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The Greek Public Debt and a Proposal for its Regulation

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Abstract

Greece was essentially bankrupt in 2010, hit by the financial crisis that swept the Eurozone, because it was one of the weakest links, with serious structural problems, a huge budget deficit and a massive public debt. The bankruptcy was avoided only to evolve into a total disaster for the country, because of the practical solidarity of its partners and the largest funding in the history of the program from the European support mechanism and the IMF. This has had a significant impact on GDP and living standards. However because of the participation of the country in the Eurozone it avoided an open and painful bankruptcy, like other nations experienced. The object of this paper is to propose a methodology to tackle the public debt of Greece, under conditions of uncertainty and in light of the negotiations with its partners and lenders. The proposal does not include the writing off of most or part of the debt, because this is considered non-beneficial for Greece over the longer term. The objective of the arrangement proposal that we put forward is to make the country's debt manageable over the mid and long term, in agreement with its partners and lenders.

Keywords: Public debt; Deficit; Debt write off; Debt dynamics; Debt arrangement

Introduction

In 2009 apart from the huge budget deficit of Greece, also seriously compromising the state of the country was the current account deficit and the lack of competitiveness of the Greek economy which largely constitute the causes of the effective bankruptcy of the country (Table 1).

Essentially, the country went bankrupt in 2010. Borrowing from the markets became prohibitive within very few months. The deficits of EU economic integration certainly played their role in the expansion of the crisis in the Eurozone, but the causes of bankruptcy were essentially endogenous and not simply due only to the high size of the public debt [1]**.** This estimate is based on the fact that while there were other Eurozone countries with same or worse debt ratios at that time, they did not sustain as many significant adverse effects from the financial crisis or were not hit to the same extent and in the same way as Greece. On the other hand, the extension of the crisis to other Eurozone countries this period (Portugal, Ireland, Cyprus and other countries in another form), highlighted the shortcomings of the venture of the common currency of the Eurozone and the deficits of EU integration. The open bankruptcy of the country was eventually avoided because of its participation in the Eurozone and loans and guarantees of its partners and the contribution of the IMF. This crisis has forced and the EU to create new institutions and procedures to address such bankruptcy crises. A small step towards economic and political integration remains the challenge for the EU. Every cloud has a silver lining.

In April 2010 Greece was incorporated in the first support program of the partners and fiscal adjustment after the Papandreou Government appealed for help to the EU, since the interest rates had soared to prohibitive heights and the risk of the country's insolvency was imminent. Chosen at the responsibility of the EU itself was the involvement in the support program of three organizations, the IMF to use its experience, the European Commission and the European Central Bank. The inclusion of the country in the support mechanism which was set up in response to the crisis in Greece and the signature of the adjustment program (the famous Memorandum), was a one way street for the country. Perhaps at the time it needed more support and commitment of the political majority and opposition forces. The Government did not request it nor demand it, resulting in almost all the political forces to join the so-called anti-memorandum block from the start, a fact which the country is paying for until today.

Indicators	2009
Budget deficit	-15.40%
Current Account Balance	-14.90%
Debt % GDP	127%
Unemployment % of the active population	8.9%
Central Government net borrowing needs	30 billion EUR
- //- % GDP	13.30%
Debt at current prices	298 billion EUR
GDP at current prices	231 billion EUR

Table 1: Economic Indicators for 2009 (Bank of Greece).

The first program of fiscal adjustment (1st Memorandum), did not really move forward, so the PSI followed, which will be addressed below and the 2nd adjustment program after the elections of 2012, with the tripartite Samaras Government. The 2nd program was clearly more improved than the first, with even lower interest rates than those of many Eurozone countries, with lengthening of the amortization of debt repayment and for some years the return of the interest on loans of the countries and the European Central Bank. The new adjustment program (2nd Memorandum) provides a series of changes and reforms in the public sector and in general in the State, like the 1st program. Changes and reforms that should have been implemented by Greece years ago, without the need for memorandums. The political system proved however overall immature and incapable, even in conditions of crisis, to design and implement a National Plan for Reconstruction and modernization of the State and economy, with basic consultation between the majority and opposition, as other countries did that were in the same position as Greece [2].

The hide and seek with the Memorandum - Anti-Memorandum continued all the years of crisis, even with the new coalition

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government that emerged after the elections of June 2012. Instead of finding a way of understanding to proceed with the necessary reforms, this Government promoted them heavily castrated and the opposition rejected any change as Memorandum enforcement. Even for serious reforms provided by the adjustment program, as the registration of property, the deregulation of professions, third party deductions, insurance reform with the consolidation of funds, pension and other critical reforms the government played continuous delays, pushed by the party and trade union clientele. The new opposition party (SYRIZA), which emerged in the 2012 elections, having won large parts and special interest groups which supported in previous decades the old political system, promising the past of a borrowed prosperity, became the new authentic expression.

These groups of the population saw the new body as a vehicle to serve their interests and continuation of their privileges, which they had secured as customers of the old system that reined for forty years, but at the expense of social universal interest. The main motto even today, is the abolition of the new institutional framework adopted by the so-called memorandum governments and the return to the situation before 2009. In practice in other words, it continued the same negative and unproductive denunciative policy of the previous opposition to the Papandreou Government in 2009, namely the "anti-Memorandum" NEW DEMOCRACY which meanwhile became the main party of the new "memorandum" Government 2012. Many analysts now believe that there is only one way for the country's political forces to become responsible and realistic when in opposition. To undertake Governmental responsibilities as quickly as possible. Perhaps they are right, as long as the country has not been destroyed by then.

The root causes creating deficits and eventually the public debt are due to chronic structural problems of the country, such as the lack of competitiveness of the Greek economy as reflected in the deficit of the current account. Due to the low competitiveness of the products of the country, imports grew at the expense of exports from year to year. Tables 14 and 15 below shows the evolution of the trade balance from 2000 to 2013, where we see the continuous deterioration until the outbreak of the 2008 financial crisis. Also, the inflexibility of the State and the huge bureaucracy in public services, the large size of the informal economy, as well as tax avoidance and evasion, set the conditions for the creation of budget deficits and debt expansion [3].

Trade Balance Million Euro

The final settlement of the debt of the country in the sense of its radical reduction so the country is able to meet the conditions of the Treaty of Maastricht, is not a case of "free lunch" as some domestic political forces, as well as some analysts flippantly argue. Regulating the debt on its own, as favorable for Greece as it may be, can bring long-term results only if the country makes bold reforms that will fundamentally change the State and will simplify the relations between citizens and businesses with public services. Namely changes and reforms to avoid creating new deficits, i.e., new debt. Reforms that will be able to attract domestic and international investment funds for productive reconstruction of the country and job creation. The conspiracy theories, which are widely reproduced by several media, but also by political bodies, are quite popular in large parts of the population, skillfully shifting the responsibilities to the "bad" foreigners plotting against Greece and feeding with various versions the subliminal instincts of a people, ultimately hindering the case of arrangement with creditors to settle the debt. These shallow analyzes and approaches ultimately exonerate the major responsibilities of the economic elite of the country and the political system that dominated after the change in 1974 in governing the country (Figure 1).

Serious responsibilities also belong to the political forces that have not exercised in the past Government power, but are now claiming power, because of awarding benefits and concessions to unions of their party customers, at the expense of society and the universal interest of the country. And the grave mistake of these forces is that in times of crisis instead of contributing creatively and taking responsibility to overcome it, they invested in an apolitical and dangerous division of people in the bipolar Memorandum Anti-Memorandum, assuming all the ordeals suffered by the citizens of the country, are due to agreements signed with partners and lenders in 2010 and 2012, cultivating the people to return to the past, as salvation solution for the country.

From the autumn of 2014 the country entered a new period in the negotiations on the debt of the country, with partners and lenders and the IMF, indeed in light of the exit from the recession of the past six years since the third quarter the country has achieved positive growth rates [4]**.** In one way or the other, the next immediate period of six months will focus on the issue of settlement of the debt and sustainability. The positive is that most democratic forces in the country, after various wanderings, have landed on a more realistic path and at least recognize the legitimacy of the debt. That is, that the country's debt, was created by loans of legitimately elected Governments, which were even legitimized by the continued voting for them by the Greek people for at least forty years! A part from some fans of conspiracy theories and the forces of neo-Nazism. Certainly the political responsibilities of the forces that ruled the country after the restoration remain intact since the unaccountable borrowing of the country, basically served mainly partisan patronage networks and their reproduction rather than the national interest. For this, however, they are being judged and will be judged constantly and history will give their historical responsibilities eventually. Of course, any issues linked to squandering public money and related criminal responsibilities remain open.

