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# UNDER THE THREAT OF GREEK PUBLIC DEBT

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The leading powers of the European Union have undergone tantalizing pains as a consequence of the financial disequilibrium in the cradle of the continent, Greece. The unsustainable level of Greek public debt has plunged those eurozone members into danger which are also struggling with similarly large public debt and has shaken the entire European banking system. The present study examines how the Greek government, which following suit with welfare states started to extend in the 70's, has drifted to the edge of state bankruptcy, which factor was most significant among those accounting for the accumulation of debt, and what other stake member states have in restoring the Greek solvency apart from the general financial stability of the eurozone. After reviewing some related findings of the theoretical literature (Araujo and Leon, 2004, Menguy, 2010, 2011) the determinative relations of the dynamics and financial structure of Greek public debt is analyzed in the article on the basis of data discovered in international and Greek statistical databases with special emphasis on the evaluation of the last ten years' processes. The analysis draws from the reports of the IMF and the Greek Statistical Office as well as some analytic writings of international special journals.

*Keywords*: public debt, primary deficit, interest premium, sovereign crisis, fiscal discipline, debt management.
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## *Introduction*

Since the explosion of the global financial crisis, the level of public debt has reached values never seen before. Japan and the United States are struggling with a debt above 200% and above100% of the GDP respectively. The rescheduling and the sustainability of Greek public debt is becoming an everyday issue in the European Union. Ireland was on the verge of trebling its debt between 2008 and 2012. The most disproportionate debt relative to GDP per capita is borne by Greece, Italy and Portugal within the European Union. It is worth comparing how factors calling for the accumulation of debt have evolved in these countries since the introduction of euro and how Greece has become the riskiest country in the eurozone. Before analyzing Greek public debt, it is worth reviewing some approaches of the theoretical literature relative to public, debt which seek specifically to explore the opportunities of debt management of severely indebted countries within a monetary union.

## *Public debt in monetary union*

Araujo and Leon (2004) evaluate the impact of speculative attacks on the countries' public debt and welfare in a monetary union with an extension of a model elaborated by Cole and Kehoe (1996, 1998, 2000). They investigate whether the repudiation of debt or inflating the common currency is a better solution of debt management under a debt crisis and gauge the contagion effect caused by the loss of confidence of international bankers in a country's financing ability. In case of a default on debt and inflation the economy of the currency union suffers a productivity loss. The central monetary authority is assumed benevolent, since it intends to maximize the welfare of the consumers in the union when deciding on whether to inflate the common currency taking account of the voting power of the particular countries in the decision-making process. The inflation tax is an alternative of the default on debt while the latter has an even greater deteriorating effect, (a loss in productivity,) on welfare.

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Menguy (2011) adapts the question of debt management inside the currency zone to EMU countries. He points out that with the creation of the EMU, the portfolio diversification opportunities of member states disappear as most of the government debt securities are denominated in the common currency, therefore the competition between member states is restricted to the liquidity and default characteristics of debt instruments in a market with outstanding liquidity and efficiency. Menguy summarizes the main findings of the special literature in this field which emphasize that countries running high debt levels endanger price stability and the balanced economic activity of other countries in the monetary union. In his one-period model, where the monetary authority is interested in the average welfare in the monetary union, productive investment financed from debt can decrease government's loss in contrast to non-productive investment. Menguy (2011) confirms that concerning fiscal discipline, the creation of a monetary union among very different countries can have harmful economic consequences as fiscally strong countries have to finance their debt at a higher cost, and fiscally weak countries might default on a part of their debt unless the monetary authority gives up its strong commitment to the inflation target. Nevertheless, if the number of countries in the common currency zone facing serious indebtedness is limited, the central bank's behavior will be less accommodative in a fiscal crisis, but will even more keep the interests of the whole integration in the fore. Menguy (2010) is also weighing whether the creation of a common fiscal insurance mechanism can be beneficial in a monetary union. In his study he suggests the establishment of a temporary transfer from countries in cyclically relatively good to countries in cyclically bad situation as a compensation for country specific or asymmetrical shocks and discusses the advantages of risk sharing and the aspects of moral hazard problems of this potential fiscal insurance mechanism. As monetary policy cannot fully neutralize fluctuation in each particular country, there might be need for a coordinated intervention by national and federal fiscal policies. The premium paid in this common fiscal insurance mechanism depends on various macroeconomic characteristics: the greater the economic openness and the flexibility of automatic stabilizers of a member state, the less the support should be. The particular country's variance to its demand shock, the sensitivity of the national economy's supply function to price changes and the efficiency of the budgetary policy to influence national demand makes it reasonable to increase the volume of the credit facility. The centralized insurance mechanism– argues Menguy – at the same time might result in a disincentive effect for countries to make national efforts to combat economic shocks, therefore a state independent premium which might incite countries to conduct contra-cyclical budgetary policies necessary to mitigate economic fluctuations is also worth considering.

Kouretas and Vlamis (2010) refer to de Grauwe when urging a common eurobond, which would alleviate the situation of countries under excessive deficit procedure within the Economic and Monetary Union. They would define the interest of the common European security as the weighted average of the interest rate of member countries and therewith it could be avoided that the moral hazard of nation states piling up high public debt predominates and it would contribute to the increase of liquidity of European bond markets with the entrance of new investors in the market.

