RISKS ASSOCIATED TO PUBLIC GOVERNMENTAL DEBT AND THEIR MANAGEMENT

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ABSTRACT: Public debt portfolio is the most important financial portfolio of a country, reflecting the complex and risky financial structures that can generate substantial risks on the patrimony of state and on its financial stability. Recent crises have highlighted the need to limit exposure to liquidity risk and other risks which make economies of states to become vulnerable to some external shocks. A viable and prudent management of public debt structures and strategies aimed at avoiding dangerous loan becomes crucial because the consequences it causes serious macroeconomic failure to pay debts, heavy losses of production and high costs associated with them.

KEY WORDS: public financial balance, public governmental debt, risks, public debt portfolio, debt management

1. INTRODUCTION

In the current period, characteristic feature of most countries with market economies is that it shows a trend of faster growth in public spending compared to current income (ordinary). In these circumstances, the state procurement of additional cash resources can be achieved either by increasing and/or imposition of new taxes or by borrowing state.

Public financial balance, to the existence conditions of imbalance in the public sector is achieved by identifying potential lending sources that can use the state. So, the state is able to ensure financial balance by financing and refinancing public deficit and debts based on special laws on account of debt, the domestic and foreign capital, both from individuals and legal entities.

The need to achieve public financial balance is given the respect even one designed to meet the needs of the general functions of the state of society. Following public authorities contracted loans to restore the balance between receipts and payments taking place in the public sector.

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The public financial balance is achieved through state borrowing/loans in order to finance budget deficits and debts taken over by the state based on special laws. These loans are found in public debt of the country since they are components of it. Public debt is established and managed separately by its two forms: government debt and local debt.

Government debt incorporate all financial obligations of the state from loans contracted directly or guaranteed by the Government, by the Ministry of Finance, on behalf of Romania, from domestic and foreign financial markets, and remaining to be repaid at some point.

Debt management strategy is the establishment of the state debt management in the mobilization of resources needed to finance it, and in the implementation risk and cost objectives established by the authorities.

In the context of national economic policies, states must ensure that both the level and growth of public debt to be sustainable, and debt service\(^1\) can be provided in various situations respecting the cost and risk objectives.

The public debt must be properly structured in terms of interest rates, maturities and currencies in which loans are contracted to eliminate the risk of outbreak or spread negative effects on the finances of the state.

2. EVOLUTION ON PUBLIC GOVERNMENT DEBT

In 2002, through monetary policy has given priority to reducing inflation and fiscal policy has resulted in controlling the consolidated budget deficit (2.6% of GDP) and its funding mainly from external sources (equivalent to 1.4% of GDP) given the large interest differential between yields on government securities issued by domestic and external conditions for the loan to a loan. And in 2003 continued the policy of financing the budget deficit in 2002, funding is mainly accomplished by external sources. In 2004, the budget deficit originally scheduled at 3% of GDP was corrected in July to 2.1% of GDP and again in August to 1.6% of GDP, while actual implementation was done with a consolidated budget deficit of 1.1% of GDP. The budget deficit in 2004 was achieved in a balanced proportion of external sources (about 57.2% of deficit) and from internal sources (42.8%).

Romanian Government policy to reduce the budget deficit, similar to the previous year, helped temper inflation in 2005 (inflation has declined to around 8.6%), while limiting further deterioration of current account deficit. Problem areas were, however, this year, uneven implementation of budget expenditure, virtually the entire accumulated deficit in the last month of the year, falling to the level of 0.8% of GDP, well below the initial target level, 1.5%. Even if in 2006 there was a relaxation of fiscal policy, reflected in an increase in the consolidated budget deficit to 1.7% of GDP to 0.8% of GDP in the previous year, it occurred in late, registering the same budget implementation asymmetric. In fact, it was the lack of government securities issues,

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\(^1\) Annual public financial effort that includes all costs covering the actual debt repayment and interest payments and fees
preferring to use temporary funding availability of the Treasury General Account (approx. 84.3% of the budget deficit was financed from internal sources.

International financial market turmoil, triggered since the fall of 2007 financial crisis appeared on the U.S. mortgage market with high-risk (subprime mortgage loan market), have widened in the first months of 2008, registering developments with adverse market conditions to worsen in all developed economies. Towards the end of 2008, the government public debt climbed by 1.3 percentage points from 91.58% to 92.88%.