The policy proposal for the odious debt and the need to write off part of the nominal value or the entire debt

The easiest and very popular position in Greece Is the write off of the debt, a large part or smaller part does not matter [5]. The magic word, however, that alerted many Greeks is the word "haircut". It is pursued as the basic policy of the main opposition force in the country, as the potential next government of the country. It is pursuing, the write off of a large (or most) part of the debt. There are of course some voices from the area, especially recently, who are talking about the need for a comprehensive settlement in the future and for a temporary

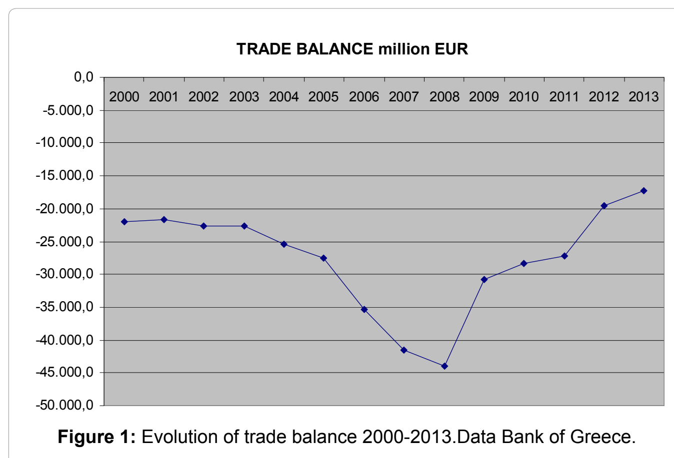

Figure 1: Evolution of trade balance 2000-2013.Data Bank of Greece.

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solution today and this is a positive development in the context of a national consensus [6].

The position on the unilateral decision of a Greek Government for the write off of most of the debt, has declined recently and replaced only by a strong minority of the opposition and some other smaller political forces of the left and the Greek far right. But it remains relatively popular and a future government that might be based on forces that persist in such a position in a difficult phase of negotiations can lead the country into dangerous paths. Since firstly, it means cessation of payments in the first phase and second phase consensual or not, the exit from the Eurozone, although the vast majority of citizens want to stay in the Eurozone, according to all polls [7]. Secondly, because unilateral decisions of a future government to erase part of the debt will complicate things so much at the level of transnational relations that will launch developments with great uncertainty for the country, since much of the debt today are bilateral loans and guarantees from countries of the Eurozone as shown in Table 2 [8]. This paper will demonstrate that the position it supports, i.e. the write off of part of the debt, whether by negotiation, is not an appropriate solution to the problem of the country and such a position does not ultimately benefit Greece.

A political position on the write off of most or part of the nominal value of the debt of Greece, sounds popular to a large number of the citizens of the country, because basically it promises lower taxes for citizens for servicing and paying off the debt in the future. The adverse repercussions suffered by a country from a write off of the public debt, especially if applied unilaterally, are many and painful. They will be expressed in many ways, dominated by the impact on lending rates and difficulties in the country's access to borrow in international markets. The setbacks suffered by the country in the reliability and solvency, will be "carried" for many years in its relations with other countries, but also in the financing of investment and development projects by private capital.

In both cases the possibility for write off of the debt of a State can be examined. When it is a result of unwise policies of Governments that were not elected democratically. But even in this case, control and documentation needs to be done through institutional managers, such as the IMF and declared as odious debt, i.e. illegal through legitimate and internationally accepted procedures. The case of Greece does not belong in this category, because the debt was created by legitimate democratically elected governments and indeed by large majorities of the Greek people. The issue of whether policies of these governments harmed the country or favored specific economic interests or patronage and party unions, is not about the legality or otherwise of the public debt. The second case is when the write off is made in consultation with the lenders and by mutual agreement. But in this case it is checked whether it ultimately benefits every country that proceeds to write off of part of its debt in agreement with its lenders, as was the case of the PSI in Greece. Therefore the political position on odious debt of Greece is stale and not substantiated. As for the write off of part of the debt in consultation and with the consent of the creditors, in each case it must be examined based on the circumstances and the terms of the agreement and the impact of such an agreement, and not to assume that such a decision always best serves the long-term interests of a country [9].

Debt Structure - Categories 30/06/2014 Data				
	Titles	**Amount (billion EUR)**	**% Category**	**% General**
1	Bonds issued in the domestic market	65,219.99	78.45%	
2	Bonds issued in foreign markets	2,806.13	3.38%	
3	Securitization Abroad	137.13	0.16%	
4	Short-term securities	14,969.16	18.01%	
	Total A	**83,132.41**		**25.79%**
	Loans			
1	Bank of Greece	4,265.82	1.78%	
2	Other internal	115.50	0.05%	
3	Special and transnational	6,906.39	2.89%	
4	European Stability Mechanism- ESM	219,707.28	91.83%	
5	Other foreign	5,119.88	2.14%	
6	Short-term (Repos)	3,151.35	1.32%	
	Total B	**239,266.22**		**74.21%**
	Grand Total	**322,398.63**		

Table 2: Greece debt structure (Data PDMA).

Also a political demand to cut a portion of the nominal value of the debt has some meaning to be subject to negotiation with lenders in the country, only in terms of service. That is, if a country can in the medium and long term serve and manages the debt with an agreement with its lenders, then forgiveness of part of the debt is of no benefit since it loses credibility and solvency, a cost potentially much larger than the portion of the debt to be cut. Forgiveness of the debt, if formulated and claimed as a one-way street, without alternative settlement proposals, may potentially create problems of another nature and quality with unpredictable consequences, problems associated with international credibility and solvency of the country to its lenders and the markets which are the final judge.

It has some meaning to note here that some foreign analysts and institutes which predicted the exit of Greece from the euro in 2010 are also advocates of the "cutting" of the Greek debt [10]. These analysts and institutes are not usually highly sympathetic organizations to the euro and in general to the economic and political integration of the EU and this element should also be taken into account when we measure the reliability and objectivity of some analyzes. In an analysis of one Institute and the President, who is Greek, you encounter some terms such as doctrine of colonialism for the partners of Greece, terms used in Greece by the left and right populist, Eurosceptic and anti-European parties [11].

A Little Historical Reference to the Failure of States and the Forgiveness of State Debts and the Case of Greece

The write off of part of the government debt has historically applied to several countries around the world and in some cases had positive results for these countries, although for some years these countries have experienced problems of reliability and solvency. The case of Argentina is distinctive. The country went bankrupt in 2001 and declared a suspension of payments, clearing 75% of the debt but hitherto it is beset with many problems, especially with exorbitant interest rates, up to 15%. But it is important to consider under what conditions these countries were forced to take unilateral measures for forgiveness of part of their debt. The most famous cases of countries that have chosen to write off part of their debt is before or after wars, after periods of dictatorial regimes or other abnormal conditions. And any restructuring of debts that provided for forgiveness of part of the debt, took place within a framework agreement with the lenders of these countries and not through unilateral actions. Where unilateral actions were taken for cutting of public debts, there were complications and strained the countries that applied these to recover in the early years, but in the process overcame the difficulties with their lost solvency.

According to a study by Borensztein and Panizza of the IMF [12], in the period 1825-2004 we have 259 episodes of bankruptcy worldwide. After some time these countries have recovered at relatively high rates. What is characteristic, however in these countries is that they had their own national currency. Greece, like the other Eurozone countries that came to the brink of bankruptcy does not belong in this category.