*The gaining ground of the Greek state in the 20$^{th}$ century*

The level of Greek external government debt reached 15% of GNP in 1957, the explosive growth of debt started in the 80's (Fotopoulos, 1992). After the oil crisis, the Greek state was obtaining stronger and stronger influence as it was gradually establishing the services of welfare state. As a consequence public debt rose to a GDP proportionate 100% by 1994 from the two decades earlier 20% level (Moutos-Tsitsikas, 2011). The rapid upswing in public debt was largely due to the interest payment after increasing external debt (which took a measure of 6-8% of GNP in the same period). Fotopoulos basically traces back the necessity of the stronger involvement of external resources in the country's financing to the Greek economy's structural imbalances and lack of resources. The economic liberalization was soon realized in Greece preceding the strengthening of the productive sector and instead of the stimulating effect of competition capital concentrated in the hands of the power elite characterized the economy. The structural imbalances manifested themselves not only on the supply but also on the demand as Greece was becoming an open economy and from the 60's, as being the associate member of the EEC, its tourism was extending, it enjoyed notable trade advantages and also transfers started flowing into the country. With the increase of openness the deficit of the trade balance was becoming more severe as a consequence of the intensifying import dependence and deteriorating terms of trade under the weak resource endowment of the economy. Greece was stronger and stronger relying on the service sector while concerning its industrial performance and productivity it was more and more lagging behind the indicators characterizing the EEC. Under these circumstances the EEC membership (1981) and the entailing trade liberalization just further aggravated the

structural disproportionateness of the Greek economy. What is more, the capital inflow was getting insufficient to cover the capital need stemming from the refunding of external debt. Nevertheless, economic growth between 1950 and 1973 outpaced that seen in the EC member states and by 1973 per capita GDP had exceeded that of Ireland and Portugal. By the mid 70's, however, the pace of growth had decelerated and by the 80's the advantage of Greece had faded away, moreover, in this decade the productivity growth was already lagging behind the EC average (the GDP per capita increased by only 0,3% on average, in contrast to the average 2% growth of member states). (Moutos-Tsitsikas, 2011).

Meanwhile the government sector's budget running surplus during the 80's generally was gradually replaced by an ever increasing deficit, whose measure was oscillating around 10%. The negative budgetary balance was not the consequence of the helter-skelter spending; it was much more owing to the lack of the right revenue basis. Though the size of the government sector started a rather significant expansion in the 70's and 80's, this was rather necessary for the catch-up to the expenditure level of the EEC countries. While in 1979-80 the general public sector only made up 33% of GDP in contrast to the 45% OECD average, in 1985-86 this ratio raised to 48% level which was then characterizing the developed industrial countries. (Fotopulos, 1992) It was not thus the dynamics that unfavorably affected the financing of the general budget. This was rather due to the structure of expenditures, which manifested itself characteristically in the wage outflows in the public sector and pension payments, instead of serving productive investment. Furthermore, the number of persons publicly employed was continuously widening which accounted for the one-fifth of the total employment by the 80's. The public sector in a wider sense soaked up 65% of GDP in 1989, despite this the public investment activity only expanded to a minimum extent and little emphasis was put on the development necessary in the productive sphere. Tax avoidance could not be reined, therefore the growth primarily spurred by consumption was financed by debt accompanied by intensifying inflation, which impeded the improvement of competitiveness. Between 1985 and 87 for the amelioration of external and internal balance the Greek government carried out a stabilization program which, through the austerity measures taken, lead to a distinct improvement showing balance of payments and abating inflation, though its effect soon receded. Between 1990 and 92 the introduction of a stability package became necessary anew, so that Greece could benefit from the loan provided by the European Community, when its debt service ran to 20% of GDP (Fotopulos, 1992).

From 1990 on, the Greek government was trying to narrow the gap between public revenues and expenditures through increasing tax revenues, so as to meet the conditions required for the introduction of the euro and the adjustments expected by the European Commission. Public services were failing to meet the desires of higher income tax payers, which further stimulated tax avoidance being especially strong in the tercier sector, and is characterizing the non-tradable sector the most even in our days.(Moutos-Tsitsikas, 2011). The external balance of the public sector further deteriorated. Between 1990 and 1994 the situation of public finances further aggravated as the government took over the restructured debt obligations of quasi public companies in the form of state guarantees. This debt consolidation caused a further 10% increase in the debt indicator of the government sector. Another some 16% increment occurred from making transfers between the national bank and the government transparent through which new components of public debt originating from liabilities to the national bank came to light. The second half of the 90's was devoted to the preparation to the eurozone entry in a relatively balanced financial environment (a 9% deficit decrease was realized in this period) though the fiscal debt consolidation among the subsectors of the general government financial sphere went against the amelioration of the financial position of the state (mainly due to unfavorable stock-flow adjustments).