The increase or the decrease of government debt to GDP reflects a variety of factors influence the Romanian economy. Macroeconomic indicators and impact on debt indicators (economic growth, budget deficit) are:

| Table 1. Development of main macroeconomic indicators and the impact on government debt indicators |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Indicators                      | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  |
| Nominal GDP (bilions ron)       | 151.5 | 197.6 | 246.4 | 288.0 | 342.4 | 404.7 | 475   | 531.2 |
| GDP growth (%)                  | 5.1   | 5.2   | 8.4   | 4.1   | 7.7   | 6.0   | 6.5   | 6.1   |
| General consolidated budget deficit (% of GDP) | -2.4 | -2.0 | -1.5 | -0.8 | -1.5 | -2.3 | -2.2 | -2.3 |
| Government debt (billion lei)   | 43.6  | 51.1  | 55.1  | 56.4  | 59.9  | 76.2  | 87.6  | 101.8 |
| Share of government debt to GDP | 28.81 | 25.9  | 22.4  | 19.6  | 17.5  | 18.8  | 18.4  | 18.6  |
| Government debt service         | 14.6  | 16.2  | 13.2  | 13.4  | 8.5   | 10.4  | 15.7  | 11.7  |
| The share of government debt service to GDP (%) | 9.6  | 8.2   | 5.3   | 4.7   | 2.5   | 2.6   | 3.4   | 2.4   |

Thus, foreign government debt increased from 2002-2005 to EUR 1.8 billion reflecting Romania access to financing in foreign markets, while in 2005-2007 it reduced debt by 1.5 billion EUR due to changing the default strategy of the Ministry Economy and Finance to finance the budget deficit mainly from domestic sources. Foreign government debt share in GDP has declined significantly over the period 2002-2007 to 12.6% as a result of strong economic growth and currency appreciation in the period 2003-2006 and in 2007 RON depreciation partially diminished the effect of economic growth. Domestic government debt even though it increased between 2002-2007 to 30.2 billion lei, as a share of GDP it declined from 2002-2005 by 2.1% and in 2006 and 2007 saw a significant increase of 4.7% of GDP due to deficit financing from domestic sources.

3. RISKS RELATED TO GOVERNMENT PUBLIC DEBT MANAGEMENT

Debt public management involves the financing needs of the State and its liability at a cost as low medium and long term, provided a continuing risk to tolerable level. Debt Management is a process closely related and dependent on monetary and budgetary policy.

In this context, the analysis of government debt portfolio should be made taking into account developments and macroeconomic forecasts (growth, inflation, monetary
policy rates, budget revenues and the budgetary deficit), the internal capital market efficiency, but also for economic change worldwide. An important component of government debt management is to manage risks associated with debt portfolio, which involves activities to identify, assess and insurance against various categories of risk.

a) refinancing risk (the inability to refinance its debt or refinance it to very high cost) - which depends on the development of domestic capital market (liquidity and interest rate changes in lei, which depend on macroeconomic developments and thus, the market expectations on progress), the international financial market developments, and can be reduced by avoiding payment of tips generated by the agglomeration of service maturity of loans or a great big share of short-term government debt denominated variable rate debt in total. In this regard we will consider a uniform distribution of government debt service and an appropriate duration of government debt portfolio, using the specific financial transactions, including repurchase in advance (buy back) or other securities exchange of securities in advance with longer maturity (bond exchanges) and active management of liabilities and liquidity, including here, and derivatives (swaps, interest rate, forward rate agreement or futures).

b) market risk with two components:

- foreign exchange rate (appreciation of foreign currency debt as a result of currency depreciation against the euro and the USD, given that state revenue is collected in local currency)-which is influenced by volatility in exchange rates as following developments on international markets and domestic issues that are of such as monetary policy. Since assets (proceeds of revenues) are denominated in local currency to avoid currency risk the strategy would be recommended that the government debt ratio in lei in total to increase. The exception is given by estimates about Romania's accession to the euro area (2012-2014) which would, in after accession to the euro, state assets (revenue budget) be denominated in euro, which increases the desirability of contracting long-term loans denominated in euro. This type of strategy can be implemented mainly by contracting new loans in lei and gradually increase the share of debt in lei in total debt, coupled with active management of existing portfolio, depending on the existing opportunities in the financial markets by using derivative financial instruments (foreign exchange swaps, currency forward contracts). Also, external funding, contracting loans in euros and very long term, provided the use of bullet-type instruments (Eurobonds issues) is appropriate, depending on market conditions and existing;

