MODALITIES OF LOCAL DEBT ANALYSIS IN THE NORTH-WEST Region of Romania

Professor Ph.D. **Ioan BĂTRÂNCEA** Babeș-Bolyai University, Cluj-Napoca, Romania <u>ioan.batrancea@econ.ubbcluj.ro</u>

Associate professor Ph.D. **Lucian GĂBAN** 1 December 1918 University Alba Iulia, Romania <u>luciangaban@yahoo.com</u>

Associate professor Ph.D. Liviu BECHIŞ West University "Vasile Goldis", Arad, Romania liviubichis1960@yahoo.com

Abstract:

Public debt is a topic of great interest problem tracked over the years and has worsened with the outbreak of the second wave of financial crisis around the world, namely the sovereign debt crisis. After BREXIT the EU must urgently adopt uniform tax measures to prevent a new crisis of sovereign debt in countries like Greece, Italy, Spain, Portugal, and for the meeting the Maastricht criteria on public debt. UE countries have to adopting a pro - active stance by continuing fiscal consolidation measures. That is why in this paper the authors present an analysis of local public debt based on a correlated system of indicators.

Key words: public debt, repayment capacity, debt service ratio

JEL classification: H72

1. LITERATURE REVIEW

The literature is widely debated issue of sovereign debt, both in terms of emerging countries and developed countries.

Thus some authors in a paper analysis the correlations between the public debt/GDP ratio and the Treasury bond risk premium in the emerging economies. (Marcio Pereira Duarte, Helder Ferreira, 2011, p. 203-217). [1]

In another paper it presents an endogenous growth model with human capital, as a result of public education. Thus the authors show the correlation between the schooling sector funds and the tax revenue and by public deficit. (Greiner, 2008, p. 415-427) [2]

The fiscal performance trends in Brazil, as a fiscal reaction functions for the consolidated public sector and different levels of government, and tests for the sustainability of the public debt dynamics is presented in a research paper. (De Mello, 2008, p. 271 - 284) [3]

Other authors, in their paper, propose and apply a new conceptualization and operationalisation of miracles in terms of economic growth, employment, and public debt in 19 OECD countries based on fuzzy-set analysis. (Vis et al., 2007, p.531-538) [4]

Non-residents' holdings (NRH) of debt securities have been large in euro area countries, but during the euro area debt crisis some of those countries experienced a steep contraction of such holdings. The authors discuss how that decrease might have endangered the sustainability of public debt and study the empirical relevance of the most important of those processes taking Italy as a case study because of data constraints and because Italy has a very large debt issuer. (Cafisco, 2016, p. 484 - 513) [5]

In another paper is presented the issue on topics including the effects of austerity measures on debt sustainability for several European Union countries, the relationship between public debt and economic growth, and an analysis of fiscal sustainability. (Staehr; Cuestas, 2015, p. 129 - 130) [6]

In their paper, authors provide the empirical support to the hypothesis that the role of short-term debt depends on how devaluation affects the reputation of the policymaker and the real value of public debt. (Levine et al., 2008, p.79-106) [7]

Another paper concentrates on the relationship between public debts and trust in the government and presents some evidence of the level of trust among Swiss cantons over the last 20 years. (Schaltegger and Torgier, 2005, p. 217-222) [8]

Focusing on the institutional differences between the UK and the US, another paper examines the relationship between accounting-based covenants and security which depends on the nature of the security (fixed or floating). (Citron, 1995, p. 139-150) [9]

In a recent paper the author propose a simple model with complete and perfect information on the relation between managerial incentive compensation and choice between public and bank debt. The results shown the one hand a positive relation between cost of public debt and managerial incentive compensation and no relation between loan spreads and incentive compensation and find, on the other hand that banks are more likely to include a collateral provision in the debt contract if the CEO''s compensation is tied to firm performance. (Meneghetti, 2012, p. 65-91) [10]

In Turkey a study between 1988 and 2002 analyze past and future sustainability of total public debt in Turkey based on econometric model and simulations. The simulations show that to reach an acceptable level of debt, Turkey has to solve its problem of chronic inflation, stabilize its economy and adopt either a policy freezing public spending or a very active fiscal policy. (Gürbüz, 2007, p. 343-359) [11]

In Romania, the government debt is classified into two categories, government debt (obligations of state authorities) and local public debt (obligations of local authorities). Public debt includes all internal and external financial obligations of the state at a time, from direct loans or guaranteed by the Government, through the Ministry of Finance, on behalf of Romania, the domestic and foreign financial markets. (Moșteanu et al., 2008, p. 253) [12]

The total public debt is recorded in the register of public debt and public debt at the end of employed is shown in the general account of the public debt. A second component of the public debt of the country is the local public debt represents all internal and external financial obligations of local authorities at a time, coming from loans contracted or guaranteed by the financial markets.

