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Abstract. The rapid increase in the government debt under the circumstances of the global crisis persistence and financial markets volatility raises the need for a new approach of public debt sustainability, including for Romania. Despite more intense contagion effects according to global markets connectivity, the importance of country specificity in the assessment of sovereign risk, which is decisive in dimensioning the borrowing costs, has grown. In the case of Romania, a sharp deterioration of its fiscal framework strength has been observed during post-crisis period, the public debt-to-GDP ratio currently reaching around 40%, thus doubling as compared to 2008. The structural analysis of government debt portfolio highlighted the main drivers of excessive public indebtedness and the increase in refinancing (rollover) risk on short term, which is supposed to overlap with the exchange rate and interest rate risks on medium and long term. Several indicators of Romania's debt sustainability are already on the warning levels edge which requires appropriate policies focusing on economic growth recovery, fiscal consolidation ongoing, increasing capacity of generating budgetary revenues, public debt management improvement. Maintaining the financial stability and the investment grade of sovereign risk are decisive for the development of Romania on a sustainable path.

Keywords: public debt; debt sustainability; sovereign risk; sustainable development; financial stability.

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1. Introduction

The absence of a consensus on international financial markets regulations and the excess of global capital flows and of risk exposures, including the derivative financial instruments, has led to a gradual split between the monetary and the real economy. The crisis triggered in the USA in 2007-2008 had contagious effects at the global level, favoured by the interconnected financial markets channels.

The increase in risk aversion and the deterioration of the post-crisis business climate, along with the banking system crisis and the credit contraction have finally degenerated into a recession of advanced economies which has been extended at the world scale.

After having seemingly recovered in 2010, the global growth decreased in 2011 and 2012 when the EU countries turned back into recession, which has been maintained in 2013, too (IMF, 2013,b). Looking ahead to the year 2014, the global growth is expected to remain modest, while macroeconomic risks are maintained, including from the view point of the financial stability, with increasing market and liquidity risks (IMF, 2013a).

The Euro Zone has been mostly affected by the impact of the global crisis. The bailout of the banking system in 2008-2009 required huge budgetary allocations which have brought about a serious deterioration of the public finances, especially in the Euro Zone periphery. On the UE 27, the government public debt has increased from 58.9% of GDP in 2007 to 93.4% at the end of June 2013 (Eurostat, 2013a, 2013b). Overcoming the sustenability debt level, in order to face due payments, Greece, Ireland and Portugal have received emergency financial packages from IMF-EU.

The austerity programmes adopted by the EU countries in view of fiscal adjustements, by severe budgetary constraints, have hindered their post-crisis economy relaunch and have brought about social tensions.

Though steps have been taken, the european leaders' commitements looked for public finance consolidation, financial systems rebuilding, setting a banking union in the Euro Zone witch haven't been achieved until now, „the sovereign debt crisis" threat being still existent.

In time, the high levels of public indebtedness in almost all the important advanced countries and the persistance of financial breaking up in the Euro Zone may lead to a new crisis occurence (IMF, 2013,b).

Romania has also suffered a significant increase in the public debt, which, though being situated below the level established by the Maastricht Treaty and under the one registered in the advanced states of the EU, the current high debt service may create payment issues that can endanger the sovereign risk and the development perspectives.

In this study we have tried to analyse the evolution of the public debt, mainly focused on the central gouverment debt, and to identify its main growth factors in the last years.

We will try to show that some indicators which reflect Romania's indebtedness public degree are already at unsustenable levels and to reveal some guiding steps to be taken, which may contribute to the maintenance of the financial stability of the country and to allow its coursing toward a durable development trajectory.

2. The increase of Romania's gouvernment public debt: decoupling from the GDP increase

In an external context dominated by the global recession, which induces adverse effects on Romania, the public debt issue has become of extreme importance, also from the perspective of its sovereign risk on medium and long term.

Romania's internal and external financial framework has been under pressure, the imbalances have become chronic in the last years by accumulating current account and fiscal deficits**,** covered, in an increasing proportion, with sovereign and private loans, leading to a rapid growth of the indebtedness level and to a severe deterioration of its sustainability parameters.

On the other hand, after accessing into the European Union, Romania managed to absorb only to an insignificant extent the available European funds, which could have diminished the pressures on the internal and external financial requirements. As long as the macroeconomic policies, the budgetary austerity measures and the structural reforms cannot ensure competitiveness gains and the functioning mechanisms of financial balances adjustments, a deterioration of the public debt sustainability and endangering our country's reaching the goals of durable development, as well as the convergence with the EU, can be expected.

