year*).

[2] As there is no official data in Serbia about the monthly value of GDP, this value can be calculated by simply dividing the quarterly data by three. This method of monthly GDP calculation is applied by the Office for National Statistics of Great Britain.

Proposal for Serbia's Public Debt Coverage

It was already mentioned in the above presentation of domestic and international solutions for public debt coverage that the laws of the Republic of Serbia include all guarantees in the public debt, regardless of whether such guarantees are activated or not. According to international standards, only activated guarantees need to be included in the public debt value; it is fair to say, though, that instructions of a more recent date emphasize a cautious approach to the guarantees (principally at the time of their issuance) and also leave a possibility for some issued but non-activated guarantees to be included in the public debt value.

When publishing regional and international public debt overviews, the International Monetary Fund waives its standard in the case of Serbia and presents the debt of general government (which corresponds to the public debt definition as set out in the Budget System Law, but not to the IMF standards). In other words, in addition to the direct debt of general government, the IMF also includes all guarantees (not only those activated) in the public debt of Serbia. As the narrower concept (without non-activated guarantees) is used for other countries, it arises that the coverage of Serbia's public debt in the IMF publications is broader than in other countries, which puts Serbia in a worse relative position. For example, in the case of Croatia, the public debt without guarantees in 2010 was about 41% of GDP (the figure that was published), and with the guarantees as much as about 59% of GDP (the figure that would have been published according to the methodology applicable to Serbia).

One of the directions on the way of making our methodology of public debt coverage and measurement come closer to international standards would involve adoption of the principle that not all issued guarantees need to be included in the public debt. It is, as already said, the generally accepted international practice. The principle of cautiousness imposes a careful analysis of the issued guarantees and, depending on the risk of activation, their inclusion in the public debt. Therefore, there are several reasons for not excluding all non-activated guarantees from the public debt of Serbia. One, public enterprises in Serbia are not operating fully upon the market principles and the Government markedly controls their business activity (at setting the final price, for example). Two, the operation of public enterprises to which guarantees are issued differs, and many of them are making losses over a rather long period, which is an indicator of a high probability that the guarantees will be activated and that their debt will become the direct debt of the government. Three, exclusion of non-activated guarantees from the public debt could encourage (uncontrolled) borrowing of public enterprises with the guarantees of the Republic because such borrowing would not formally increase the public debt. It is important not to allow the borrowing with the guarantee issue to get out of control. Accordingly, there has to be in place the control of the guarantee issuance and of their inclusion in the public debt if there is a risk of their activation in the future. Four, the tendencies in international practice reflect, as also observed in the last recommendations of the IMF and EU, different treatment of the guarantees depending on the quoted characteristics (whether the entities the guarantees are approved to are independent or state controlled, whether the financial standing of the entities indicates a possible activation of guarantees, whether previous examples of guarantee activation are in place, and the like). Taking into account the abrupt increase of indirect instead of direct borrowing in many countries, it need not be surprising if international standards change and extend the coverage of the public debt onto some non-activated guarantees.

Another subject of the analysis in considering the adequacy of public debt coverage is the government obligations not paid within the contracted term. Namely, in the case of Serbia, besides standard debt obligations – credits and debt securities – payment arrears have accumulated at different general government levels. In certain cases (Republic Health Insurance Fund), arrears have accumulated to such an extent that it is almost certain that current obligations will be converted into the public debt of the government. It is for this reason necessary to consider in which way will in the public debt of Serbia be also classified the value of late payments of government liabilities at the level of central government, local self-government and social insurance funds. This component of the public debt is not captured in the public debt data published by the Ministry of Finance.

The criteria for inclusion of a part of issued guarantees and accumulated arrears need to be formulated and clearly articulated. When guarantees are concerned, it would be necessary to estimate on a case by case basis if an issued guarantee needs to be included, and in what amount, in the public debt. The estimate would depend on the answers to the following questions:

- can the entity in the name of which the guarantee was issued be deemed as independent market entity?
- is there a history of guarantee activation in the case of the entity in the name of which the guarantee was issued?
- does the entity's financial performance indicate that it will not be able to pay the guaranteed obligation?

