APPROACHES OF PUBLIC FINANCE SUSTAINABILITY TAKING INTO ACCOUNT THE CURRENT ECONOMIC CONTEXT[1]

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Abstract

The paper aims to emphasize the approaches of public finance sustainability in the new context created as a result of the fiscal pressures exhibited worldwide, both in advanced and emerging economies. The analysis highlights the need to address public debt sustainability both in terms of deterministic analysis that consider alternative scenarios not only in terms of interest rate, exchange rate, primary balance, economic growth shocks, but also contingent liabilities shocks and in terms of stochastic analysis for a better quantification of the economic agents reactions to changes of public debt level.

Keywords: public debt, alternative scenarios, shocks, fiscal burden indicators

JEL Classification: E62, H63

1. Introduction

Fiscal sustainability deterioration at a global level highlighted the interest of academics, central banks and policymakers for this topic. The economic turmoil manifested recently revealed that a public debt lower than 60% of GDP (according to Maastricht criteria) is not necessarily a sustainable debt, but more fiscal burden indicators are required in order to establish the fiscal sustainability. Moreover, the deterministic analysis used through the intertemporal budget constraint equation that considers interest rate shocks, exchange rate shocks, primary balance of the general consolidated

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budget shocks, economic growth shocks is not enough, requiring also contingent liabilities shocks, consolidated with a stochastic analysis to better quantify the reactions of the economic agents to changes in public debt.

However, in order to understand different approaches appeared under fiscal pressures manifested worldwide, both in advanced economies and emerging economies, an analysis of the public debt dynamics is required emphasizing the operating mechanism (Ali Abbas et al., 2013). Thus, the fiscal consolidation improves the primary budget balance, directly reducing the amount of money that the government has to borrow and therefore the level of debt. Nevertheless, the reduction of public spending or the tax increase tends to have a negative impact upon the economic growth through fiscal multiplier, which could raise the government debt to GDP in the short term. The size of these effects depends on various factors highlighted in the literature. So, there are studies in which monetary policy can increase the size of the multiplier during a fiscal expansion (Spilimbergo et al., 2009) or studies showing how monetary policy interest rate close to zero may worsen the impact of fiscal consolidation (Woodford, 2011) or researches in which the results show that fiscal multipliers are higher in times of economic recession (Batini et al., 2012; Blanchard and Leigh, 2013). Any change will affect the budget deficit through automatic stabilizers, eroding a part of the fiscal effort that was made (Paraschiv and Ștefan, 2014). Together with the effects of fiscal multipliers, the fiscal consolidation could worsen the share of public debt to GDP in the short term considering that not only the starting level of debt is high, but also the size of the fiscal multipliers (Eyraud and Weber, 2013). As the public finance sector improves, the interest rate may decline and in this case the result is an improvement in the budget balance either as the government issues new bonds to finance the remaining deficit and the old debt is due date or because the existing debt was issued with floating rates. Lowering interest rates can have an impact on the economy too by encouraging investors and consumers to spend more, leading to an increase in GDP and resulting a decrease in the debt to GDP. Other factors can influence the dynamics of public debt, such as fiscal risks. For example, privatization procedures related to repayment of public debt can reduce debt costs, national currency depreciation can raise the debt burden held in foreign currency, the banking system recapitalization can increase the debt.

Therefore, in this article we intend to highlight the need to address public debt sustainability both in terms of deterministic

analysis that consider alternative scenarios not only in terms of interest rate shocks, exchange rate shocks, primary balance shocks, economic growth shocks, but also in terms of contingent liabilities shocks and through the stochastic analysis to better quantify the reactions of economic agents to changes in public debt, starting with the main fiscal burden indicators and continuing with the new approaches of public finance sustainability due to the highlighted need of using them during global economic pressures.

2. The main fiscal burden indicators

When the public debt evaluation is realised not only fiscal burden indicators must be considered, but also the access of a country to get finance. Thus, a classification of countries can be done, being divided in lower scrutiny and higher scrutiny.