*The accumulation of debt between 2000 and 2011*

Following the introduction of the euro Greece had to cope with the threatening problem of twin deficit (IMF, 2012). Private credit stock doubled between 2001 and 2009. Preceding the global financial crisis only Portugal showed up net savings reaching negative domains besides the Greek economy. (Moutos-Tsitsikas, 2011) The net foreign assets position showed a negative balance equivalent to 90% of GDP in 2009. The forceful economic growth was first of all financed by government expenditures, public spending had sprung to 51% of GDP by 2009. (Moutos-Tsitsikas, 2011) From 2004 onwards public debt started swelling anew, mainly caused by rising structural deficit (in the period under consideration the structural balance deteriorated form a surplus of 4,5% to a deficit exceeding 14%), and partly thanks to the government having access to favorable credit conditions in international capital markets via its eurozone membership. High deficit was escorted by a real wage increase surpassing productivity which further downgraded the competitiveness of the country at the same time with the inflation level typically higher than that of trading partners. (IMF, 2012) The real exchange growth finally had a rather unfavorable impact

on current account balance. In contrast to what was provided for in the Stability and Growth Pact breaching the 3% deficit and 60% debt criterion was not punished by the European Commission as the loosening of fiscal discipline would have made it reasonable like in the Greek case. Despite the close to 30 excessive deficit procedures in years 2003-2010 no sanction was exercised in the eurozone.

Between 2001 and 2007 the expenditures of the Greek public sector increased by 87%, whereas revenues all in all by 31%, thus it was continuously submitted to excessive deficit procedure. Within revenues direct taxes gradually occupied the place of indirect taxes. Beyond this, the expensive system of social security was still maintained in Greece, which among others allowed going on pension after 35 years of working. The replacement/substitution rate between the wage and the pension exchanging it was fixed at a significant 70-80% level which – taking into consideration the menace of aging population of Europe – projected the unsustainability of the pension system. (IMF, 2012). An often raised criticism about the Greek public sector touches upon the low productivity and overemployment of the same. The number of employed persons in the government sector increased by 150% between 1975 and 2009 (Moutos-Tsitsikas, 2011), and the benefits they enjoyed showed a greater increase than the average of the eurozone 12.Not to mention the wage dynamics of the public sphere well above the competitive sector, which was not underpinned by the relative improvement of productivity of the former. The public employees' wages rose together with the social transfer benefits while public companies operated with low efficiency and generally incurred losses. (Pascual-Ghezzi, 2011) The strong presence of grey economy amounting to approximately 25-30% of GDP and the tax avoidance reducing government revenues, in which necessity enterprises and SMEs play a determinative role, further contributes to the difficult situation of public finances. Despite all this a well detectable improvement in fiscal discipline followed after 2007, in 2009 however the global financial crisis rolled in Europe and forced European economies – including Greece – to take economic stimulating measures.

