#### The Greek Debt Crisis: Causes, Suggested Solutions and Reforms

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# I. Introduction

The Greek economy is currently facing a debt crisis and economic hardship summarized by (a) large internal government deficits: 10.5 % of GDP; (b) large external trade deficits: 10.6% of GDP; (c) increasing national debt: about 142.8% of GDP; and (d) negative economic growth: -4.5%; all the numbers are for the year 2010.

Clearly, the country is facing twin deficits: persistent internal government deficits which have accumulated into a large national debt to GDP ratio, and an external trade deficit which reflects lack of international competiveness and low productivity. The two deficits need not be independent and one may feed into the other and vice-versa or be even bidirectional. In theory, causality may run from external deficit to internal deficit, if, for example, along with the private sector the government imports capital goods and services to complete ongoing government projects. Or causality may run from internal deficit to external deficit, if the government needs to borrow to satisfy a high level of consumption or to pay the salaries and pensions of an expanding public sector. It seems that the predominant factors in the first type of causality are economic and in the latter political and institutional. If causality is bi-directional we have a combination of both economic and political factors at work, which is more likely the case in practice.

Whatever the type of causality, deficits need to be financed –there are no free lunches-, and borrowing to accommodate them has been going on for a few years now in Greece at an increasing, and lately very costly rate; e.g., the interest rate spread relative to Germany reached 1219 basis points on April 26, 2011, and the interest rate on 10-year government bonds rocketed to 15.8%. Obviously, this situation is not viable, whether you borrow by selling costly Greek 10-year bonds, or borrow from the French, the Germans, the Chinese or the IMF. Borrowing from the IMF complicates matters because its lending policies come with specific restrictions, associated with austerity measures such as wage and pension cuts, reductions in government spending and rising taxes. The intention of these policies is to contain costs and restore the country's international competiveness, and at the same time make sure that foreign lenders get their money back.

Unable to meet its debt obligations, Greece sought financial assistance from the EU and the IMF, which in May 2010 approved a 3-year €110 billion bailout loan for the country, which on March 25, 2011 was extended by another 7.5 years. The loan was accompanied

with an austere stabilization program (Mnemonio-1) which included wage and pension cuts, and structural economic and fiscal reforms intended to make the economy more efficient, and improve the public finances of the government in order to deal with the debt crisis. The economic structural reforms included, among others, opening up closed professions, reforming the pension funds to make them viable in the future, lengthening the retirement age, making the labour market more flexible and privatizing public corporations and assets. Fiscal reforms included raising taxes, cutting government spending and improving the taxation system to increase tax revenues and fight tax evasion.

Understandably, the stabilization program did not include political and institutional reforms, which are equally if not more important than economic and policy reforms. The reason is that political and institutional factors, due to their relative permanency through time, have intertemporal effects on the economy, and thus on the national debt, since the latter by definition is the sum of past deficits. Indeed, the two main political parties that have governed Greece for the last 30 years have chosen a higher level of aggregate consumption than in the past, financed in part by EU subsidies since 1981 and, in addition, foreign borrowing since 1989. This behaviour was reinforced by the motive to stay in power longer by expanding public sector employment, offering generous wage and pension plans to public workers in cooperation with their politically powerful unions, making political favours to party faithful, and being tolerant on tax evasion and political corruption.

Presently, the current government is in a very difficult position having to manage the debt and implement the EU/IMF austerity plan. One year already into the plan, problems have surfaced with shortfalls in tax revenues, and delays in major reductions in government spending and privatization of public enterprises. Since the numbers do not add up, there is even talk among EU officials for a second bailout loan in the order of C0 billion and yet another more austere economic plan (Mnenonio-2) to deal with debt payments for the years 2012 and 2013. No doubt, this will put additional pressure on the government and test its resolve and survival.

Given this economic and political landscape, in what follows I suggest seven potential scenarios or solutions to the debt crisis: (a) Greek deflation, (b) German inflation, (c) Short term borrowing, (d) Issuance of Eurobonds, (e) Debt restructuring, (f) Exit the euro zone and (g) Extension of the payment period of the national debt. In addition, I discuss six political and institutional reforms in order to achieve a single objective: "eliminate deviations from Greece's Western direction, and thus make the country a modern EU state." These reforms are: (a) change the electoral process to minimize the incentive of hiring public workers in order to "buy" votes, (b) adjustment of public sector wages and pension plans to public sector productivity, (c) elimination of institutionalized corruption by abolishing the law about ministerial responsibility, (d) fighting tax evasion by creating a credible tax system, without the provision of negotiated settlement of tax arrears, and (e) getting rid of the fakelaki and rousfeti culture.