Based on the approach of Carlo Cottarelli and Reza Moghadam (2011), an advanced country that has the current or projected share of debt to GDP higher than 60%, with a gross financing need (the amount needed to cover the budget deficit and the debt depreciation) to GDP bigger than 15% and has or is seeking exceptional access to IMF funds is in the case of higher scrutiny. According to the same approach, an emerging country that has the current or projected share of debt to GDP higher than 50%, with a gross financing need to GDP bigger than 10% and has or is seeking exceptional access to IMF funds is in the case of higher scrutiny.

Is recognized that debt sustainability problems can occur when there is a lower level than those established in the aforementioned approach, especially in the case of emerging countries. Therefore, additional indicators should be investigated to reveal vulnerabilities that may arise from large forecasts of fiscal adjustments, a high rollover debt risk, economic growth volatility, a high need for external financing, a large share of debt held by non-residents, a high share of foreign currency debt or a rapid increase in the short term debt.

In order to quantify the rollover debt risk, Escalano (2010) suggests examining the following indicators: the stock of public debt, current and projected primary balances and the difference between the projected nominal interest rate of debt and the projected nominal GDP growth rate. There is a whole debate regarding the indicator better measuring the debt. The preferred indicator should be, according to Emanuele Baldacci et al. (2011), the net debt as it considers both government assets and liabilities that could be used for debt repayment. However, the net debt measurement raises some

difficulties in many countries because of the differences on the definition of assets. Therefore, a comparable measure of gross debt is generally accepted. Current and projected primary balances are the key to fiscal policy consistency with the intertemporal budget constraint. The difference between the projected nominal interest rate applied to public debt and the projected nominal GDP growth rate affects the debt dynamics. The greater the differential between the interest rate and economic growth is, the more need is for a higher primary balance to ensure fiscal solvency.

The debt rollover risk may also increase if there are changes of the fiscal risks in the long run. The fiscal sustainability indicators computed by the European Commission must be taken into account, namely S1 (which shows the required increase of taxes or reduction of expenditure as a percentage of GDP in order to reach a debt level of 60% of GDP) and S2 (which shows the level of fiscal effort necessary to fulfil the intertemporal budget constraint on infinite time horizon) indicators.

Additional indicators used to assess debt sustainability should be according to IMF methodology (Backhache et al., 2013) the adjustment of the primary balance as a percentage of GDP cumulatively in three years, the variation coefficient of economic growth, external financing need as a percentage of GDP, the share of debt held by non-residents in total debt, the annual change in the share of short term debt to the original maturity and gross international reserves. Thus, an advanced country that has the primary balance adjustment as a percentage of GDP cumulatively in three years higher than 2%, the variation coefficient of economic growth higher than 1%, the external financing need as a percentage of GDP above 25%, the share of debt held by non-residents in total debt more than 45%, the annual change in the share of short term debt to the original maturity greater than 1.5 enters in the higher scrutiny country. An emerging country that has the primary balance adjustment as a percentage of GDP cumulatively in three years higher than 2%, the variation coefficient of economic growth higher than 1%, the external financing need as a percentage of GDP above 15%, the share of debt held by non-residents in total debt more than 45%, the share of foreign currency debt in total debt greater than 60%, the annual change in the share of short term debt to the original maturity greater than 1 enters in the higher scrutiny country.

It may also be the case that some countries with high fiscal burden indicators should be in the higher scrutiny classification, but

due to certain particularities such as holding highly liquid assets in a high amount to get to be part of lower scrutiny country.

The originality of debt sustainability assessment is that the analysis should not be interpreted in a rigid or mechanical way, the assessment must take into account the specific circumstances of the analysed country, involving probabilistic judgements about the trajectory of the debt and the availability of financing on favourable terms.

3. Fiscal risks (contingent liabilities) and stochastic analysis in the approach of public debt sustainability

With the worldwide deterioration of fiscal sustainability, the role of contingent liabilities has increased in debt sustainability analysis. Thus, governments can accumulate significant obligations in the form of contingent liabilities that are not recorded nor analysed in the fiscal documents, the contingent liabilities being actually some obligations triggered by an event that may or may not achieve. They can be defined either as potential liabilities that may arise from past events and whose existence will be confirmed only by showing or not one or more uncertain events not wholly within the control of government, or as a present obligation that arises from past events, but is not recognized because the level of obligation cannot be measured with sufficient confidence or it is unlikely to need some resources to settle the obligation (Brixi, 2004).