*Table 1: The economic components of gross public debt in 2000-2011 (%)*

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Greece* | | | | | | | | | | | | |
| primary balance | -3,60 | -2,00 | -0,70 | +0,70 | +2,60 | +0,70 | +1,40 | +2,00 | +4,80 | +10,60 | +5,00 | n.a. |
| seigniorage | 0,32 | 0,31 | 0,10 | 0,10 | 0,08 | 0,08 | 0,08 | 0,08 | 0,06 | 0,06 | 0,06 | n.a. |
| effect of nominal GDP | -7,05 | -7,23 | -6,81 | -9,41 | -6,81 | -4,89 | -7,68 | -6,69 | -4,68 | 0,62 | 2,46 | 6,31 |
| (real GDP growth) | (3,50) | (4,20) | (3,40) | (5,90) | (4,40) | (2,30) | (5,50) | (3,00) | (-0,20) | (-3,30) | (-3,50) | (-5,50) |
| interest to GDP | 7,40 | 6,50 | 5,60 | 5,00 | 4,80 | 4,60 | 4,60 | 4,80 | 5,10 | 5,10 | 5,80 | n.a. |
| (interest/debt) | (7,09) | (6,21) | (5,46) | (5,08) | (4,81) | (4,54) | (4,29) | (4,47) | (4,51) | (3,94) | (4,00) | n.a. |
| *1,estimate* | | *100,82* | *101,62* | *100,58* | *94,53* | *100,27* | *101,56* | *105,58* | *107,45* | *118,13* | *145,57* | *158,09* |
| *2.estimate* | | *100,18* | *101,61* | *100,76* | *94,97* | *100,19* | *102,33* | *105,18* | *107,48* | *117,96* | *145,72* | *158,38* |
| debt/GDP | 104,39 | 104,67 | 102,59 | 98,34 | 99,77 | 101,23 | 107,33 | 107,42 | 112,97 | 129,31 | 144,89 | 162,83 |
| *Italy* | | | | | | | | | | | | |
| primary balance | -5,40 | -3,10 | -2,50 | -1,50 | -1,20 | -0,20 | -1,20 | -3,40 | -2,50 | +0,80 | +0,10 | n.a. |
| seigniorage | 0,07 | 0,02 | 0,00 | 0,00 | 0,00 | 0,00 | 0,01 | 0,00 | 0,01 | 0,07 | 0,03 | n.a. |
| effect of nominal GDP | -6,76 | -4,96 | -3,83 | -3,13 | -4,15 | -2,78 | -4,00 | -4,18 | -1,37 | 3,35 | -2,17 | -2,25 |
| (real GDP growth) | (3,70) | (1,90) | (0,50) | (0,00) | (1,70) | (0,90) | (2,20) | (1,70) | (-1,20) | (-5,10) | (1,50) | (0,50) |
| interest to GDP | 6,30 | 6,30 | 5,60 | 5,10 | 4,80 | 4,70 | 4,60 | 4,90 | 5,10 | 4,50 | 4,40 | n.a. |
| (interest/debt) | (5,81) | (5,82) | (5,33) | (4,91) | (4,64) | (4,46) | (4,34) | (4,75) | (4,82) | (3,90) | (3,72) | (n.a.) |
| *1,estimate* | | *102,59* | *106,38* | *104,41* | *104,38* | *102,89* | *107,15* | *105,49* | *100,40* | *107,03* | *124,10* | *120,73* |
| *2.estimate* | | *103,52* | *106,34* | *104,48* | *104,38* | *102,93* | *107,14* | *105,47* | *100,48* | *107,07* | *124,45* | *120,64* |
| debt/GDP | 108,51 | 108,17 | 105,15 | 103,91 | 103,44 | 105,43 | 106,10 | 103,08 | 105,81 | 115,51 | 118,43 | 120,47 |
| *Portugal* | | | | | | | | | | | | |
| primary balance | 0,00 | +1,40 | +0,20 | +0,40 | +0,80 | +3,40 | +1,40 | +0,20 | +0,60 | +7,30 | +6,80 | n.a. |
| seigniorage | 0,02 | 0,03 | 0,03 | 0,02 | 0,02 | 0,04 | 0,06 | 0,10 | 0,12 | 0,12 | 0,09 | n.a. |
| effect of nominal GDP | -3,37 | -2,58 | -2,19 | -1,08 | -2,18 | -1,84 | -2,56 | -3,41 | -1,06 | 1,44 | -2,02 | 0,51 |
| (real GDP growth) | (3,90) | (2,00) | (0,80) | (-0,90) | (1,60) | (0,80) | (1,40) | (2,40) | (0,00) | (-2,90) | (1,40) | (-1,90) |
| interest to GDP | 2,90 | 2,90 | 2,80 | 2,70 | 2,60 | 2,40 | 2,70 | 3,00 | 3,10 | 2,90 | 3,00 | n.a. |
| (interest/debt) | (5,98) | (5,66) | (5,20) | (4,83) | (4,51) | (3,82) | (4,22) | (4,39) | (4,33) | (3,49) | (3,21) | (n.a.) |
| *1,estimate* | | *47,98* | *52,89* | *54,62* | *57,87* | *58,84* | *66,68* | *65,39* | *67,95* | *74,10* | *94,53* | *101,01* |
| *2.estimate* | | *48,04* | *52,72* | *54,48* | *57,82* | *58,73* | *66,50* | *65,36* | *67,95* | *74,03* | *94,81* | *100,83* |
| debt/GDP | 48,48 | 51,20 | 53,84 | 55,88 | 57,65 | 62,75 | 63,92 | 68,27 | 71,58 | 83,01 | 93,32 | 101,56 |

*Source: Eurostat, Ameco, Bank of Greece, Bank of Italy, Banco de Portugal*

On the whole, governments have opportunities of formulating their debt-to-GDP levels by tax policy reforms, cutting on expenditures, regulating money supply, managing foreign exchange rates, stimulating economic growth and properly timing interest policy decisions (as well as debt repayment or repudiation). To have a better insight into the last ten year's proceedings it is worth decomposing GDP proportionate debt into its components that is investigating the effect of the primary balance, seigniorage revenue, interest expenditure, and GDP growth on debt in the case of Greece. Table 1 is summarizing these indicators together with the data of Italy and Portugal, with those of two other eurozone countries fighting with an above 100% debt as a proportion of GDP on the basis of Eurostat and national bank statistics. The table contains own estimate on seigniorage revenue among the data.

As the revenue of the ECB from issuance of coins and banknotes is shared among member states and then national banks distribute their annual profit among shareholders (or set it aside as reserves), among others the government. Profit divided this way can be used for calculating seigniorage.

As it is emphasized by Czeti-Hoffman (2006) as well, the central bank plays a much more important role in the treatment of public debt than it could be simplified to the earning transferred to state budget, in that it also trades with government securities and regulates the amount of money in circulation and therewith affects the rate of inflation. For simplicity I approximated seigniorage revenue as dividend provided to the government by national banks.

The Ameco database serves an estimate on the decreasing effect of nominal GDP growth on public debt (1. estimate). By applying the GDP deflator statistics of Eurostat, I deliver a second approximation, so there is a further estimate for the given year's public debt explained by its components for the years 2001 and 2011. (2. estimate) The two estimates over or underestimate the level of public debt as a percentage of GDP in a particular year but it well indicates the direction of change in the majority of cases. The difference can stem from statistical discrepancies, change of exchange rate, debt restructuring, as well as privatization revenues.

As regards the major drives of debt accumulation, the primary balance meant a strong contribution in the case of Greece and Portugal, and had a rather dampening effect until the global financial crisis in the case of Italy.