Countries such as Greece belonging to a monetary union put the issue of debt forgiveness in another basis. Countries that have gone into debt forgiveness (unilateral or in agreement with their lenders), had their own currency. With the devaluation of their currency they could give some immediate reprieve to their economy. Certainly this decision was paid at the high cost of high inflation, but also with painful consequences for at least some years in the standard of living of their citizens, as they are paying more for the products imported by their economy and the real incomes of citizens are reduced. It is also true however that at the same time monetary autonomy gives these countries the tools for direct political recovery of the economy and to tackle unemployment. Of course every time we must look at the balance of positive data and negative impacts of such a political choice. And this is the challenge for Greece, because the return to the national currency is the only way for a government that will chose unilateral write off of part of the debt and cessation of payments [13].With Greece "cutting" the debt, without the will of the partners and creditors, it will necessarily select, at best, an orderly exit from the Eurozone. Whether as a direct political choice of a new government, or as forced choice after the absolute refusal of partners and lenders in the country's request to write off part of the nominal debt. A Government which has as its core position the write off of most of the debt and insists on this policy, will necessarily have to have the option (the so-called Plan B), in case of denial of partners and lenders, cessation of payments and secondly the country's exit from the Eurozone at least [14]. This option becomes mandatory in order to bring national monetary policy. In order to pay salaries and pensions even limited and undervalued. To be able to import oil and raw materials necessary for the functioning of the economy, albeit very expensive. Since only gaining national currency will it be able to exercise policies similar to those countries that "cut" their debts and in the process recovered. Because only with the simultaneous acquisition of the tool of national currency is there any meaning to the policy of cessation of payments and a unilateral write off of most of the debt. The question of course is whether such a development is of strategic interest to Greece and what will be the cost for citizens and for the country in the medium and long term with a possible cessation of payments and a return to national currency.

Greece tried deletion of part of the public debt with the program PSI (Public Sector Involvement), in 2012. Namely the write off of part of government bonds held by private investors, with the greatest possible agreement of private creditors. The results of PSI (Table 3), according to several analyzes were negative for many entities holding government bonds (pension funds, private individuals, banks, etc.). But for the actual debt, the contribution of the PSI was almost negligible, since the country was forced to undertake the recapitalization of banks and finance the deficits of already insolvent pension funds each year to many billions. If we also consider the cost of reliability suffered by the country in international investment funds, we understand that the PSI was a negative choice for the country. With the 130 billion euros borrowed by the country in the second phase of the support program, it could have bought government bonds in 2012 corresponding to the current value of the secondary bond purchase with better results for the nominal value of the debt. The most serious loss to the country with the PSI, is the increase in the lack of trust and credibility in international markets and investors, but also to other peoples and nations.

The partners and lenders of the country do not agree with the forgiveness of part of the debt of Greece

A request by Greece for forgiveness of a portion of the nominal value of the debt, does not sound good at all to the partners of the country, since such a choice must be passed by their national parliaments. That is, to persuade their parliaments that the loans they recently gave to Greece, even by poorer countries than Greece, should be "cut". In other words they will not receive, not only the interest, but will lose a large part of the funds lent to the country with a very low rate, in most cases much less than at which they borrow. And indeed when under the support program for a certain period they will return the interest from these loans to Greece.

It sounds even worse to European citizens who will be called to pay through their taxes any forgiveness of the debt of Greece. The distressing images of Greece in the headlines of European newspapers will resume at worst. The request of Greece for forgiveness of the debt is not realistic and for another reason. One such issue would be put immediately by other EU countries with excessively high debt and justifiable. Mainly though, the request for write off of the debt is not fair since it is politically unethical that a country demand of poorer countries to forgive its debts towards them.

Why Forgiveness of the Debt does not Benefit Greece

But for Greece itself medium and long term forgiveness of part of its debt is not an effective solution. Generally, countries seeking to "cut" their debts ultimately do not win, since they lose much of the political chapter called trust and reliability. Also these countries usually become complacent after the forgiveness of the debt and do not take effective steps to address the causes of the dynamic growth of the debt, i.e. structural reforms, thus having the same problem at a later historical period. This was repeated several times with Greece in about two hundred years of modern history according to the study by Forbes magazine [15]. It is no coincidence that a country with great financial strength today, like Britain, never "cut" its debt in modern times, even when it had huge debt obligations, such as the period after the Second World War.

Possibly based on recent evidence Greece, did not have all the necessary economic conditions to join the Eurozone in 2001. Maybe the so-called creative accounting was exploited to some extent to cover

2011	**Private Sector Involvement (PSI)**		**Haircut**			
						Reduction
Public debt	**Billion Euro**	**%**	**Exchange**	**EFSF**	**Warrant (GDP)**	**Total (billion Euros)**
			31.50%	15.00%	1.00%	
Public Sector	162	44%				
Private Sector	206	56%	64.89	30.9	2.06	**97.85**
Total	**368**		**64.89**	**30.9**	**2.06**	**97.85**

Table 3: Status of debt 2011 and implementation of the PSI.

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important structural problems and deficits of the Greek economy. However this picture to a large degree was known to the European partners and creditors [16]. Nonetheless, Greece became a full member of the Eurozone in 2001. It is clear to many analysts that this integration was more political than economic in nature. For Greece it was a great success, since the country joined the largest economic family, secured a large market where it could promote its products and services, imports became cheaper, ensured easy access to cheap loans and community input could radically change the reality of the country. Despite any steps taken and the progress achieved, unfortunately after joining the Eurozone and especially the period 2004-2009, for Greece was a period of expansion of the State and wasteful consumer loan prosperity for its citizens. Exports fell, imports increased even for products that Greece was formerly self-sufficient.

The reforms were put aside and society was expressed through groups and special interests parties which the political system satisfied their every request, since they were their customers, who with their vote ensured the dominant play of the same forces in the political environment of the country. Even a significant part of entrepreneurship, through political entanglement lost its creative features, stopped investing and risking and incorporated into a state-development model. In practice in the country a level of life in many civic groups exceeded the level of labor productivity in the sector, but also in general in the country. Mainly in the public sector and public utilities but also to a certain degree in private business sectors. The wealth produced in the country did not justify the income ensured by these groups primarily through legislative rules of the political system, either at the level of any kind of fees or at the level of pensions.

On the Predictions of the Exit of Greece from the Eurozone (The Famous Greek Exit)

In the bankruptcy crisis that Greece found itself in 2010, many analysts and economists mostly foreign, predicted the exit of Greece from the euro in 2010 but also in 2012 [17]. And this prediction was certainly not arbitrary. It was based on the analysis of the specific situation of Greece at the time, which was tragic and the only logical way was for the country to leave a cumbersome and incomplete euro area, in order to get back the monetary instrument under national control, to address the pressing problems of financing needs of the State. The return to the national currency based on all the manuals and previous experience of many countries was the only solution to all scenarios and calculations of many economists. And so these analysts predicted the exit of Greece from the euro area. All these analyze underestimated the geostrategic and political factors associated with Greece and the EU. Studying the case of Greece only with economic criteria and tools given from the empirical study of other countries, undermining the political factors they arrived at erroneous predictions.

These factors are linked also to the critical geostrategic position of Greece in the global scene. A country of eastern gateway to Europe for major powers like China. It is no coincidence that this great economic force for several years has invested significant funds in Greece, particularly in ports and transport sector, but as the figures show there is interest and to extend to other areas. Piraeus is evolving into a major port, a hub of global intermodal transport with the strategic involvement of the Chinese COSCO. At the same time opened up great opportunities of development and investment initiatives not only with complementary and ancillary activities in shipping, but also in manufacturing and assembly operations that will use the global network of the Chinese group to reach their products faster to the final consumer in Europe. Also Greece's neighboring position with regard to Turkey in the critical region of the eastern Mediterranean is an important factor for the designs of the powerful forces of the world. Turkey is a country which in recent years has been sliding into a role increasingly destabilizing the Eastern. Mediterranean region which is critical to the interests of the great powers. The previously mentioned in conjunction with the optimistic survey data on reserves of hydrocarbons in the EEZ of Greece and Cyprus and the importance of strategic cooperation of Greece and Cyprus with Israel and Egypt, enhance considerably the geopolitical role of Greece in this troubled corner of Europe.