- interest rate risk (increases in domestic interest rates or foreign capital) - which is influenced by volatility in interest rates, monetary policy and budgetary developments in international financial markets, and may be offset by using financial derivatives: swaps interest rate, swaptions (combination of interest rate swaps and options), futures.

c) liquidity risk can be seen both in terms of cost to investors who want to close a position taken on debt state by selling them, and in terms of the state, when one takes into account the possibility of substantial reduction in the volume of liquid assets available to the authorities;

d) credit risk refers to the possibility of non-execution by state or by the guarantor, of the contractual obligations with financial assets;
e) operational risk groups different types of risks such as trading errors in various stages of implementation and registration of operations, internal control insufficiențe or misconduct, legal problems, etc.

Developed countries, where government securities markets are very active and liquid, are especially concerned about market risk. However, developing states that have not access foreign capital markets and securities whose markets are relatively underdeveloped state, should pay attention to refinancing risk. For the analysis of main risks associated with debt portfolio shall have regard to following indicators: - the risk of refinancing, the repayment schedule determined by the absolute value and period of repayment / redemption of the debt indicator analysis to be used is the percentage of government debt maturing in a time horizon (degree of refinancing at 1 year and 5 years)

- for foreign exchange caused by the absolute value of the debt and currency, the analyze indicator to be used is the share debt in foreign currency, foreign currency debt being detailed for each currency;

- for the interest rate risk, the indicators used are:
  - share of variable interest rate debt in total government debt versus debt ratio;
  - fixed rate of interest;
  - refixing percentage, that percentage of government debt for which interest rate is changes in a chosen time horizon (indicator refixing 1 year and 5 years);
  - average maturity until the next change in interest rate variable, that the average time until the variable interest rate changes (average time to next refixing).

In order to assess the risks to the stock of government debt are needed on: the budget deficit and surplus / deficit primary projections of government debt service (detailed on the rates of capital and interest payments and the type of interest rate (fixed or variable), scenarios of deficit financing and refinancing of debt (securities issues program) selected horizon analysis, projections of financial variables (exchange rates and interest rates on domestic and international) and data key interest rates related to loans in RON, EUR, USD and CAD and exchange rates, to calculate their volatility for extrapolation of these variables for the period of analysis.

4. THE MAIN DIRECTION FOR GOVERNMENT DEBT MANAGEMENT STRATEGY AND INSTRUMENTS WHICH ARE CONSIDERED FOR IMPLEMENTATION

The main objective of government public debt management in the current period is:

a. Controlled growth of government debt so that its level to maintain reasonable limits set by the Maastricht Treaty. In the management of government debt will have regard to the maintenance of government debt indicators to sustainable levels, with their classification in limits set by the Maastricht Treaty.

b. Government bonds market development. Government securities market development strategy for financing the budget deficit and debt refinancing will be on
loan contraction of domestic issues with the launch of government bonds in order to
develop domestic market for government securities. As another option, where
conditions are favourable and depending on funding opportunities and, in particular to
refinance loans in foreign exchange or early redemption of such loans, seek to finance
the foreign currency by issuing Eurobonds, taking into account liquidity conditions in
these secondary markets and the benefits of consolidation and expansion of the yield
curve for Romanian Eurobonds and the objective of increasing market instruments
denominated debt (debt is negotiable). Such a strategy has paid increasingly higher
internal market as a source of financing has the advantage of adopting an optimal mix
of macroeconomic policies to the existence of excess liquidity in the system, in the
context of any significant inflows of foreign capital in Romania and the reduction of
currency risk, negotiable debt growth and a reduction of government debt transactions.
One of the objectives related to market development for government securities is that
of strengthening the yield curve and its extension, is well known that yield securities
sovereign liquidity conditions their growth on a wide range of maturity as the
investment environment and create references for corporate and sovereign issuers in
U.S. dollars. However, it should maintain regular consultation with participants on the
domestic market (primary dealers, investors, etc.) to ensure transparency and
predictability of how the contracting and management of government debt in lei and
for regular evaluation of investment needs in the market and expectations for market
conditions.

c. Reduce costs with government public debt and budgetary risk caused by the
granting of state guarantees and submitted loans. The costs of government debt in
GDP will be reduced gradually by improving conditions for domestic financing and
contracting of government debt to yield more low to come their downward trend of
inflation, but also by reducing the share of the debt contracted by state or economic
agents to guarantee their submitted loans since the state guarantees / submitted loans
will give only a special law issued for this purpose.