The difference between interest to GDP and the impact of nominal GDP growth on debt[1] aggravated the situation in Greece after 2008, when in certain years even nominal GDP growth was negative.[2]In Greece investment started to decline in 2009, then the government began to economize, and in 2011 also private consumption started to fall back. (IMF, 2012) Menguy (2011) ascertains that the effectiveness of monetary policy in Greece and Portugal is questionable as output variance strongly depends on nation-specific dynamics in these countries, so these countries fighting with highest debt are most hit by the common interest policy applied in certain periods. Greece showed vigorous growth at least until 2008, Italy and Portugal suffered great losses due to their slow GDP growth pace relative to the interest burden during the whole period.

Monetary financing lost its grip since neither of the above countries' national bank can finance the government directly. Seigniorage revenue fell below one percent much before the establishment of the ECB, already at the beginning of the 90's in all the three countries.[3]It is worth mentioning that the drop in the seigniorage revenue in eurozone countries is partly counterbalanced by the liquid efficient securities market having provided favorable interest conditions for the issuance of government securities for participating countries. (The foreign currency component of public debt can be set at about 0,2-2% in all the three countries for the given period under consideration.) However, the common currency area can be harmful for those countries which maintain fiscal discipline, besides in crisis periods it may lead to the default of one or more countries on at least part of their debt (like Greece in 2011) as stated by Menguy (2011).

*Financial structure*

In the case of Portugal and Italy the most significant role in financing public debt is played by the financial and foreign sector. The contribution of the non-financial private sector is around 10-30% (in

[1] Referred to as 'nominal growth effect' in Table 1 is imported from Ameco data basis used to compute '1. estimation', and then appraised separately by the author under '2. estimation'.

[2] It appears in the table as "effect of nominal GDP", which the Ameco databasis provides an estimation for and is supplemented by the author's own estimate with the help of GDP deflator ('2. estimation').

[3] It became especially negligible on a cash flow basis. (Gros, 1996)

which non-financial corporations hardly share a 5%) in the three countries discussed above and was continuously decreasing in the period examined. It can be established that in such a financial structure government debt management can have a rather negligible effect on private sector consumption and saving decisions. There is no data published by the Eurostat as concerns the financial, non-financial private, households and foreign sectoral financing structure of Greek public debt. It is probably due to the faulty incomplete data service of Greece, as in the Greek Statistical Office and the Greek Central Bank databases there are no data classified in the above way available.

Not to mention that during the crisis the Greek government made efforts to cover government deficit with such complex financial instruments which could hide the real level of public debt. Some European leaders therefore urged to restrict financial regulation by banning derivative deals (for financing government expenditures) as they were of the opinion that these products had contributed to the development of the Greek crisis. (Nelson et al., 2010)

In 2009 the government announced that the data service concerning Greece's fiscal position was misleading mainly due to the losses incurred by state companies operating in the transportation industry and in the field of national defense which had not been consolidated with the data of the whole public sector before. (Pascual-Ghezzi, 2011)

There is thus no comparable time series available on the debt holders of Greek public debt. The Statistical bulletins of the Greek Statistical Office do not give detailed information on the structure of public debt and the issues of Greek Public Debt Management Agency only publish detailed statistics with respect to central budget.

The best way to obtain information on the division of government bond stock by debt holder is through the communications of private banks and financial analysts. What unequivocally turns out from such analyses is that financing the Greek debt is first of all a European matter, as mostly European banks stand behind the debt obligation. In the first quarter of 2011 European investors made up 90% of the whole debt (Credit Suisse, 2011), 29% among which was granted by Greek residents. In a sectoral break-up banks represent the major investment group with a portfolio of 124 billion euro; they take a 43% share in the financing of Greek government bonds in the first quarter of 2011. (Public debt in Greece amounted to some 350 billion euros altogether in 2011.)Various investment funds, pension funds and insurance companies possess some 47% of the total of public debt, 4% is owned by sovereign creditors and central banks, a further 4% is absorbed by other investors. (Credit Suisse, 2011)In the frames of its government bond purchase program (SMP) the ECB got hold of approximately 45 billion euros from the bond package (Pascual-Ghezzi, 2011).Among banks those owned by the French have the greatest exposure towards Greece, though German and English banks have also piled up significant claims towards the Greek, they still have greater exposure towards Ireland, and the Spanish play a greater role in the financing of Portugal debt. Italian banks hold little risk in other severely indebted eurozone countries. The debt obligation is mostly incorporated in bonds (in 2011 some 75%), the majority of which is denominated in euro and only a negligible proportion is in circulation as foreign bond. From among the two official creditors, the EU represents about 15, and the IMF 5% at the beginning of 2011. The two latter are prospectively undertaking a continuously growing share in debt financing whereas the proportion of private investment in the stock of government bonds is gradually shrinking (Credit Suisse, 2011).

It is worth mentioning for its curiosity that in the case of Greece credit provided by the EU are not funded by the European Financial Stability Fund but were received by the Greek government in the form of bilateral loans.