The rest of the paper is as follows. Section II considers the seven suggested solutions in relation to the national debt. Section III discusses political and institutional reforms. Section IV offers a short conclusion.

## **II. Suggested Solutions**

One way to examine Greece's debt crisis and suggest some difficult solutions is to start by considering Greece's real exchange rate. Consider, for instance, the Greek real exchange rate vis-a-vis Germany:

#### q=eP\*/P,

where  $\mathbf{e}$  = the nominal exchange rate  $\mathbf{P}^*$  = the German general price index (e.g., CPI or GDP deflator) and  $\mathbf{P}$  = the Greek price index. The choice of Germany is not random, as this country is Greece's most important trading partner in the European Union. In 2009, Greece had a 4.8 billion euro trade deficit vis-a-vis Germany.

Thus defined, an increase in **q** is equivalent to real depreciation of the Greek goods and services and a decrease in **q** is equivalent to real appreciation. Over time, **q** has been falling either because **P**\* is falling or **P** is increasing or both; recall that since Greece adopted the euro, e is irrevocably fixed at e=1 at and cannot be changed. The fact that P\* is falling and **P** is rising ultimately reflects productivity differentials (alternatively, unit labour costs differentials) between the two countries. With q falling, Greece has become less competitive internationally and its trade balance (net exports) relative to Germany has gone into a deficit. No wonder, we see a lot of BMWs, Mercedes and Siemens products flooding the Greek market, while at the same time Greece cannot sell even feta cheese to Germany, since they can buy it cheaper from the Bulgarians, say. Through the national income identity, it is easy to see that the trade deficit can feed into the Greek government budget deficit or vice versa. For example, if you import more than you export, you must borrow internationally to pay for your trade deficit. This international borrowing, in turn, can cause an internal government deficit, especially if a large part of the importing is done on behalf of government spending projects. The causality can of course go the other way. We have indeed a classic case of the twin deficits, external and internal, which are currently causing a great deal of concern for the Greek economy.

Against this unpleasant background what are the possible difficult solutions? Here are some suggestions, already discussed one way or another by economists and policy analysts:

#### 1. Greek deflation

This solution is associated with the notion of **"internal devaluation"** as a way of becoming competitive. With the nominal exchange rate fixed at unity, the only way for the Greek terms of trade deteriorate, (i.e., **q** increase) and thus become more competitive internationally, is to have the domestic price **P** fall. By **P** falling, through aggressive

wage and income cuts,  $\mathbf{q}$  will increase so as to make Greek products more competitive internationally. This is the EU/ECB/IMF-troika preferred option. This policy may improve the external deficit, but it will be painful domestically, as a lot of Greek firms will likely close down and unemployment will increase further. One can infer the human cost and social unrest in this case. The current Greek government seems to be stranded in this direction, but this policy is not without risks or costs. We already see the ongoing strikes by public sector and private sector worker unions, and there are more to come in the future. Further, in addition to rising levels of unemployment, deflation worsens the real burden of the national debt.

#### 2. German inflation

Let **P**\* increase, by more accommodative German policies. In this case Germans will become less competitive internationally, sell less BMWs to the Greeks and other countries, and help them reduce their trade deficits relative to Germany, and thus borrow less. The gain for the Germans will be to make the future viability of the euro possible, and use it to their advantage as they have so far. Will the Germans inflate their economy to help the Greeks or support the euro indirectly? I would not bet on it. The Bundesbank has been an inflation-averse institution traditionally for good reasons. Low inflation provides a stable macroeconomic environment, keeps interest rates low and, more important, it makes Germany more competitive internationally. Being such an export oriented economy, Germany would not inflate its economy to help countries in the periphery of the euro zone and jeopardize its comparative advantage relative to the rest of the world. In fact, a major factor for the current boom of the German economy is robust exports to the emerging Asian economic giants China and India. Responding to the suggestion of inflating the German economy, Merkel recently gave the answer in no uncertain terms: "we should not be penalized for our own success."