All these data proved very important for the determination of the European partners and creditors of Greece to stay, despite the fact that many times Greece appears as the naughty child of the Eurozone, with responsibility and leadership of the country itself. And of course this is not said without reason. The political system even after 2010 either as support or opposition resisted any reform logic, because it upset the status quo, undermined small and large corporate interests and patronage networks that supported this timeless political system. Of crucial issues such as tax evasion, the insurance and pension system, benefits of specific groups and many other critical sectors, Greece is still in the introduction. It is no coincidence that in the negotiations on the course of the program of fiscal adjustment, Greece was almost never consistent in what was jointly agreed. Namely decisions, of course painful for large segments of the population, but that the country should have taken decades ago, the political system dared not take and implement them, not even in the critical period of 2010-2014. One typical example is the insurance system. The insurance and supplementary pension funds in Greece in 2009 were euphemistically even more than the professions. Since then there is an effort for integrating them, but the resistance is such that under some laws they are consolidated and with other laws their fragmentation is perpetuated.

There are other very important factors and Greece was never found outside the euro that have to do with the EU itself and its perspective. Beyond the geopolitical factors mentioned earlier, a Greek exit from the euro would open the Pandora's box and for the European developments. Euroscepticism and anti-Europeanism had begun to strengthen and this was confirmed in the recent European elections of 2014 [18]. The forces of nationalism had already begun to rise. A Greek exit from the euro would trigger such a state with unknown consequences for the existence of the EU itself. Thus the partners of Greece preferred its salvation, with a giant financial plan, unprecedented to date, despite the small financial contribution of the country in the Eurozone evidence showing that the economic impact of a possible exit was manageable, but the policies rather formidable.

The political impacts over the medium and long term were not appreciable and for the very structure of the EU. So specific political reasons and the forces of self-preservation and survival that an organization always has in the difficult hours when particularly at risk, were the main factors that prevented the exit of Greece from the Eurozone, contradicting the Cassandras of the Greek exit.

The European Dimension of the Debt of Greece

In a union such as the EU it is not justified to present such problems as excessive debt in many member states. The conditions of the Union are clear and define a specific limit of public debt in each country (60% of GDP as required by the Treaty of Maastricht) and the magnitude of the fiscal deficit (less than 3% of GDP). However the level of economic integration between the countries of the EU, did not avail (and still lacks full form today), the safeguards and control mechanisms

to prevent similar situations of excessive debt and high budget deficit. Certainly the occasion of the 2008 crisis and rescue cases of Ireland, Portugal, Greece and Cyprus by an open bankruptcy with incalculable consequences for the whole euro area, created the first such crisis response mechanisms, such as the ESM (European Stability Mechanism - ESM) and other institutional EU interventions that preceded it, as the EFSF (European Financial Stability Facility - EFSF) and the European Financial Stabilisation Mechanism (European Financial Stabilisation. Mechanism - EFSM) and finally the Bank consolidation and control of balanced budgets. Now the new institutional framework provides supervision in most sectors of the economy of each country (current account balance, net international investment position, real effective exchange rate, changes in shares of exports, unit labor costs, etc.) and this is a positive development in the course to democratic integration and EU solidarity [19].

This is precisely the period (November 2014) we witnessed a conflict between countries such as France and Italy with the EU Commission and financially stronger EU country today Germany, concerning the amount of budget deficits and the relaxation of the terms of budgetary stability pact [20]. This conflict in conjunction with the general strengthening of the forces of anti-Europeanism and Euroscepticism and return of nationalism in many parts of Europe, are serious risks for the future of European integration. If the political reasons behind the birth of the EU and the voices of reason do not prevail, the very edifice of the EU in the near future may be driven into a phase of uncertainty. The recent conflict of France, Italy with the European Commission and Germany on the occasion of the budgets of the two countries, ended with a final compromise to not openly violate the terms of the Financial Stability Pact. This means that the leaders of France and Italy understand that the criticism of Germany and the European Commission, is based and can be ignored. Thus without addressing these risks in the future of a major crisis in the EU, we have examples of writing a calm political stance by all the powerful forces of Europe to strengthen economic and political integration, albeit at different speeds and with different policy approaches.

To deeply understand the German policy and the insistence on fiscal stability, we should see what it means easing financial conditions or Eurobonds and reciprocity. Some analysts try to explain the attitude of Germany and the insistence on fiscal stability in religious terms. But it is not exactly so. If the EU takes these policies directly, such as the Eurobond we will have the following result. Surplus EU countries will have to pay for the deficits of others. The issuance of a Eurobond used by one Member State to borrow simply means that it will cost dearly in countries currently borrowing at very low interest rates and benefit the countries borrowing at higher rates. This is why Germany and other surplus countries disagree today with the process of reciprocity of debt and deficits in the Eurozone countries and the issue of Eurobonds. As they consider not only will benefit some countries effortlessly and no sacrifice on their part, but such a course is doomed to failure. And to a degree they are right in my opinion. As this reciprocity will be based on feet of clay, since the countries that have not implemented the necessary reforms will be a brake on the others in the global competition. So overall the EU will lose from a cursory reciprocity of deficits and debt. In practice this means that Germany and other surplus countries (one side) will be called to “pay the piper” without deficit countries (the other side), doing something special to adapt their economy. And what of the solidarity that is one of the basic foundations of the structure of the EU? Here is the delicate matter of understanding the contradiction and transgression. Since only with transgression by both sides can we have continuity in the European structure.

The theories on the front of the countries of the South towards the countries of the North I do not consider serious or effective. As the issue of common path, of convergence and integration needs consultation, formulation of national interests and fair transgression. Since to ask just one side to show solidarity and pay higher interest rates than they would pay for its own debt, sacrificing i.e. to some extent the national interest, without the other side moving to the necessary structural reforms, which itself does not deny as necessary, is not fair. Mainly though because the course of economic and political integration will not have a promising prospect, as the citizens of these countries (e.g. Germany) would not agree to pay something for nothing. It is worth mentioning the recent strengthening of Eurosceptics in Germany itself. Thus we can explain this “Protestant” perseverance of compliance with budgetary rules by Germany. We must not forget that Germany went through this same stage of painful structural reforms, with great sacrifices of German workers, the past decade and with the Social Democrats at the helm of the Chancellery and Gerhard Schroder, who without denying the need of reforms in other countries criticized today’s Germany from another perspective, without actually disagreeing with Merkel’s policy [21]. Certainly even Germany is criticized today by agents of the eurozone that it should not rest on its laurels [22]. Conclusion, the issue of the Eurobond and reciprocity will proceed only if all countries make the necessary structural reforms that will help convergence of Eurozone economies and not in their deviation, because only changing the persistent policy of Germany is not enough. One theory discussed recently in Europe especially in different Think Tanks, is the breakdown of EU countries into two sections, namely a two-speed Eurozone, as a solution to the dissolution. One section will include the most developed EU countries, i.e. the countries of the North and the second section the Southern countries, i.e. countries that fall short in key financial and economic indicators. These theories were strengthened in response to the recent financial crisis of 2008 and took a new dimension because of an article by German Finance Minister Schaeuble in the Financial Times [23]. However, carefully reading the article one understands that what Schaeuble is insisting on is the deepening of European integration, talking about the core, i.e. the group of countries that will pull ahead and drag along and the other countries in the direction of consolidation, implying the Eurozone countries. Indeed he proposes and concrete measures on how to deepen European integration, such as the parliament of the Eurozone for greater legitimacy of the decisions of the euro area and the establishment of a European commissioner to monitor national budgets of Eurozone states. Of particular importance is his urging to Britain to submit proposals to the big challenges of EU topics, such as how the Member States will proceed with the related reforms to ensure sound public finances, further regulation of financial markets, reform the labor market, the deepening of the internal market, the conclusion of transatlantic free trade agreements, reducing harmful tax competition, building an energy union and the creation of a digital union in the EU. Key issues for the next step of the common European course. Unfortunately many media presented this article of Mr Schaeuble as a signal for the split of the Eurozone. But this is not apparent from this article, or by other statements by Schaeuble. In some centers, particularly in some the other side of the Atlantic, it is obvious that European integration would not be pleasant and at every opportunity the centers will attempt to sabotage the European architecture. This should be taken into account by the protagonists of European integration, so that through mutual concessions and promotional compositions to prepare the next step of economic and political integration, for a Europe of Democracies and solidarity.