*The Greek public debt and the sovereign crisis*

Investors' confidence was especially shaken concerning Greek public debt when the Greek government announced in October 2009 that instead of the planned deficit of 6,7% the real amount of public deficit would be 12,7%.Not much later following this Greek bonds were downgraded. In May 2010 a common bail-out package was prepared for Greece by the EU and the IMF. The 30 billion euro credit provided by the EU bore an interest rate of 5%, which is somewhat more expensive than the interest after credit drawn by Southern European countries but meant better conditions than private investors had expected. The IMF provided a 15 billion eurostandby credit to Greece at the same time, in the frames of the usual credit facility applied for balance of payments imbalances. Indeed it was not about a on-time one-off credit granting but an agreement was made about a credit package of 110 billion euros between the eurozone countries and the IMF for the period between 2010-2012. After the negotiations during which the Germans were claiming the disclosure of the schedule of budgetary restrictions, Greek bonds were again

downgraded by the Moody's credit rating agency. In 2010 large scale austerity measures were called for in Greece: public employees' wages and pensions were frozen, fringe benefits were retained, the VAT rate was raised, and also excise duties were levied on certain products. At the same time the restructuring of the health care and pension system and the public administration was proclaimed as well. Despite this the slippage in the payment of public sector salaries, the slowing GDP growth and the higher than expected deficit level were all signaling that Greece soon will be restricted to renewed financial assistance. The government brought its strategy about medium-term fiscal adjustment compiled on the recommendation of the EU to the Parliament, which among others contained a privatization program of 50 billion euros (amounting to 20% of public debt) to be realized till 2014 (Pascual-Ghezzi, 2011). It became apparent by 2011 that Greek public debt is growing more rapidly than the performance of the economy.

In October 2011 following the July agreement of eurozone governments Cline (2011) approaches the sustainability of Greek public debt in a very optimistic way. In his opinion the situation is not so hopeless, as one may conclude based on the level of public debt, as net public debt (reduced by claims) shows a much more favorable picture than gross debt and interest conditions are constantly ameliorating. The debt crisis entailed a serious increase in interest rates, however, the 2011 July agreement mitigated the interest rate payable, among others through involving the private sector (PSI), as well as regarding the debt service to the European Union. The higher than expected volume of the privatization program (50 billion euro) just like the restructuring of debt to 10 and 30 years of maturity in the case of eurozone financing, or extending the maturity to 30 years in the case of liabilities towards the private sector all strengthen sustainability. Nevertheless Cline (2011) notes that primary balance should show a 6% surplus throughout more years to allow public debt to follow a decreasing path. Furthermore, it can also be enunciated that the GDP proportionate weight of Greece's public expenditures also projects room for cutting costs, as with its 46% prevailing in 2009-10 it supercedes G7 with an average of 42%. (Cline, 2011) Cline forecasted a 113% debt-to-GDP ratio by 2020 for Greece based on 6% annual primary surplus and 2-3% real GDP growth.

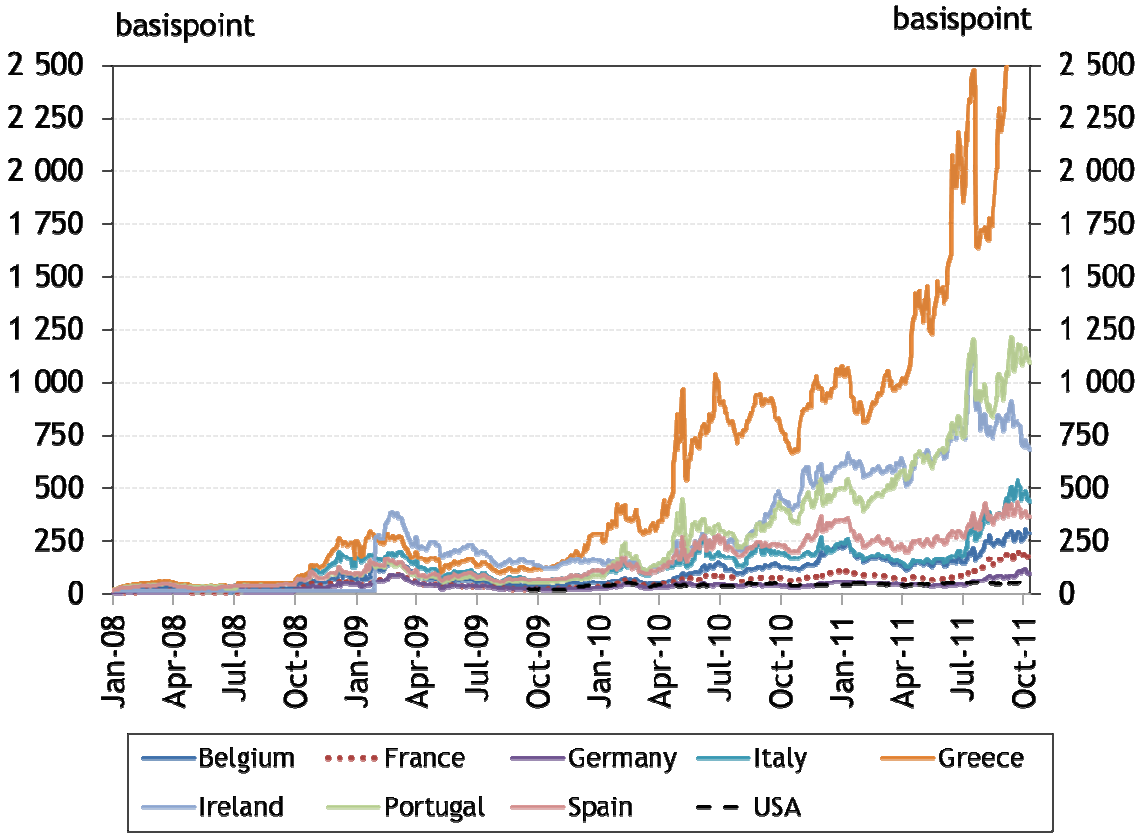
The debt issue escalating to sovereign crisis made it necessary in the eurozone to establish the European stability mechanism, then for restoring confidence of markets a rescue package was prepared for Ireland and Portugal. In May 2011 Standard&Poor's announced a downgrading of Greek debt. In July 2011 the EU came up with a new package for Greece, which not only provided for a credit line(109 billion euros), but also the restructuring of Greek debt outstanding. These contributed to a much lower level of interest payable (instead of the earlier planned approximately 5% interest burden, interest to be paid towards eurozone countries reduced to 3,5% for the period 2011-2014).With the extension of the grace period for refunding to 10 years and considering the provisions made for the private sector with the partial remittal and exchange of nominal debt (which sets the loss of private investors to 135 billion euro until 2020) the debt burden further alleviated (MNB 2011).By 2012 the privatization of the area of Athens airport, the Greek gas industry company, the public lottery and gambling company had started. What somewhat deteriorates positive expectations is that banks need recapitalizing and the collateral of private sector debt needs renewal which require state capital injection. For preventing the contagion effect it is essential to secure banks' capital adequacy, as in the portfolio of European banks there is a significant stock of bonds issued by Greek banks. (Toschi, 2011)