As the local debt has still insignificant dimensions in the case of Romania (about 5% from the total public debt), the study is focusing on the evolution of government public debt, respectively on the main factors of its increase.

In the period 2000-2012 an accelerated rise in the government public debt was registered. This reached 226.8 bn lei (equivalent of 50.9 bn euro) by the end of the year 2012, representing 38.6% of the GDP, comparatively with about 25 bn lei (equivalent of about 8 bn euro) in the year 2000 when it represented only 16.7% of GDP (MPF, 2013). We mention that, if we add the local debt of about 14 bn lei to the government debt at the end of the year 2012, the total public debt of 240.8 bn lei represented 41% of the GDP.

Starting from the hypothesis that, theoretically, the long-term sustainability of the debt is conditioned by keeping its growth rate below the GDP growth rate, its being verified in practice depends on the extent to which the sovereign loans manage to become (co)financing sources of investment projects (included for public works for infrastructure modernization) which are meant to contribute to the economic growth.

In nominal terms, from the calculations presented in Table 1 a close level of the two indicators in the period 2000-2006, though followed, in an unfavourable context of the global crisis triggering, by their decoupling in the period 2007-2013, respectively an annual increase of 7.7% of the nominal GDP as compared to about 25% of the public government debt.

Table 1.

The annual average growth rate of GDP and of public government debt during 2000 – 2012

- percent -

Periods	**2000 - 2012**	**2000 - 2006**	**2007 - 2012**
GDP (nominal) annual average growth rate	12.0	14.6	7.7
Public government debt annual average growth rate	20.1	15.4	24.4
Public government debt rate /GDP (nominal) rate	1.67	1.05	3.17

Source: calculations based on MPF (2013); data for GDP(nominal): National Commission of Prognosis

In the case of Romania, we can assert that, at least in the period 2007-2013, the massive sovereign loans didn't contribute to the stimulation of economic growth, but, rather, to the counteracting of the global crisis effects, as well as of the adverse action of internal factors which made the country run the risk of a financial destabilization. The major impact on the government public debt increase in this period was caused by the package of external financing from IMF, EU and other financial institutions (The World Bank, EIB, EBRD), amounting to about 20 bn euro, agreed, at the request of the Romanian authorities in emergency conditions, in April 2009.

We believe that the lack of a soundly argued motivation of its necessity (at least officially, respectively publicly), the imposed conditionalities (or self-imposed by austerity measures, mainly salary cuts in the budgetary sector and the VAT increase that induced social discontent and the deterioration of the business climate) have actually covered the deficiencies of the perception capabilities, i.e. of preventing the adverse effects of Romania's accumulated vulnerabilities, penalizing the stand-by position of authorities, when confronted with the evidences of an international financial crisis which couldn't pass-by our country.

Actually, the crucial challenge in the spring of 2009 lay on the stringency of liquid international reserves recovery (deprived of by the reduction of the minimal foreign exchange reserves requirements of the credit institutions under the pressures of Romania's foreign banks subsidiaries and under the threat of their financial deleveraging), in the context of the recession economy entry and the increase of the financing requirements of the current account deficit (by reducing to the half the FDI inflows as compared to the year 2008) and the budgetary one (more than 7%), by which the triggering of a foreign currency crisis and the collapse of the national one were imminent.

Thus, the excessive increase in Romania's public indebtness level, which is supposed to make our country's future payments difficult, has been brought about by both external shock and economic policy errors. The major lesson of the year 2009, which didn't seem to have been learned, at least up to the present, is that each state must ensure, in its own way, the solidity of the internal and external financial framework, a strong competitive economy, a public sector performant management, with a functional market economy and with a transparent and efficient business environment .

3. Romania's government public debt: costs and sustenability

Regardless the assement ways (current/constant prices, national currency/euro, respectively the impact of prices and exchange rates variation), the fact that the public debt rise. far exceeding the GDP growth in the period 2007 – 2012. became obvious. It results that the high indebtedness of Romania is not sustained by the net financing capacity of the economy i.e. by generating enough revenues for due payments, which explains the debt rollover every year.

The sustainability of public finances, including as measure of sovereign risk. is defined as the government capacity to comply with loan obligations, respectively to meet the annual debt service (capital reimboursement, interests and commissions) currently and in the perspective on medium and long run.