For all the above, an isolated settlement of Greek debt by “cutting”

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is not at all a realistic prospect today, mainly because there is no economic and political context of some form of reciprocity of debt, as "hard" as the negotiators are proved to be on behalf of Greece. Also in each case there are currently no policies and economic conditions of a comprehensive settlement of the public debt of EU countries. This is why today Greece should settle the debt in terms of service and move boldly and dynamically to the necessary reforms to prepare for the future of European integration, because in this context will be the final solution to the public debt.

The Debt of Greece and Markets

Another important factor, which some political forces in Greece, either underestimates or look the other way, are the markets. Today in conditions of globalization any development in a country is sensitive to initial conditions of a simple disruption of economic realities in the most remote corner of the world. The uncertainty of the reactions of the markets and above all their effects is very difficult or impossible to be harnessed by the best forecasting system. Chaos is dispersed in all the large and small financial figures contained in any forecasting system. It is characteristic of the experience of October 2014, when the country experienced days of 2010. Once the dust had settled and it seemed that a climate of confidence in Greece by international markets had been established, a conflict between the Government and opposition about who "rips" first and best the memorandums creates a huge market upheaval precipitating the Greek stock market and rise of interest rates on Greek bonds [24]. Although international investment funds and various "speculators" will not lose significant funds from a possible write off of Greece's debt, since this applies to official loans taken by the country from its partners and the IMF, such a development, and only a small likelihood will undo the relatively good image built by the country in international markets with many sacrifices of the Greek people. The common sense can understand what it will mean for the country if the international markets start again to speak of breach of commitments by the country's political system. But even if we accept as a working hypothesis that Greece's partners accept the write off of 50%, the question is, how will the country be able to serve the remaining debt. And this when it has not addressed the causes that create the debt, such as large structural problems of the Greek economy and the State apparatus. Deterministically after some time it will request a new bailout agreement or renew the scenario of the Greek exit, clearly by our own responsibility. All the sacrifices made in the previous four years by the citizens of the country will be thrown away. So the write off of part of the debt, although it sounds attractive to the ears of many people in Greece, probably is not to its advantage today.

A Realistic Proposal for Settlement of the Debt of Greece in Agreement with Lenders and Partners

There is a solution to Greece's debt today, in terms of sustainability and service, but also that can be implemented with realistic and workable policies in cooperation and agreement of the partners and creditors of Greece. The country's debt problem, as of the other EU countries can be resolved and addressed fundamentally in the long term, only through the processes of EU integration and reciprocity in the future. This means, however, that the EU is evolving in the near future in a federation, where major national powers are ceded to the democratically elected institutions of the EU. In other words we are talking about a new treaty, where the Member States will not exist as national entities as we know them today, but will be federal States of a large federal European Union.

The question of course is whether the peoples of Europe want such a development and if things are ripe for such a prospect. The answer of course will be given in the future. According to the approach we advocate in this paper, all countries, not only Greece will benefit from such a perspective. Today the problems of countries acquire a transnational or global character and only through such transnational associations can be addressed. Today many countries such as Greece are very small countries within Europe to stand alone with claims based on global realities. As Germany is a relatively small country in the global division of labor and global competition. So all European countries need the economic and political integration of Europe.

Many times some centers fighting the democratic integration of Europe, create confusion for citizens of European States, arguing that through this integration except part of national sovereignty, the traditions and national cultures of each people and nation will be lost in the process. These allegations, however, have no basis and can easily be reversed when we practice institutional steps of the present EU, for securing and preserving national identity and cultures, even of the smallest ethnic minorities in Europe. This however must be believed by everyone, even the vast majority of European societies, because the British syndrome of "national recovery" is strengthened in Europe, especially after the rise of Eurosceptics and nationalists in the recent elections.

But this road to European integration is not open automatically. It would need to fill the large gap that separates the countries such as Greece, from the developed democratic countries of the EU, most notably with bold reforms and structural changes in the economy and public administration.

Thus through such processes of democratic consolidation and integration will be addressed in the future the debts of European countries. The magic word is reciprocity. Namely that debt of any country in the future of a federal European Union, will merge and through their algebraic reciprocity will be mutually negated within the new federation and only the debt of the European Union to third parties will remain.

Is such a prospect a utopia? Possibly. But even on the eve of the Second World War started in Europe as the First World War, if someone was talking about the EEC -a financial community that became a reality a few years after the war by the main opponents of the war - would sound at least as crazy.

The problem now and in tomorrow's negotiations between Greece and its partners and creditors remains. What is now becoming feasible to resolve Greece's debt to be viable for years to come? The answer is that there is a realistic solution that both parties can accept and that is mutually beneficial. As part of this solution is proposed the transfer of part of the funds allocated to recapitalize banks in the country, by the country's debt to the EMS, in conjunction with the extension of bond maturities and reducing the weighted average interest rate, details of which will be presented below. This arrangement will significantly reduce the burden of debt service per year so that the surpluses Greece will have in the coming years, a substantial portion thereof will be primarily channeled to the development and production reconstruction of the country and a smaller one to serve the debt. We are talking about a deal to service and repay the debt linked to the development process of the country and the growth rates of GDP.

Description of the Debt Problem of Greece

If you follow the path of public debt we see that it had an upward

trend, at least until 2004 proportional to the increase in GDP (Chart 2). In the course they diverge with greater divergence to form in the crisis years (2009-2014) where GDP declined by around 26% (Figures 2-7).

The key elements of the Greek economy are listed in Table 3 and the charts 2, 3, 4, 5 (Table 4).

The problem of the country concerning the debt is sustainability. More accurate is talk that the debt problem is the ability of Greece to be able to service the debt immediately and long term. This problem cannot be answered independently of the state of other economic aggregates. Mainly debt as a percentage of GDP will diminish when

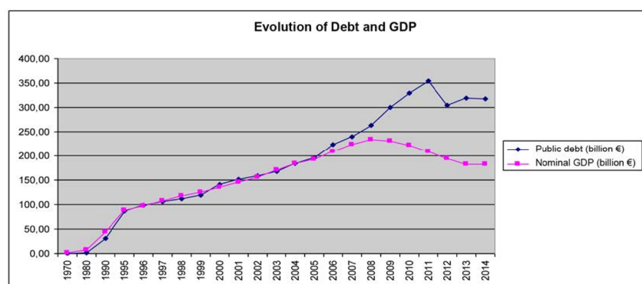

Figure 2: Evolution of Public Debt and GDP in bn. EUR 1970-2014.

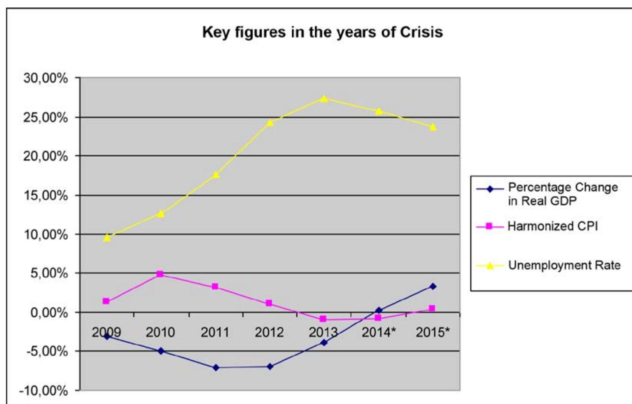

Figure 3: Evolution%, GDP%, CPI% unemployment during the crisis 2009-2014, (Forecast, Ministry of Finance).

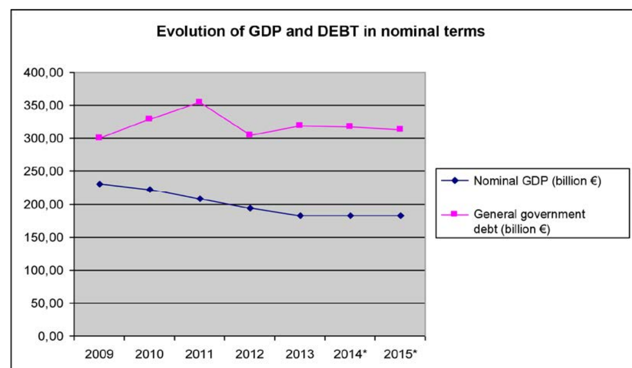

Figure 4: Evolution of GDP, DEBT (EUR) in the crisis years 2009-2014 (Forecast, Ministry of Finance).