To improve the structure government debt portfolio will consider the following
measures:
- the increasing share of government debt denominated in national currency in total
government debt. This will seek to limit currency risk and domestic market
development for government securities. Given that the budget revenue collection is
done in national currency, contracting government debt in the same currency would
eliminate currency risk;
- the increasing share of government debt denominated in Euros in total government
debt in foreign currency. Increase the share of financing in the euro will have regard,
on the one hand, minimize the costs of new foreign loans, given the conditions
enjoyed by Romania in the European financial markets, and, secondly, to limit
currency risk, given the structure of exchange reserves managed by the National
Bank of Romania and currency composition of exports and imports;
- reducing the debt refinancing for the government, denominated in national currency
and the euro denominated. This will aim to reduce the risk of refinancing at high
levels of interest rates. By contracting for long-term loans, refinancing risk at high
interest rates in the European market will be limited;
- increase the share of fixed-rate debt in total government debt. By increasing the share of fixed-rate debt will be considered on the one hand, limiting the risk for increased key interest rates in particular for government debt in foreign currency;
- contracting debt mainly denominated in foreign currency bond issue by launching international capital markets while reducing borrowing from international financial institutions in total government debt in foreign currency. It will consider increasing the share of government debt in foreign currency by the issue of market instruments, namely the issue of bonds on international capital markets. It intends to diversify the investment base and strengthen and extend the yield curve for government securities on foreign capital markets, with positive effects on costs associated with government debt in foreign currency. The issuance of bonds on foreign markets will provide a diversified investment base and portfolio restructuring to increase flexibility, since these instruments are traded permanently on secondary international markets;
- as uniform distribution of government debt service, by establishing new loan maturity, trying to avoid the formation of peaks of payment to not increase the risk of liquidity and refinancing.

   Government public debt instruments used are:

- issues securities on the domestic issues that benchmark securities issued with maturities of 3, 5, 10 and 15 years, and issues of Treasury bills will be issued with a maturity of 6 months and 1 year (364 days)
- issues securities on the foreign capital market, that shows the long-term securities with maturities of 10 years and even 15 years, depending on the evolving financial markets and financing needs of the budget deficit;
- loans from international financial institutions to finance the budget deficit, only the comparative cost analysis tools provided by international financial institutions.
- the state guarantees and submitted loans for national projects, but for this type of instrument is absolutely necessary in a certain context, the case of very large strategic projects of national importance in the granting of a special law for that purpose, with requirements for state aid under the relevant legislation and following an analysis rigorous risk under the law.

   In order to achieve a structure deemed optimal currency portfolio of government debt to maintain reasonable interest rate risk and refinancing and to reduce / relax the government debt service, it must be made regular scenario analysis and sensitivity and should maintained an ongoing dialogue with financial institutions, so depending on the opportunities offered by developments in international financial markets are used derivatives (currency swaps and interest rate) and other specific risk management instruments (futures, options).

   In conditions in which such operations prove successful in terms of the objectives of government debt management has referred to the possibility of early repayment of existing loans in the portfolio of government debt, endeavouring to reduce the fragmentation of the stock portfolio and bring costs current levels by issuing government securities market conditions.

   Moreover, to reduce refinancing risk over the medium term will be examined whether the use of bond exchange transactions (exchange of government securities with the remainder in the medium to long-term securities with maturities) or buyback
transaction type (redemption in advance government securities). Along with sustainable management practices of debt, it said, with the many crises occurring on the debt markets, the need for efficient and prudent capital market.

A viable management of public debt depends on the risk that authorities are willing to accept. This risk can change over time, depending on the size of the debt portfolio and the vulnerability of economic and financial shocks. In general, the country is more indebted and more vulnerable to external shocks, the losses are greater if a financial crisis or the entry in default of debt. In this case is very important to choose the loan conditions that limit the risks and caps loans, this approach is only likely to be followed by countries that are financially dependent on bilateral and multilateral creditors.

REFERENCES:

[1]. Moșteanu, T. - *Budget and public treasury*, University Publishing House, Bucharest, 2004
[4]. *** - Government Emergency Ordinance No 64 of June 27, 2007 on public debt
[5]. [www.mfinante.ro](http://www.mfinante.ro)
[6]. [www.imf.org](http://www.imf.org)