One of the classical methods for the public debt sustainability assessment (vezi ECB, 2011, p. 63) starts from the following ecuation:

$$r_t = \frac{1+d_t}{1+p_t} r_{t-1} - b_t + a_t \qquad (1)$$

where:

r – public debt to GDP ratio
d – debt stock average nominal interest rate
p – GDP growth rate (nominal)
b – primary balance (% of GDP)
a – debt/deficit adjustment
t, t-1 – current and previous year respectively

In dynamics, the public debt accumulation become:

$$\Delta r_t = \frac{d_t - p_t}{1+p_t} r_{t-1} - b_t + a_t \qquad (2)$$

The ecuation (2) reflects the annual change in public debt to GDP ratio as result from the interaction of primary balance (fiscal balance – debt interests expenditures), “snowball” effect (the cumulated impact of the interests expenditures on debt stock and of the real GDP growth and inflation rates on debt to GDP ratio) and debt/deficit adjustment (financial transations aquisitions/sales of shares/assets by the governement that affect the debt stock but are not recorded in the primary balance).

The long term debt sustainability is conditioned by the stabilizing (to a level considered safe) or by the declining in the public debt to GDP ratio, meeting the requisite :

$$\Delta r_t \leq 0 \tag{3}$$

Under the circumstances when the debt stock average nominal interest rate is higher than nominal GDP growth rate and the debt/deficit adjustment is positive (or zero), theoretically, the only way to meet the requisite (3) is achieving primary balance surpluses, solution that has a remarkable practical significance.

Further, according to the presented method, Romania's public government debt sustainability in the period 2008 - 2013 will be examined. The Table 2 data are showing an assessment of the contribution to the increase in the public governement debt to GDP ratio of the main three factors.

Table 2

The main factors of the increase in the public governement debt to GDP ratio in 2008 -2013

- percent -

Indicators/Years	**2008**	**2009**	**2010**	**2011**	**2012**	**2013****
PGD* to GDP ratio	19.5	27.2	34.8	37.8	38.6	39.0
Change in PGD* to GDP ratio (percentage points to previous year)	0.7	7.7	7.6	3.0	0.8	0.4
Contributions to change:						
- primary balance	4.1	6.1	5.0	2.7	0.7	0.5
- "snowball" effect	-2.4	2.1	0.4	-0.3	0.1	-0.5
- deficit-debt adjustment	-1.0	-0.5	2.2	0.6	0.0	0.4

* PGD – Public Government Debt

* * Estimations

Source: own calculations based on IMF, 2013c.

Though somehow difficult to explain because of indicators sinuous evolution, it is found that, in most years during the considered period, the factor with the biggest impact on the increase in governement indebtedness was the primary balance deficit i.e. the difference between the fiscal balance and the interests expenditures to GDP ratio. Particulary clear is the fact that the public governement debt to GDP ratio does not meet the requisite (3) previously mentioned as a condition to ensure the long term debt sustainability.

Though the "snowball" effect generally occurs with a significant impact (in 2008, 2011 and 2013 even in a positive manner), this is due mainly to the effets of the declining trend in the debt stock average nominal interest rate (the method does not consider the influence of an increase in the debt average maturity i.e. of the remaining avearge duration), to the inflation rate mitigation, to the diminishing gap between the real and nominal GDP growth rates in the last years and to some statistical discrepancies. Otherwise, a derived indicator, but with similar significance i.e. the rollover rate for amortizing public sector debt increases, according to IMF estimations from 130% in 2012 to 150% in 2013 (IMF, 2013c, p. 36). Therefore, despite the IMF optimistic scenario regarding the perspectives of Romania's fiscal framework for 2013 – 2018 under which a stabilization of the primary balance is foreseen, with the assumptions of maintaining the key indicators (GDP growth, real interest rates, other identified flows generating debt) at projected levels, this stabilization is expected with a negative sign (a primary balance deficit between zero and 0.4% of GDP), to which the impact of other challenges supposed to alter the considered assumptions will be added.

This classical method of the public debt sustainability assessment. which has the merit of highlighting the role of achieving a primary balance surplus as decissive macroeconomic factor for ensuring the public debt sustainability on medium and long term. need to be supplemented with the analysis of other indicators.

The issue of public debt sustainability, directly or indirectly related to the sovereign risk, has become an extremely important debate topic at the global level, both in the economic literature and in the international financial institutions or national authorities. The radical solutions to strengthen public finances consist either in imposing budgetary restrictions (fiscal austerity), or increasing public expenditures in view of reinvigorating economic growth (fiscal stimulation), or the forced directing of the funds to the state budget, mainly by maintaining reference interest rates at low levels ("financial repression") (Reinhart and Sbrancia, 2011).