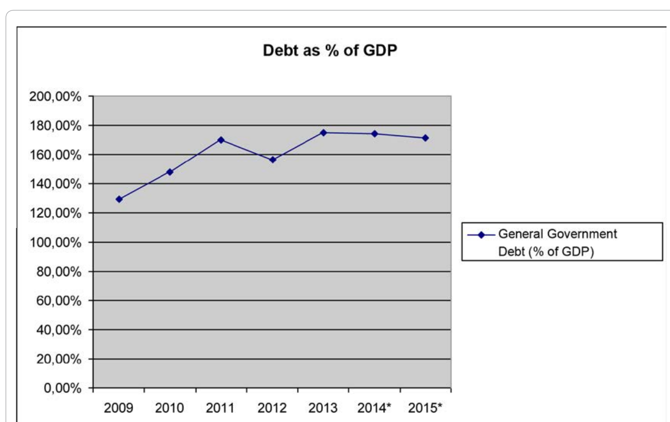

Figure 5: Evolution of DEBT as % of GDP in the crisis years 2009-2014 (*Forecast, Ministry of Finance).

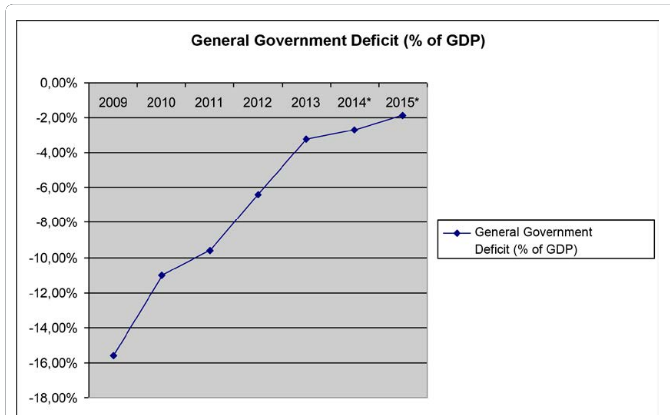

Figure 6: Evolution of deficit as % of GDP in the crisis years 2009-2014 (*Forecast, Ministry of Finance).

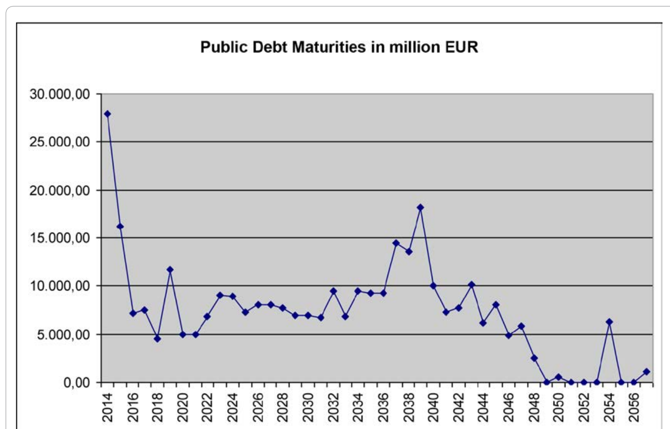

Figure 7: Public Debt Maturities (Data Public Debt Management Agency, PDMA, 2014.

the numerator of the fraction (DEBT) at least will not grow (i.e. not produced new deficits) and the denominator (GDP) will grow from year to year. But to do this, Greece needs to serve the debt, i.e. be able to pay interest annually and pass to positive, as much as possible, higher growth rates of GDP. Indeed, in order to serve the country's debt, the primary surplus (i.e. the difference Revenues - Expenses), should be

Greek Economy in the Years of Crisis	2009	2010	2011	2012	2013	2014*	2015*
1. Key Sizes							
Nominal GDP (in billion euros)	231.10	222.20	208.50	193.75	182.10	182.46	182.46
Percentage Change in Real GDP	-3.10%	-4.90%	-7.10%	-7.00%	-3.90%	0.20%	3.30%
Harmonized CPI	1.30%	4.70%	3.10%	1.00%	-0.90%	-0.80%	0.30%
Unemployment Rate	9.50%	12.60%	17.70%	24.30%	27.30%	25.80%	23.80%
2. Public Finance							
General government debt (in billion euros)	299.70	329.50	355.14	303.93	318.70	317.61	313.51
General Government Debt (% of GDP)	129.68%	148%	170%	157%	175%	174%	172%
General Government Deficit (% of GDP)	-15.60%	-11.00%	-9.60%	-6.40%	-3.20%	-2.70%	-1.90%
Primary Deficit/Surplus	-10.60%	-5.10%	-2.40%	-1.30%	0.80%	1.50%	2.90%

Table 4: Data of the Greek Economy in crisis years 2009-2014(*Forecast) (Ministry of Finance).

at least equal to the country's obligations to pay interest. And if the growth permits then, i.e. to surpass the limit of servicing the debt, to pay part of the amortization.

However in order for the country to be able to pass to high growth rates it should attract the interest of international and domestic private investment funds, recovering market confidence. This of course requires political stability, but also direct debt settlement in agreement with the lenders of the country. The output capability of the country to markets for new borrowing should be done with full security and backup option credit line from the ESM to cover any financial gaps that may occur in the near and distant future under uncertainty, to obtain the necessary credibility and solvency. If all this happens then the country will be able to ensure low interest rates from international markets.

Since in the literature there is no commonly accepted definition of debt sustainability, which connects perfectly with the amount of the nominal value, we will consider three scenarios for the evolution of the dynamics of Greek debt by 2030. Therefore, the problem we have is to look for the right mix of policies for settlement of the debt to be serviceable on the one hand, but this arrangement to also be acceptable to lenders of Greece.

To formulate this mixture of the necessary policies we will study the evolution of the debt on the basis of three scenarios. a) The projected based on forecasts of the evolution of the different sizes of the economy according to the IMF. b) An optimistic scenario to achieve better targets for the growth of the country in the period under study (+1% predicted by the IMF) and the primary surplus of the country (+1% predicted by the IMF). c) Our own realistic scenario.

Mathematical Description of the Dynamic Evolution of the Country's Debt

To formulate a mathematical model to study the dynamic evolution of the debt of Greece, under the three scenarios, we define the following variables:

D_t: the nominal value of the debt at the end of year t D_{t-1}, the nominal value of the debt at the end of year $t-1$ Y_t, the nominal value of GDP at the end of year t

Y_{t-1}: the nominal value of GDP at the end of year $t-1$ r, the weighted average lending rate of the country

PB_t: the nominal value of the primary balance of the country at the end of year t, (primary deficit/surplus)

d_t: debt as a percentage of GDP at the end of year t d_{t-1}, debt as a percentage of GDP at the end of year $t-1$

	Data	Rate
d_{t-1}	Public Debt as % of GDP in year t-1 (base year 2013)	157%
V_t	Rate of change of GDP (%) in year t	0.002
r_t,	Weighted Average interest rate (%) in year t	0.040
In	Rate of inflation (%)	0.008
Pb_t	Primary Surplus / Deficit in year t	0.015
d_t	Public Debt as % of GDP in year t (t=2014)	174%

Table 5: Data for the base year 2013 and forecast for 2014.

	2014	2015	2016	2017	2018	2019	2020
d_{t-1}	**174%**	**178%**	**175%**	**172%**	**169%**	**165%**	**161%**
γ_t	0.002	0.033	0.030	0.030	0.030	0.030	0.030
r_t	0.040	0.040	0.040	0.040	0.040	0.040	0.040
In	0.008	0.003	0.011	0.012	0.012	0.017	0.017
pb_t	0.015	0.029	0.030	0.030	0.030	0.030	0.030
d_t	**178%**	**175%**	**172%**	**169%**	**165%**	**161%**	**157%**

Table 6: Data for the years 2014-2020 and the evolution of debt dynamics in Scenario 1.

pb_t, country's primary balance to GDP ratio (primary deficit/surplus)

γ_t, the growth rate of the country at the end of year t π_t, inflation in the country at the end of year t

The following equations apply:

$$D_t = (1 + r)\, D_{t-1} + PB_t \quad (1)$$

$$Y_t = (1 + \gamma_t)\,(1 + \pi_t)\, Y_{t-1} \quad (2)$$

Divide both members of [1] to Y_t and after some acts we have the familiar debt dynamics equation:

$$d_t = \frac{1+r}{(1+\gamma_t)(1+\pi_t)} d_{t-1+} pb_t \quad (3)$$

Application of Scenarios of Evolution of the Debt. Results of the Dynamic Evolution of Greece's Debt.