The high costs of transition and structural reforms have created the environment for the development of contingent liabilities at the government level. Moreover, both the SOEs' privatization due to fiscal constraints and the need to improve efficiency in infrastructure and pension system developed the use of government contingent support. The need to achieve a certain target on budget deficit generates incentives for governments in promoting measures that do not require immediate cash and at least for a while hide the true cost, creating long-term fiscal risks, complicating the structural reforms.

According to Brixi (2004), the fiscal risk matrix is as follows. Contingent liabilities can be explicit (government obligation created by law) or implicit (government "political" obligations that reflect some public or interest group pressures). Examples of explicit contingent liabilities may be state guarantees for enterprises loans, guarantees for financial institutions (state-owned banks, pension funds, infrastructure development funds), commercial guarantees, private investors guarantees, debt government guarantees. Implicit

contingent liabilities are claims of public sector entities for losses, arrears, guarantees and debts, claims of local government to cover liabilities and guarantees, financial institutions claims, non-contractual claims which may arise from private investment (such as infrastructure), other possible obligations (such as environment commitments for unknown damage and toxic and nuclear waste).

The real challenge lies in quantifying them. Therefore, the alternative scenarios method is used in debt sustainability analysis. There are also explicit and implicit direct liabilities (obligations in any event). This time, the explicit ones can be sovereign debt, future non-discretionary public spending (especially social security and health), transition costs of the on-going reforms, tax expenditures for exemptions. Direct implicit liabilities may be future recurrent costs of public investment projects.

In addition to the public finance sustainability approach in terms of contingent liabilities, different methods of stochastic analysis are increasingly emphasized in order to provide an extra to the public debt dynamic equation in the fiscal sustainability research in a manner as close to reality. Thus, Hasko (2010) uses a reduced form of VAR model, identifying a strong response of the public debt to economic growth, fiscal and monetary policies shocks. Escalano (2010) develops a practical guide to a better understanding of public debt dynamics, highlighting the complexity associated with the interaction between inflation, interest rate and fiscal adjustment. Using also a VAR model, but with debt feedback, Cherif and Hasanov (2012) test the effects of macroeconomic shocks on the public debt dynamics in the United States, showing that the optimal choice of optimal timing for a shock can improve the management and the public debt reduction.

Egert (2012) tests the relationship between public debt and economic growth, obtaining as a result a nonlinear relationship that varies by frequency data, timing and the characteristics of each country. Jawadi and Sousa (2013) analyse the public debt dynamics using multiple structural breaks. Greenlaw, Hamilton, Hooper and Mishkin (2013) test sovereign debt dynamics in advanced countries and conclude that countries with a high share of debt to GDP cannot be satisfied only with low interest rates because these countries are always vulnerable to adverse feedback loop, in which a high debt leads to higher interest rates and therefore, increasing the debt level and culminating in a critical point or a fiscal crisis where interest rates explode. So, the fiscal sustainability problem raises questions about the proper practice of monetary policy. Cevik, Dibooglu and Kutan

(2014) analyse the interaction between monetary and fiscal policy rules using Markow chains in emerging economies.

4. Conclusions

In conclusion, we have seen that economic turmoil manifested recently highlighted the interest of academics, central banks and policy makers for public finance sustainability. Thus, we realized the public debt dynamics analysis emphasizing the operating mechanism, deducting that monetary and fiscal policies decisions have effects on the public debt sustainability. The analysis has been enriched by a review of the main fiscal burden indicators deducting that the originality of debt sustainability assessment is that the analysis should not be interpreted in a rigid or mechanical way, the assessment must take into account the specific circumstances of the analysed country, involving probabilistic judgements about the trajectory of the debt and the availability of financing on favourable terms.

The research was further complemented with the new approaches of public finance sustainability due to the highlighted need of using them during global economic pressures, namely contingent liabilities and different methods of stochastic analysis used on this theme. We could see that the real challenge lies in quantifying these liabilities, therefore, the alternative scenarios method is used in debt sustainability analysis and we could review the most commonly stochastic analysis methods used to provide an extra to the public debt dynamic equation in the fiscal sustainability research in a manner as close to reality.

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