This change in the debt ceiling came hoping to minimize borrowing capacity and also the local public debt. Analyzing such phenomena, local government debt is a topic that should not be ignored, instead, must be approached with great insight, especially by public authorities. Awareness of it is more than necessary especially today; the experience can be helpful to create a prolific future.

2. METHODS AND RESULTS

Public debt management requires a strategic management able to mobilize the necessary amounts of funding, to conduct risk and cost goals set by authorities and other targets set by them.

Managers of local public finance objective is to pay the financial obligations at a cost as low as possible, both medium and long term and to maintain the risk at a tolerable level.

Local governments should avoid dangerous loan structures and strategies, as it entailed effects of inability to pay the debt, while decreasing credibility and local government capacity to mobilize internal and external resources.

The management of local government debt risks involved, which must be subject to careful monitoring and evaluated carefully, referring to market risk, refinancing risk and operational risk.

In our opinion, the local public debt can be analyzed by an indicators system which includes: the public debt ratio (PDR), the public debt term ratio (PDTR), the public debt expenses ratio (PDER), the long term public debt revenues ratio (LPDR), the short term public debt revenues ratio (SPDR) and the public debt revenues ratio (PDRR).

In our research we take into consideration the evolution of balance sheet and patrimonial result account of the North West counties administrations: Bihor, Bistrița –Năsăud, Cluj, Maramureş, Sălaj and Satu Mare during 2007 and 2013.

The first component of the system is the public debt ratio (PDR) which is calculated as a ratio between local public debt and local own revenues.

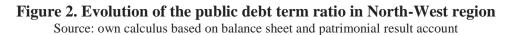


Figure 1. The evolution of the public debt ratio in the NW region Source: own calculus based on balance sheet and patrimonial result account

As we observe during the financial crisis the indicator increases in 2010 at 23, 04%, then the evolution arrived at 19, 98% in 2013. This indicator highlights the administration's ability to cover debt Local County from its own revenues.

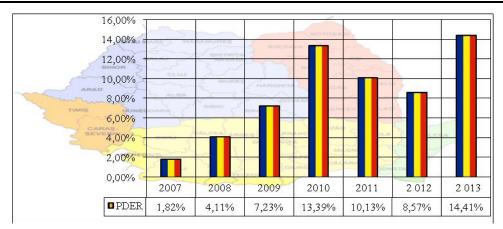
The second component of the system is the public debt term ratio (PDTR) which is calculated as a percentage between short term local public debt and local own revenues.

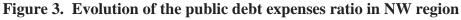




Until the outbreak of the sovereign debt crisis this indicator recorded insignificant values. After 2010 the indicator took values from 9% to 12%. The indicator highlights the ability of local governments to repay short-term loans.

Another important ratio is the public debt expenses ratio (PDER) which is calculated as a percentage between local administration public debt and local operational expenses.

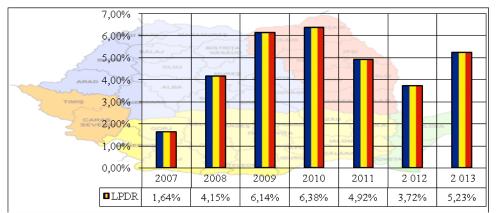


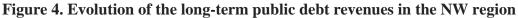


Source: own calculus based on balance sheet and patrimonial result account

So as you can see the indicator recorded higher values in 2010 and 2013, which means an extra effort of local governments to include in costs a part of the cost of short-term and long term borrowings. The indicator is an important leverage management which signifies how the public debt can be included in the local administration costs.

The long term public debt revenues ratio (LPDR) is a fourth component of the system which is determined as a ratio between long-term loans and total operational revenues.





Source: own calculus based on balance sheet and patrimonial result account

From the chart above we can see that the indicator constantly increased from 1, 64% in 2007 to 5,23% in 2013. The indicator is an important tool that highlights how local government can be repaid the long-term debt from the local revenues.

The fifth component of the system is the short term public debt revenues ratio (SPDR) which is determined as a ratio between short-term debt and total operational income.