Then in Table 5 describes the values of variables as formulated in the year 2014, according to IMF forecasts.

Forecast scenario based on IMF estimates

Record values of the different sizes as provided by the IMF and the prices established for the country's debt according to equation [3] (Tables 6 and 7).

In the optimistic scenario we assume 1 additional unit of GDP

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
d_t	**153%**	**149%**	**145%**	**141%**	**137%**	**133%**	**129%**	**125%**	**121%**	**117%**

Table 7: Evolution of debt dynamics in Scenario 2 for the years 2021-2030. (For these years, we assume that we have the same data as in 2020).

	2014	2015	2016	2017	2018	2019	2020
d_{t-1}	**174%**	**178%**	**173%**	**167%**	**161%**	**155%**	**148%**
y_t	0.002	0.043	0.040	0.040	0.040	0.040	0.040
r_t	0.040	0.040	0.040	0.040	0.040	0.040	0.040
In	0.008	0.003	0.011	0.012	0.012	0.017	0.017
pb_t	0.015	0.039	0.040	0.040	0.040	0.040	0.040
d_t	**178%**	**173%**	**167%**	**161%**	**155%**	**148%**	**142%**

Table 8: Data for the years 2014-2020 and the Evolution of debt dynamics in.

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
d_t	**135%**	**129%**	**123%**	**117%**	**111%**	**105%**	**99%**	**94%**	**88%**	**83%**

Table 9: Evolution of debt dynamics in Scenario 2 for the years 2021-2030. (For these years, we assume that we have the same data as in 2020).

	2014	2015	2016	2017	2018	2019	2020
d_{t-1}	**174%**	**162%**	**158%**	**153%**	**148%**	**144%**	**138%**
y_t	0.002	0.033	0.030	0.030	0.030	0.030	0.030
r_t	0.040	0.030	0.030	0.030	0.030	0.030	0.030
In	0.008	0.003	0.011	0.012	0.012	0.017	0.017
pb_t	0.015	0.029	0.030	0.030	0.030	0.030	0.030
d_t	**162%**	**158%**	**153%**	**148%**	**144%**	**138%**	**133%**

Table 10: Data for the years 2014-2020 and the evolution of the debt dynamics.

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
d_t	**128%**	**123%**	**118%**	**113%**	**108%**	**103%**	**98%**	**94%**	**89%**	**85%**

Table 11: Evolution of debt dynamics in Scenario 3 for the years 2021-2030.

growth in the country and 1 additional unit of primary surpluses. In Tables 8 and 9 we see the economic sizes as evolving over time. Based on these assumptions we see the country's debt as a percentage of GDP.

Scenario by adjusting and debt settlement agreement with partners

In the 3rd scenario we assume a realistic agreement with the partners providing the transfer of part of the loans related to the recapitalization of. Banks to the EMS, a reduction in the weighted average interest rate by one unit and a lengthening of the maturity of loans. In Tables 10 and 11 we see the evolution of economic sizes and debt to GDP.

In Figure 8, we observe graphically the evolution of the country's debt by applying the three scenarios. We note that in 2030 we get almost the same effect whether by the optimistic scenario or realistic 3rd scenario which is the proposed solution to the debt settlement agreement with partners and creditors of Greece.

Conclusions

The debt of Greece based on the above analysis can be sustainable in the sense of servicing medium and long term, either by achieving high growth rates above 4% and primary surplus of 4% of GDP, or to reach an agreement with lenders of the country directly including:

The transfer of the portion of debt exploited for the recapitalization

Debt Maturities Data 30/06/2014		
Year	**Amount (million EUR)**	**%**
2014	27,937.00	8.67%
2015	16,162.00	5.01%
2016	7,200.00	2.23%
2017	7,500.00	2.33%
2018	4,514.00	1.40%
2019	11,700.00	3.63%
2020	5,000.00	1.55%
2021	5,012.00	1.55%
2022	6,800.00	2.11%
2023	9,000.00	2.79%
2024	8,900.00	2.76%
2025	7,312.00	2.27%
2026	8,000.00	2.48%
2027	8,000.00	2.48%
2028	7,700.00	2.39%
2029	6,900.00	2.14%
2030	6,913.00	2.14%
2031	6,700.00	2.08%
2032	9,500.00	2.95%
2033	6,800.00	2.11%
2034	9,500.00	2.95%
2035	9,300.00	2.88%
2036	9,300.00	2.88%
2037	14,400.00	4.47%
2038	13,600.00	4.22%
2039	18,200.00	5.65%
2040	10,000.00	3.10%
2041	7,300.00	2.26%
2042	7,700.00	2.39%
2043	10,100.00	3.13%
2044	6,200.00	1.92%
2045	8,100.00	2.51%
2046	4,800.00	1.49%
2047	5,900.00	1.83%
2048	2,500.00	0.78%
2049	0.00	0.00%
2050	500.00	0.16%
2051	0.00	0.00%
2052	0.00	0.00%
2053	0.00	0.00%
2054	6.300.00	1.95%
2055	0.00	0.00%
2056	0.00	0.00%
2057	1.148.00	0.36%
	322,398.00	100.00%

Table 12: Debt Maturities.

of the banking system, to the European stability mechanism (ESM), which today is the participation of EFSF to banks (Tables 12 and 13) .

The further reduction of the weighted average interest rate by at least one unit for loans to the States and the ESM. Freezing the payment of interest until 2020 on loans to the Eurozone countries and to the ESM (about EUR 30 bn.) and leveraging with capital of the European Investment Bank, to be design and implement a large ten-year program of public and private investment in the country that will give a giant boost to the development process and production restructuring

Citation: Chainas K (2015) The Greek Public Debt and a Proposal for its Regulation. J Pol Sci Pub Aff 3: 167. doi:10.4172/2332-0761.1000167

Debt Structure - Categories, Data 30/06/2014				
	Titles	**Amounts**	**% Category**	**% General**
1	Bonds issued in the domestic market	65,219.99	78.45%	
2	Bonds issued in foreign markets	2,806.13	3.38%	
3	Securitization Abroad	137.13	0.16%	
4	Short-term securities	14,969.16	18.01%	
	Total Private Sector	83,132.41		25.79%
1	Bank of Greece	4,265.82	1.78%	
2	Other internal	115.50	0.05%	
3	Special and transnational	6,906.39	2.89%	
4	Support mechanism	219,707.28	91.83%	
5	Other foreign	5,119.88	2.14%	
6	Short-term (Repos)	3,151.35	1.32%	
	Total Public Sector	239,266.22		74.21%
	Grand Total	322,398.63		

Table 13: Main Categories of Debt (Data Public Debt Management Agency) (PDMA).