#### 3. External Short-term Borrowing

Greece and other countries with problems servicing their national debts, **can borrow short-term to meet their debt payments.** For example in May 2010 Greece borrowed  $\textcircledll 10$  billion in a deal that involved the European Union (EU), the European Central Bank (ECB) and the International Monetary Fund (IMF). Initially the loan was to be repaid in 3 years at an annual interest rate of 5.2%. In March 2011, the loan repayment period was extended by 7.5 years and the interest rate was reduced to 4.2%. In return, Greece agreed to cut wages, freeze pensions, privatize public enterprises and public property to the tune of  $\textcircledll 0$  billion, and undertake structural economic and fiscal reforms, in order to achieve specific deficit and debt targets, and jumpstart its stagnant economy. In November 2010, Ireland was forced to accept an EU/ECB/IMF bailout in the amount of  $\oiintll 0$  billion. There is even talk for the need to bailout Spain as well in the future. There are three basic reasons for the bailout agreements: **a) to save the euro, b) to make sure that the creditors or holders of sovereign national debts are paid back, c) to provide financial stability in the EU and allow time for the recapitalization of major European banks that have bought**  large amounts of bonds from the countries of the European periphery that currently face debt crises.

All the bailout agreements are administered by the European Financial Stability Facility (EFSF) which was created by the euro zone states in May 9, 2010 within the framework of the Ecofin Council. As part of an overall €750 billion rescue package, EFSF is able to issue bonds guaranteed by the euro zone countries for up to €440 billion and lend up to €250 billion to member states in difficulty, subject to conditions negotiated with the European Commission in cooperation with the ECB and IMF, and to be approved by the Eurogroup. EFSF has been assigned the best possible credit rating: AAA by Standard & Poor's and Fitch Ratings, Aaa by Moody's. In the March 24-25, 2011 European Council meetings, it was decided that by June 2013, the EFSF will be absorbed into a permanent European Stability Mechanism (ESM) with an effective real lending capacity of €00 billion. At the same meetings the Pact for the Euro was introduced which links a country's wages to its international competitiveness and productivity.

#### 4. Issuance of Eurobonds

Make it more affordable for Greece to borrow without the large interest rate spreads, by having the ECB buy/sell issues of new bonds at lower rates. This seems to be a reasonable solution, until the Greek economy and other weak economies in the periphery of the euro zone stabilize. Other euro zone countries such as Spain, Ireland, Portugal or Belgium could use the same borrowing method if they needed to do so, as they may in the future. Certainly this is not a long-run solution, unless the troubled economies. improve quickly over time, in terms of robust economic growth and development. There are political and economic issues associated with the issuance of Eurobonds. In the absence of an effective federal European government, who will be the issuer of these bonds? The lack of a European political union poses a serious constraint to the issuance of eurobonds. In a genuine political union such a political constraint does not exist. For instance, the US federal government can readily bailout a state, say Florida, when it experiences a negative economic shock. A federal fiscal transfer to Florida can alleviate the effects of the shock automatically, and the federal US government can then collect federal taxes to pay for these transfers. So the senior citizens of Florida should not be worried about getting their monthly pensions or their prescription drugs from their neighbourhood pharmacy. Uncle Sam takes care of the negative economic shock to Florida. This is not the case in the European Union, because it lacks a political federal jurisdiction. The EU is not a "transfer union" and none of the large EU countries like it to become one. For then it would mean that the more affluent EU states would subsidise the poorer EU countries of the periphery. For instance, no German political leader would agree that the German tax payers should finance the accumulated national debts of Greece or Ireland.

Thus, **the issuance of Eurobonds at this stage of European integration is politically infeasible and also economically unfair**. Eurobonds may also be economically distorting since they will involve the same interest rate for all members of the euro zone regardless of their macroeconomic conditions. Yet, it is well known that interest rate differentials across countries reflect risk factors associated national debt differentials and other macroeconomic factors, such as the level of inflation, and the balance of the trade account.