Under the circumstances in which there is no consensus regarding a certain debt level (as a percentage of GDP) which can be considered as unsustainable, Cecchetti et al., 2011, pointed out that, the more the indebtedness degree rises, the more the default risk increases, the countries having to make fiscal buffers which can counteract the effects of possible external shocks.

The public finances sustainability on long-term is put to a difficult test also by the population aging effect and by the increasing costs of the social insurance budget, especially in the states of EU (EC, 2012).

A level of the public debt perceived as unsustainable brings about fiscal risks, as it has already been noticed in Romania (visible in the budget projected for 2014), which deteriorates the investment climate (debt overhang effects), leading to the uncertainty increase regarding the macroeconomic prospective and the recovery of the payment capacity (Zaman, Georgescu, 2011, p. 266).

As a consequence of global crisis effects, the International Monetary Fund (2013d) has revised the methodology of the public debt sustainability assessment, also applying it to the countries with a market economy, separately for emergent countries and respectively advanced ones. The analytic assessment of the public debt sustainability is based on several indicators concerning its burden, as well as its financial profile, respectively: maturity, currency composition, type of creditors a. o. Comparing to the benchmarks concerning the risks early warning of the public debt sustainability for the emergent countries (IMF, 2013d, p. 30) it results that Romania is exceeding them in the case of external financing requirements (23.7% of GDP as against the benchmark of 15%), the average increase of the public debt amount from the GDP (higher in the case of Romania as against the benchmark of 1 pp), the cumulative 3 year primary balance (deficit of 0.7% as against the benchmark of 2% of GDP), the public debt hold by nonresidents (higher than the benchmark of 45% of the total public debt).

This new approach encompasses more importance that has to be attached to each country's particularities, having in view the growing influence of specific factors: the capacity to achieve surpluses of the primary balance, to meet the debt service obligations, the perspectives of economic growth and of tax regime, the borrowing costs on the international markets.

The rating agencies, which influence decisively the borrowing costs on the capital markets, have also changed their methodologies of sovereign risk assessment, by extending the set of indicators on fiscal framework solidity, as well as on the sovereign credit risk correlation with that of the banking system.

For example, the rating agency Standard and Poor's (2013) classifies countries on different risk scale taking into account the level of the government debt (% of GDP), the public debt compared to the budgetary revenues, as well as the debt costs (debt interests expenditures as a percentage of budgetary revenues), with some negative adjustments i.e. if more than 40% of the debt is denominated in foreign currency, if the exposure of the banking sector assets to the government is more than 20% and the debt service profile significantly varies.

Romania's public government debt has not only increased very fast recently, but it has also been burdened by increasing costs which have affected its sustainability degree. As can be noticed from the data presented in Table 3, the annual debt service increased from 10.4 bn lei in 2007 (2.6% of GDP) to 64.3 bn lei in 2012 (about 11% of GDP). Compared to the budgetary revenues, the amount of the debt service has increased from 7% in 2007 to about 1/3 in 2012.

In the last years, about 15% of the total annual public debt service consisted of interests and commissions, which came to be almost 2% of GDP in the year 2012.

Table 3

Romania's public government debt indicators

- percent -

Indicators/Years	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
PGD* to GDP	18.8	19.5	27.2	34.8	37.8	38.6
PGD* service to GDP, out of which:	2.6	2.8	11.4	8.8	10.7	10.9
- capital reimboursements	2.0	2.1	10.2	7.4	9.2	9.1
- interests and commissions expenditures	0.6	0.7	1.2	1.4	1.5	1.8
PDG/Budget revenues	56.7	60.8	86.8	108.1	115.6	117.5
PGD* service /Budget revenues	7.2	8.6	36.2	27.7	32.7	33.3
Interests and commissions/Budget revenues	1.8	1.8	3.6	4.2	4.7	5.5
Interests and commissions / Budget expenditures	1.6	1.5	2.6	3.5	4.1	5.1

* PGD - Public Government Debt

Source: based on MPF „Report on goverment public debt management", years 2008 – 2012.

The increase of Romania's public indebtedness degree hasn't contributed to the amelioration of different GDP growth factors, on the contrary, the growing dimension of its costs coming to change into an economic growth hinder, and, by cutting off more than one tenth from the GDP, mainly on the investment side, altering the development financial resources and this, predictably, on a long-term.