Depending on the estimate (answers to the above questions), the value of the guarantee that is included in the public debt would be weighted by a certain value (from 0 to 1) where the higher risk of activation of a guarantee would mean a higher value of the weight. In the case of companies that are assessed to be almost certainly able to repay their debts, the guarantees should be assigned the weight of 0 (the companies, such as EPS, regularly serviced in the past all their liabilities under the interest and principal of the guaranteed debt, and in the absence of specific reasons, their debt would not need to be included in the debt of the general government). There are guarantees that need to be fully included in the public debt (and assigned the weight of 1), such as in the case of JP „Železnice Srbije“ (whose issued guarantees have already been activated, so that already issued and future guarantees have the assigned weight of 1), and JP „Putevi Srbije“ (the enterprise which is a part of the general government). Finally, there are companies that are in-between these two groups (Srbijagas, JAT, RTB Bor) in the case of which there is certain risk of not being able to repay their debts – a part of such guarantees needs to be included in the public debt depending on corresponding probability of guarantee activation (weights to be assigned to them need to be in the range from 0 to 1).

Estimate of the probability of guarantee activation represents the most sensitive phase both in terms of objective impossibility of forecasting with certainty the future performance of a company and the possibility of consciously underestimating the probability so as to make the overall public debt smaller. In view of the existing institutional arrangement, the Fiscal Council's stand is that the most appropriate solution would be that the Public Debt Administration is competent for estimating the probability of guarantee activation and that the Fiscal Council provide opinion on the likelihood of such estimate.

The criterion for the inclusion of arrears in the public debt would need to be the delay in settling the government liabilities. If it is longer than 60 days, the arrears need to be included in the public debt. Moreover, if there is a high risk that the entire amount of certain arrears (by way of claim rescheduling) formally becomes in the future a part of the public debt, then all such arrears need to be included in the public debt. Taking into account that there are no reliable records either of the total value of arrears or of their length (maturity) in the system of consolidated general government, there is an urgent need for a significant improvement of the data gathering system.[3]

Fiscal Council's Proposal for Public Debt Coverage

The Fiscal Council proposes that in the Republic of Serbia's public debt be included:

- total direct debt of the Republic and total debt of JP „Putevi Srbije",
- total debts of AP Vojvodina, social insurance funds and local self-governments, regardless of whether Republic guarantees for these debts have been issued or not,
- guaranteed debt of public enterprises in their entirety if the guarantees under that debt are activated (for example, the debts of JP „Železnica Srbije"),
- guaranteed debt of public enterprises for which the guarantees have not been activated by now, to be partly included in the public debt – the debt value is weighted (by weights from 0 to 1) depending on estimated probability of guarantee activation,
- liabilities under the arrears of the Republic, AP Vojvodina, social insurance funds and local self-governments, if arrears are longer than 60 days; if accumulated arrears pose a risk of becoming a direct debt of general government, then the entire value of the arrears needs to be included (regardless of the maturity).

Comparative Analysis of Public Debt Level per Different Definitions

After the above considerations, Table 1.3 shows different captures of Serbia's public debt: according to applicable domestic legal solutions, according to international standards and, as an illustration, according to the solutions proposed in this paper.

Table 1.3 presents the public debt value ranging from 42.5 (Maastricht) to 46.6% of GDP (Budget System Law), depending on the methodology of public debt coverage and measurement. Between these two values are the values of the public debt according to the Public Debt Law (45.1%) and as per example made based on the methodology proposed in this text.

[3] Reliable and updated records of the arrears is one of the criteria that Serbia has a duty to comply with under the Precautionary Arrangement with the IMF.

Table 1.3. Public Debt of Serbia as at 31 December 2011 per Different Legal Definitions of the Capture of Government Level and Debt Instruments

% of GDP		Public Debt Law	Budget System Law	Eurostat/ Maastricht	Examples of the new public debt capture
Direct debt of the Republic[1]		40.73	40.85	39.86	40.85
Local self-government and AP Vojvodina	guaranteed debt	0.28	0.28	0.28	0,28
	non-guaranteed debt	-	1.37	1.37	1,37
Guarantees	activated	0.96	0.96	0.96	0,96
	non-activated	3.10	3.10	-	1,14[*]
Arrears[2]		-	-	-	0.86[**]
Public debt, total		45.07	46.56	42.47	45.46

[1] direct liabilities of the Republic, including the debt of JP „Putevi Srbije"
[2] rough estimate based on data available as at 30 September 2011
[*] weighted value of the guarantees (weight 0.7 for JP „Srbijagas", 0.7 for JP „JAT" and 0.5 for RTB Bor)
[**] included estimated arrears longer than 60 days and total arrears of the Republic Health Ins. Fund

The main differences in the public debt values in Table 1.3 arise from the explained differences in the public debt coverage in various laws and methodologies. The differences are the following:

- **Republic debt.** According to the Public Debt Law and the Budget System Law, direct debt of the Republic includes all direct and indirect liabilities of the Republic, together with the debt of JP „Putevi Srbije"[4]. As per Maastricht definition, the Republic debt only includes the direct debt of central government, while apart from indirect liabilities also excluded are the Republic liabilities services by others (JKP Toplane (Distant-Heating Plants) and small and medium-sized enterprises).[5] The Fiscal Council's proposal is congruent with the capture of the Republic direct debt according to the Budget System Law and international standards, i.e. captures the Republic direct debt and the debt of all public enterprises and social insurance funds belonging to the Republic sector.
- **Local level debt.** According to the Public Debt Law, public debt encompasses only the guaranteed debt of local self-government and AP Vojvodina, while according to all other definitions, besides the guaranteed debt is also captured the non-guaranteed debt of local self-governments and AP Vojvodina which, according to the definition, pertains to the debt of general government.
- **Guarantees.** According to the Public Debt Law and the Budget System Law, public debt includes all issued (activated and non-activated) guarantees. According to the Maastricht definition of the public debt, non-activated guarantees (as a part of

[4] In conformance with the Public Debt Law, non-guaranteed debt of JP „Putevi Srbije" is not included in the public debt while is included according to the Budget System Law. This explains the small difference in Table 1.3 in the value of the Republic direct debt according to the two laws.

[5] There are debt liabilities where government is a formal debtor, and credit users are public or private companies which repay the credit. In most of such cases the government mediates on the occasion of credit approval for specific purposes by international institutions. A detailed analysis would need to show whether these liabilities need to be excluded from the public debt capture. As long as the results of this analysis are not available, the Fiscal Council keeps a more conservative approach and believes that the Republic direct debt serviced by other legal entities is a part of the public debt.

indirect obligations) are not a part of the public debt, only activated guarantees (direct obligations) are. The proposal for improving the public debt coverage methodology encompasses, in addition to activated guarantees (for JP „Železnice Srbije“) a certain portion of non-activated guarantees. Here is presented only one possible illustration of different captures of non-activated guarantees. One of the possible ways of weighting is given in Table 1.4. With the weight of 0.7 in the public debt are included the guarantees for the debts of JP „Srbijagas“ and JP „JAT“ because it is estimated, on the basis of the defined criteria, that the said guarantees need to be partly included in the public debt (because of the price policy JP „Srbijagas“ cannot be deemed as a fully market-based entity, and in the case of JP „JAT“ there is a high risk of guarantee activation in view of the financial result of this public enterprise operation). With the weight of 0.5 in the public debt are included the guarantees for RTB Bor, as there is a moderate risk of activation of these guarantees as well, i.e. that the Republic will take over the servicing of the debt. The guarantees for JP EPS, JP EMS, JP „Nikola Tesla“ Airport, Flight Control Agency, Fiat automobili Srbija and others have been taken with the weight of 0 as it is believed that there is no significant risk of their activation. Once again we emphasize the need of having in place a correct methodology for estimating the risk of guarantee activation, and that such process needs to be credible and transparent.

Table 1.4. Guaranteed Debt (per Debtors) as at 31.12.2011

Guaranteed debt of public enterprises	Millions dinars	% of GDP	Weight	Weighted debt in % of GDP
JP Železnice Srbije	31,983	0.95	1	0.95
JP EPS	18,096	0.54	0	0
JP EMS	4,417	0.13	0	0
JP Srbijagas	44,996	1.34	0.7	0.94
JP JAT	5,389	0.16	0.7	0.11
JP „Nikola Tesla“ Airport	1,115	0.03	0	0
Flight Control Agency	5,268	0.16	0	0
Fiat automobili Srbija	14,127	0.42	0	0
Građevinska direkcija Srbije	1,940	0.06	0	0
RTB Bor	5,728	0.17	0.5	0.09
Other guarantees	3,227	0.10	0	0

- **Arrears.** According to the IMF interpretation of the public debt in Serbia, all arrears of central government institutional units are included in the public debt. In conformance with the Public Debt Law, Budget System Law and Maastricht definition of the public debt, payment arrears are not a part of the public debt. The basic criterion for the capture of arrears in the Fiscal Council’s proposal is that the public debt comprises the arrears longer than 60 days. Moreover, if there is a serious risk of accumulated arrears becoming the direct debt of general government, then the entire value of the arrears needs to be included. The example for this additional criterion is the arrears of the Republic Health Insurance Fund which are in the proposal fully included in the public debt. They account for about 10% of total annual revenues of the Republic Health Insurance Fund and have been constantly increasing over a couple of years so that there is a high risk of their formal inclusion in the public debt.