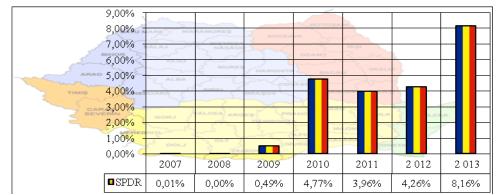


Figure 5. Evolution of the short-term public debt revenues ratio in the NW region Source: own calculus based on balance sheet and patrimonial result account

In our opinion this indicator is an important tool used in risk analysis of bankrupt local governments.

Finally the last component of the system is the public debt revenues ratio (PDRR) which is determined as a percentage between the local public debt and operational revenues.

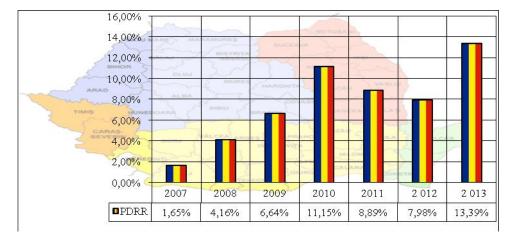


Figure 6. Evolution of the public debt revenues ratio (PDRR) in the NW region

Source: own calculus based on balance sheet and patrimonial result account

Regarding the short-term debt, the legislature imposed a maximum limit of 20%, and may be increased up to 35% -40% of current revenues. (Botos, 2007, p. 258)

From this graph we see that the administration of NW falls within the legal gap.

Performance of local government depends heavily on its financial structure, shows how the work is financed by both equity and loan. According to the classical theory there is an optimal ratio between the two funding sources report that lead to the minimization of cost of capital respective administration.

3. CONCLUSIONS

A major subject in the financial analysis is the local governments and public debt which has a great interest in the context of deepening sovereign debt crisis around the world.

The study undertaken revealed, on the one hand the importance of using financial ratios to analyze the local government debt, and on the other hand to analyze the effects on the performance of local administration, the public debt region local government.

All indicators presented above show an increase in local government debt given that their income is not keeping pace with this evolving.

REFERENCES

- [1] Marcio Pereira Duarte, N., Mendonça, Helder Ferreira, de M. (2011) *Public debt and risk premium. An analysis from an emerging economy*, Journal of Economic Studies, Vol. 38 Issue 2, p.203-217.
- [2] Greiner, A. (2008), *Human capital formation, public debt and economic growth*, Journal of Macroeconomics, Vol. 30 Issue 1, p.415-427.
- [3] De Mello, L. (2008) *Estimating a fiscal reaction function: the case of debt sustainability in Brazil*, Applied Economics, Vol. 40 Issue 3, p.271-284.
- [4] Vis, B., Woldendorp, J., Keman, H. (2007) *Do miracles exist? Analyzing economic performance comparatively*, Journal of Business Research, Vol. 60, Issue 5, p.531-538

- [5] Cafiso, G. (2016) Non-residents' Holdings, Market Volatility and Public Debt Sustainability. An Analysis with Data for Italy, Review of International Economics, Vol. 24 Issue 3, p.484-513
- [6] Staehr, K., Cuestas, J. C. (2015) Special Issue on Debt and Sustainability: Introduction, Economics & Business Letters, Vol. 4 Issue 4, p.129-130.
- [7] Levine, P., Mandilaras, A., Wang, J. (2008), *Public debt maturity and currency crises*, Scottish Journal of Political Economy, Vol. 55 Issue 1, p.79-106.
- [8] Gürbüz, Y., Jobert, T., Tuncer, R. (2007) *Public debt in Turkey: evaluation and perspectives*, Applied Economics, Vol. 39 Issue 3, p.343-359.
- [9] Schaltegger, C. A., Torgier, B. (2005) *Trust in government and public debt: an empirical analysis*, Proceedings of the 98th Annual Conference on Taxation, Miami, Florida, USA, p. 217-222.
- [10] Citron, D.B., (1995) The Incidence of Accounting-based Covenants in UK Public Debt Contracts: An Empirical Analysis, Accounting & Business Research (Wolters Kluwer UK), Vol. 25 Issue 99, p.139-150.
- [11] Meneghetti, C. (2012) Managerial Incentives and the Choice between Public and Bank Debt, Journal of Corporate Finance, Vol. 18 Issue 1, p.65-91.
- [12] Moșteanu, T., Vuță, M., Câmpeanu, E.M., Gyorgy, A., & Cataramă, D.F. (2008) Buget și trezorerie publică, Editura Universitară, București.
- [13] Botoş, M. (2007). Bugetul şi trezorearia publică. Note de curs. Oradea: Editura Universității, p. 258