We consider that the decrease in the financing costs of budgetary deficit and of the debt refinancing in the next 5 years perspective, as it would result from the Romanian government public debt service projection elaborated by MPF (2013b), according to which this one (expressed in euro) would be reduced by the end of 2018 to only 1/3 as compared to the level of 2013, is not founded in our opinion, neither on assumptions of this very optimistic scenario nor on reliable economic argumentation of the trend change having been defined. Actually, the average maturity of the outstanding debt stock by the end of 2012, of about 5 years, is to expire just around the year 2018, without taking into consideration the refinancing needs in the meantime.

4. Conclusions

The situation of Romania's public debt has significantly deteriorated in the last years, endangering the stability of the our country's internal and external financial framework, both on the short, medium and long term.

Against the background of the economic vulnerabilities widening, subdued to the external shock of the global crisis, the public debt issue being seen through the public interest light, we believe that its sustainability seems to be undermined from the inside, too.

If the main economic causes which have led to the sovereign loans boom are connected to the budgetary deficit and current account increases, implicitly to the rise in Romania's internal and external financing requirements, we consider that at their origin there were extraeconomic factors, which have proved to have a major impact.

These were errors of economic policies, with a multiplying adverse effects, among which: expansionary budgetary policies; ignoring the phenomenon of deepening the financial imbalances for years and the risk of FDI flows slowing down by which these ones were financed; the lack of appropriate logistics in order to absorb European structural funds which could compensate partially the growing financing gap covering; the incapacity to notice the signs of the global crisis occured in the early 2007 and to foresee the potential effects on Romania; the lack of reaction to the crisis shock which hit Romania and the inability to adopt post-crisis policies and measures capable of mitigating the adverse effects and to relaunch the economy as soon as possible.

The main factor of the public debt explosion in the years 2009 and 2010 was represented by the 20 bn euro IMF-EU loan, which had only a role of supporting the state vital functions, not having effects on the identification of any real remedies for the correction of the imbalance, corresponding to the requirements of Romania's sustainable development.

As it comes out from our study, Romania's public indebtedness increased to around 40% of GDP being already situated at the highest ceiling of sustainability level in the particular case of our country, some of the indicators revealing even an exceeding of the warning benchmarks. We think that the main factor of macroeconomic and financial recovery is represented by achieving a primary balance surplus as a prerequisite of the debt burden reduction, as well as of its costs. As for the fiscal consolidation, in our opinion, among the factors of public finances sustainability are:

- changing the budgetary vision into a pro-active one, following the use of budgetary instruments in order to achieve a sustainable development, aimed to set and maintain a trend of budgetary revenues increase;
- refraining from taxes increase, or introducing new ones as sources of supplementing revenues, both at the central and local level, which infringe the commitments of maintaining the stability and predictability of the fiscal regime, having adverse effects, inclusively on the business environment deterioration and the FDI reduction, as recent experience has demonstrated;
- setting up a strict budgetary discipline as far as local and central administration expenditures are concerned, both for the one related to the staff and maintainance and to the public acquisitions;
- giving absolute priority to the investments and financial resources necessary for supporting the European structural funds absorption and exports promotion;
- respecting the commitments, the international ones as well regarding the achievement of the Europe 2020 strategic objectives, by alloting 6% of GDP to Education and 2% of GDP to Research & Development, sectors in decline, decissive on the long-term for the economy relaunching and for Romania's sustainable development.

- fighting the fiscal evasion by drastic measures, which has been maintained at a high level, by both individuals and companies, inclusively by off-shore accounts and the price transfer practices of multinationals.

Beside the achievement of primary balance surpluses, among other factors which can contribute to the increse of the public debt sustainability can be mentioned:

- ameliorating the methodologies and statistics quality in the public debt field, which can ensure the comparability and and compatibility of the data series, an essential condition of the analysis, respectively of studies pertinence, as a basis of adopting the most adequate policies/measures, both for neutral researchers and the directly involved staff from institutional structures;
- standardizing annual reports concerning public debt management, which can facilitate the analytic approach and informing the population about issues of high interest;
- elaborating strategies of public debt management based on real internal and international environment assessment, predicting essential measures aimed to reduce the debt burden, imposing sustainability standards specific to Romania and ensuring the consistency of guiding lines (ceilings), respectively targets of risk exposures;
- setting stricts limits for government bonds issues for refinancing the public debt and the significant reduction, in this way, of Romania's gross financing needs;
- optimizing debt portfolio and putting under control the refinancing, the interest rate and the currency risks based on real fundamentals of risk management in the particular case of Romania.

The decrease of Romania's public indebtedness and the amelioration of financial and macroeconomic stability parameters allow the maintaining of the sovereign risk in the"investment grade" category, which can contribute, in a decisive manner, to the public finance sustainability and the durable development of the country.

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