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
I.A	**Trade Balance**	-21,927.5	-21,610.9	-22,708.7	-22,643.5	-25,435.8	-27,558.9	-35,286.3	-41,499.2	-44,048.8	-30,767.3	-28,279.6	-27,229.1	-19,619.0	-17,229.4
	Balance fuel	-2,986.7	-2,996.6	-3,505.0	-4,035.8	-4,511.1	-6,629.2	-8,761.3	-9,219.6	-12,154.6	-7,596.5	-8,627.2	-11,126.9	-10,220.0	-7,697.5
	Trade Balance excluding fuel	-18,940.8	-18,614.3	-19,203.7	-18,607.7	-20,924.7	-20,929.7	-26,525.0	-32,279.6	-31,894.3	-23,170.8	-19,652.4	-16,102.1	-9,399.1	-9,531.9
	BALANCE ships	0.0	0.0	434.5	136.3	135.6	-723.0	-3,390.5	-5,520.3	-4,705.0	-3,356.9	-3,621.3	-3,261.2	-1,042.6	-1,483.3
	Trade Balance excluding fuel and ships	-18,940.8	-18,614.3	-19,638.2	-18,744,0	-21,060,3	-20,206,7	-23,134.5	-26,759,3	-27,189.3	-19,813.9	-16,031.1	-12,840.9	-8,356.4	-8,048.7
I.A.1	**Exports of goods of which**	11,098.6	11,545.4	10,433.6	11,113.6	12,653.3	14,200.9	16,154.3	17,445.5	19,812.9	15,318.0	17,081.5	20,230.6	22,020.6	22,534.8
	Fuel	2,421.9	1,650.0	1,121.7	1,280.7	1,544.7	2,257.7	2,939.8	3,037.3	4,254.5	3,063.2	4,950.0	6,187.7	7,426.4	7,941.2
	Ships (sales)	0.0	0.0	531.0	260.5	1,291.4	1,602.2	1,631.8	2,275.4	1,582.0	771.7	798.6	754.7	737.8	443.0
	Other goods	8,676.8	9,895.4	8,780.9	9,572.4	9,817.2	10,341.0	11,582.7	12,132.8	13,976.5	11,483.1	11,332.9	13,288.2	13,856.5	14,150.7
	Goods	10,039.9	10,109.3	9,412.1	10,352.6	11.677,8	12,941.6	14,822.6	16,143.5	16,936.1	13,304.7	15,352.6	18,674.6	20,133.9	20,637.7
	Triangular trade	245.5	291.2	279.3	201.8	301.2	505.1	465.8	442.4	313.7	117.7	119.6	55.3	37.4	12.0
	Processing of goods	40.4	85.6	42.8	25.5	18.2	34.4	35.0	40.5	23.3	16.5	9.5	9.6	10.2	10.6
	Repair of goods	60.4	60.9	88.4	62.6	73.4	85.1	81.1	124.0	159.1	182.4	153.7	128.0	126.9	150.9
	Supplies stores	712.4	998.3	610.9	471.1	582.7	634.7	749.9	695.1	2,380.8	1,696.7	1,446.1	1,363.1	1,712.2	1,723.6
I.A.2	**Imports of goods of which**	33,026.1	33,156.3	33,142.3	33,757.1	38,089.0	41,759.8	51,440.6	58,944.8	63,861.7	46,085.3	45,361.0	47,459.6	41,639.7	39,764.2
	Fuel	5,408.6	4,646.6	4,626.7	5,316.5	6,055.8	8,886.9	11,701.1	12,256.9	16,409.0	10,659.8	13,577.1	17,314.6	17,646.3	15,638.7
	Ships (purchases)	0.0	0.0	96.5	124.2	1,155.8	2,325.2	5,022.3	7,795.7	6,286.9	4,128.6	4,419.9	4,015.9	1,780.4	1,926.2
	Other goods	27,617.5	28,509.7	28,419.1	28,316.4	30,877.4	30,547.7	34,717.2	38,892.2	41,165.8	31,296.9	27,364.0	26,129.2	22,213.0	22,199.3
	Goods	32,032.5	32,362.3	32,618.4	33,286.0	37,434.1	40,738.7	49,921.0	57,602,7	62,130.2	44,934.4	43,930.7	45,197.1	39,354.4	37,519.9
	Triangular trade	204.5	254.7	230.3	186.1	292.8	578.8	526.5	342.5	193.6	61.9	123.0	357.8	149.8	95.7
	Processing of goods	24.9	28.1	23.8	30.2	42.3	39.0	44.7	47.0	39.9	33.8	28.4	35.2	15.0	8.6
	Repair of goods	103.9	71.9	72.1	85.1	84.1	117.7	291.0	218.8	265.5	165.6	125.0	110.7	106.8	172.2
	Supplies stores	660.3	439.3	197.5	169.7	235.8	285.6	657.4	733.8	1,232.6	889.5	1,154.0	1,758.8	2,013.7	1,967.8

Table 14: Trade Balance 2000-2013 ˙Data: Bank of Greece (Amounts in million EUR).

Budget:	1970	1980	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Public revenue (% of GDP)	-	-	31.0	37.00	37.80	39.30	40.90	41.70	43.40	41.20	40.60	39.40	38.40	39.00	39.2	40.70	40.70	38.30	40.40	42.20	43.80	44.00	44.60
Public expenditure (% of GDP)	-	-	45.2	46.20	44.50	45.30	44.70	44.80	47.10	45.70	45.40	45.10	46.00	44.40	45.0	47.20	50.50	54.00	51.40	51.90	50.20	47.20	47.30
Deficit/ Surplus	-	-	**14.2**	**9.10**	**6.70**	**5.90**	**3.90**	**3.10**	**3.70**	**4.50**	**4.80**	**5.70**	**7.60**	**5.50**	**5.7**	**6.50**	**-9.80**	**-15.60**	**-11.00**	**-9.60**	**-6.40**	**-3.20**	**-2.70**
Primary Deficit/ Surplus																		**-10.60**	**-5.10**	**-2.40**	**-1.30**	**0.80**	**1.50**
Inflation (annual %)	-	-	-	8.90	7.90	5.40	4.50	2.10	2.90	3.70	3.90	3.40	3.00	3.50	3.3	3.00	4.20	1.30	4.70	3.10	1.00	-0.90	-0.80
Change in GDP (%)	**8.90**	**0.70**	**0.00**	**2.10**	**2.40**	**3.60**	**3.40**	**3.40**	**4.50**	**4.20**	**3.40**	**5.90**	**4.40**	**2.30**	**5.5**	**3.50**	**-0.20**	**-3.10**	**-4.90**	**-7.10**	**-7.00**	**-3.90**	**0.20**
Public debt (billion €)	0.20	1.50	31.1	86.9	97.80	105.2	111.9	118.6	141.0	151.9	159.2	168.0	183.2	195.4	224.2	239.3	263.3	299.7	329.5	355.1	303.9	318.7	317.6
Nominal GDP (billion €)	1.10	6.80	43.4	88.7	97.5	107.9	117.3	125.0	135.0	145.1	155.2	170.9	183.6	193.0	208.6	223.20	233.20	231.10	222.20	208.50	193.75	182.10	182.46
Ratio of debt to GDP (%)	**18.18**	**22.06**	**71.6**	**97.97**	**100.3**	**97.50**	**95.40**	**94.88**	**104.44**	**104.69**	**102.58**	**98.30**	**99.78**	**101.24**	**107.48**	**107.21**	**112.91**	**129.68**	**148.29**	**170.33**	**156.87**	**175.01**	**174.07**

Table 15: Evolution of Public Debt and GDP from 1970 to 2014 (*Data of Ministry of Finance).

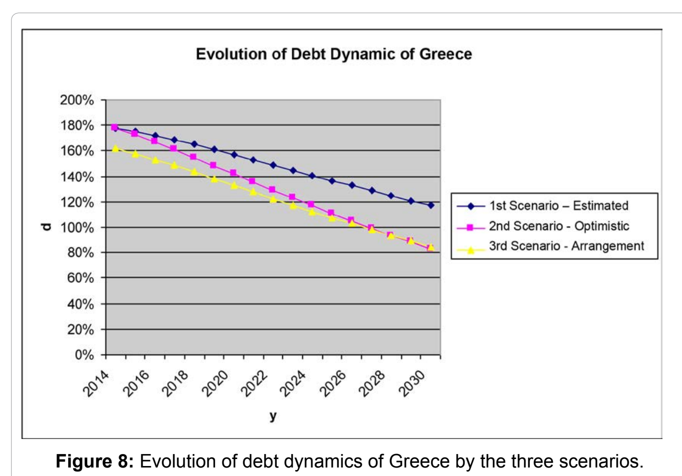

Figure 8: Evolution of debt dynamics of Greece by the three scenarios.

in the country and an effective way to quickly and effectively tackle unemployment.

Revenues from privatization constitute reserve funds for the payment of any financial gaps that may be created in the future.

Create backup credit line from the ESM for emergency needs of the country or difficulty borrowing from the markets.

Commitment of the country through a national understanding of the main political majority and opposition forces to the necessary changes and reforms for a sustainable and effective agreement with its partners and lenders.

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