The favorable interest condition and credit obligation has been inevitable and timely as on the basis of interest premia it became evident in 2012 that Greece can not be financed from private capital markets. It often emerged in the propaganda in relation to Greece that 50% of the private sector component of public debt would be worth writing off. Such argumentation– if account is taken of the priority status of debt stock financed by public parties towards private investors – further damaged the judgment of Greece and lifted interest premia. High interest premia furthermore badly influenced the judgment of two other severely indebted countries, Spain and Italy, therefore the rationale of the new rescue package partly rested on the ability to „stop contagion" and prevent the potential default of other eurozone members on their debt. Public institutions underwrote 38% of whole Greek debt to mitigate sovereign risk this way. (Toschi, 2011) For the ECB and eurozone members thus became priority to ensure the liquidity and maintain the long term solvency of Greece and restore confidence towards the Hellenic country.

In 2008 preceding the crisis there were some ten basis points differences between the German and Greek 10 year bond premia, which widened to 400 basis points by 2010. (Nelson et al., 2010) The 5year CDS premia also suggest that the regaining of confidence was far from complete by the end of 2011, but not even in February 2012, when the premium characterizing 10 year public bonds reached 3200 basis points. (IMF, 2012). This market reaction was largely due to the uncertainty of private investors

considering expectable loss. The market counted with a 65% default probability in 2011 (Toschi 2011).On 21st February it eventually was possible to successfully accord with the creditors' group lead by II Fabout the conditions of debt exchange, which had a soothing effect on market expectations.

Figure 1: 5 year CDS premia in the eurozone between 2008 and 2011




*Source*: MNB, 2011

In 2012 Greece applied to IMF with new borrowing intention in March, in the frames of the extended fund facility it received another 28 billion euro credit for four years, which it can withdraw in equal installments and with which its previous contract will become void. It was especially necessary to provide for bringing up the required collateral at the beginning of 2012, as the expiration of a greater volume of bond stock has become due. The members of the eurozone are contributing to financing Greece by a further 144,7 billion euros. Greece has to cope with several lags compared to the objectives set in the earlier standby agreement. It did not succeed in realizing a fiscal adjustment of an adequate level (although it improved its primary balance by altogether more than 8 percentage points between 2009 and 2011 by increasing VAT, income and property taxes, however, in 2011 the primary deficit took a value of 2,5% instead of the surplus of 1,5% previously planned.) the budget is fighting with several problems on the revenue side as a consequence of low tax paying willingness. On the expenditure side despite the pension reform the level of social transfer payments is still typically high, which has been created in the last decade. Macroeconomic variables have improved less significantly, than it was predicted, among others the real exchange figures of competitiveness, apart from the unit labor cost based one, which has dropped some 10% since 2010. The often mentioned deficiency of the Greek economy is the lack of sufficient flexibility of the labor market which prevents the economy to shift to an expansionary path, and that the unemployment decreases. An economy primarily based on tourism and shippery has difficulties in recovering from the downturn because of the general European recession. The IMF (2012) forecasts real GDP growth first for 2014, it counts with a 4,8% drop in 2012, and with economic stagnation for 2013.Between 2014-2020 it projects an average growth of 2,5-3%.

The IMF (2012) is anticipating a 4% primary surplus for 2014 and finds it possible under adequate debt release that the extent of public debt can be pressed down to 120%.Of course it identifies several risks in relation to the realization of these figures, so it confirms that without continuous ECB refinancing

operations and official support the planned debt path can not be safeguarded which can even lead to Greece's exit from the eurozone which means a jeopardy even for the IMF.

Much depends on the results of the elections, how devoted the new government will be towards the putting through of structural reforms and the maintenance of fiscal discipline in general in the long run.

*Summary*

Greece is an eloquent example for that respecting the Maastricht criteria which lack all kind of economic content according to some experts – especially when considering the effect of the financial crises emerging from time to time – are indispensable for the stability of the monetary union with member states representing rather different economic development level. Saving Greece is not simply a face-saving question for the members of the eurozone as the Greek crisis has implied – inferring from the consequences of previous crises –the threat of contagion. The bankruptcy of one country can bring about the slackening and eventually the dissolution of the eurozone, which would cause beside the apparent political consequences gigantic complications in the European financing relations, as the use of the common currency made it unnecessary to manage foreign currency risk by international enterprises at least within the eurozone and in the case of requesting credit considering their geographical location. Suddenly instead of a debt stock expressed in homogeneous currency the institutions and clients of the banking system would come up against obligations in 17 different currencies in the worst scenario.

The question of external disequilibria observable in the eurozone raises the need of a compensation system in which member states recoup each other for balance of payments disequilibria by common assent, those running surplus compensate the losers of temporary deficit. A better harmonization of fiscal policies is also worth considering, so is the operation of a common insurance mechanism and the issuance of Eurobonds seems to be a more and more realistic alternative.

*Literature*

Araujo, A., Leon M. (2004): *Speculative Attacks on Debts and Optimum Currency Area: a Welfare Analysis*. Working Paper Series. 84/2004. Banco Central do Brasil.

Cline, W. R. (2011): *Sustainability of Greek Public Debt*. Peterson Institute for International Economics. Number PB11-15

Czeti, T., Hoffmann, M. (2006): *A magyar államadósság dinamikája: elemzés és szimulációk.* MNB-tanulmányok. 50.

Credit Suisse (2011): *Greece. A restructuring scenario analysis*. Fixed income research. 16 May 2011. http://www.cincodias.com/5diasmedia/cincodias/media/201202/21/mercados/20120221cdscdsmer_1_Pes_PDF.pdf. (download: April 5, 2012)

Eurobank EFG (2012): Equity Research. February 23, 2012. http://www.eurobankequities.gr. 8. April 2012

Fotopoulos, T. (1992): *Economic restructuring and the debt problem: the Greek case*. International Review of Applied Economics. Volume 6, Issue 1. pp. 38-64.

Gros, D. (1996): *Seigniorage in the EC. In: Functioning of the International Monetary System* (ed.: Frenkel, J. A., Goldstein, M.). Volume I. pp. 218-231. IMF

Garcia, C., Restrepo, J. E., Tanner, E. (2011): *Fiscal Rules in a Volatile World – A Welfare Based Approach*. WP/11/56. IMF Working Paper.

Hellenic Statistical Authority (2011): *Press release: fiscal data for the years 2007-2010*. Athens, 17 October 2011.http://www.statistics.gr. (January 2, 2012)

IMF (2012): *IMF country report*. No. 12/57. March 2012 www.imf.org. (April 6, 2012)

Kouretas, G., P., Vlamis, P. (2010): *The Greek Crisis. Causes and Implications*. Panoeconomicus. 2010. 4. pp. 391-404.

Menguy, S. (2010): *How to limit the moral hazard related to a European Stabilization Mechanism*, Journal of Economic Integration. Vol. 25. pp. 252-275.

Menguy, S. (2011): *Inflation rate, indebtedness and interest rates on public debt in a monetary union. Conference on Macro and Financial Economics: Theory and Applications*, Brunel University, West London (26 May, 2011).
http://www.qass.org.uk/2011-May_Brunel-conference/2011_ParallelSessions.htm (10.11.2011)

MNB (2011): *Jelentés a pénzügyi stabilitásról*. November 2011; www.mnb.hu. (8.11.2011)

Moutos, T., Tsitsikas, Ch. (2010):*Whither Public Interest: The Case of Greece's Public Finances*. CESifo Working Paper No. 3098

Nelson, R., M., Belkin, P., Mix, D. E. (2010): *Greece's Debt Crisis: Overview, Policy Responses and Implications*. Congressional Research Service. 7-5700. www.crs.gov. (April 2, 2012)

Pascual, A., Ghezzi, P. (2011): *The Greek Crisis: Causes and Consequences*. CESifo Working Paper No. 3663.

Toschi (2011): *Restoring the Economy*. J. P. Morgan Asset Management.
http://www.jpmorganinstitutional.com. (April 8, 2012)

Van Aarle, B., Bovenberg, L., Raith, M. (1986): *Money, Fiscal Deficits and Government Debt in a Monetary Union*, No. 1996-34. Discussion paper from Tilburg University. Center for Economic Research

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