#### 5. Debt Restructuring

Besides the €110 billion bailout loan, Greece has accumulated about €340 billion of national debt. One way to alleviate the burden of this debt on the Greek economy is to restructure or haircut the debt, in the sense of paying only a fraction of the debt to domestic and foreign lenders, the latter holding over two-thirds of the total debt. For example, a 10% haircut would reduce the level of the debt by €34 billion and thus provide a much needed relief to the Greek economy, given its present recessionary state; a 20% haircut would reduce it by €68 billion and so on. Debt restructuring or a haircut of any size is equivalent to bankruptcy, as the economy cannot pay its debts based on its own productive capacity. Two important issues are: how to implement a debt haircut and what will be the consequences of such an event on the Greek economy. European politicians, for some time now, have talked about a sort of "controlled bankruptcy" implemented through the EFSF. The idea is to use EFSF resources to either buy the country's debt at reduced prices in the secondary bonds market or to loan Greece funds to buy a portion of its debt in the same market and thus retire it. A similar idea was discussed in the March 24-25, 2011 EU meetings where it was decided that the ESM, starting in June 2011, may implement a debt haircut for a country in a debt crisis, with private investors absorbing some of the losses associated with the haircut. The country can then borrow using the primary global bonds market. But at what interest rate? Certainly higher than the pre-haircut era, as now the risk of further default will be perceived higher by the markets. Following the EU decision, Standard & Poor was quick to downgrade Greek bonds by two categories from BB+ to BB-, taking them deeper down their junk status. Similarly, Moody's cut the country's rating by three grades to B1 from Ba1. In the same mode, the magazine Economist (on March 31, 2011) was very critical of the ESM clause, as well as of the EU leadership and the ECB for denying the possibility of debt restructuring within the euro zone.

An important cautionary note: Controlled bankruptcy is a new idea advanced by some EU politicians, notably German, and it is only a theoretical possibility. There is no historical record of it. Instead, the historical record is one of market-determined bankruptcies. For example, Argentina defaulted on its national debt in 2002, and repudiated about 70% of its debt. Iceland went bankrupt in 2008, when its government decided not to bail out its banking sector which had accumulated a large amount of foreign debt by investing abroad. Thus, politicians may be naive in suggesting controlled bankruptcy or partial debt restructuring. At the end of the day, markets seem to be stronger than politicians and determine the final outcome. For instance, I do not know what politicians can do when, following the news of debt restructuring, depositors run to the bank to get their deposits and cause "bank runs". In this case, banks would simply dry up of funds and become insolvent. In 2010 alone, there was already a €50 billion deposits loss from the Greek banks to foreign ones or other outlets.

Even though controlled bankruptcy would have been less likely to succeed in the case of Argentina or Iceland, it may be marginally more likely to succeed in the context of the euro zone. The reason is that Argentina and Iceland stood alone when their debt crisis hit them, whereas Greece, Ireland and Portugal are part of a currency union of 17 countries. Argentina and Iceland had to seek external help from the IMF only, whereas the euro zone countries have a €750 billion total bailout package, through the EFSF/ESM, that has already been used in the case of Greece and Ireland to support the euro. In addition, Greece and Ireland have a common currency which mitigates the chance of severe bank runs through a speculative attack on the exchange rate. By contrast, in Argentina the lack of investor confidence and the accumulation of unsustainable national debts led investors to run to the bank to exchange pesos for dollars, which caused the collapse of the currency board arrangement which was in place for a decade up to 2002.

#### Whatever is the type of bankruptcy that prevails eventually, the effects will be

severe if not devastating. The rate of unemployment in Greece, which is currently 15.9%, will increase further, imports of basic products, such as technology, energy and pharmaceuticals will decline sharply, and the country will be shut out of global financial markets initially, and the cost of borrowing will be high when using the same markets in the future. Further, a deep enough debt haircut, say 30% or higher, may put at risk major European and Greek banks, and Greek pension funds which hold large chunks of the Greek debt in their portfolios. French and German banks together hold about €87 billion of the Greek debt. It is estimated that the Greek banks hold about €65billion, the pension funds €40 billion and other insurance companies €15 billion of the Greek debt. If such institutions become insolvent due the debt haircut, the effects of debt restructuring will be really devastating for the Greek economy. Living standards would collapse to third world levels, and it will be difficult for Greece to keep the euro as its currency. Reverting back to drachma would be the more likely outcome.

For these reasons it is counterproductive for economists and political commentators to talk about debt restructuring. More important, **it would be foolish for the Greek government to announce a policy of debt restructuring.** In this event, its hard-won credibility and sacrifices for implementing the structural economic reform and fiscal adjustment programs, associated with the bailout loan, would be lost and investor confidence would vanish instantly after the announcement. The credibility of the EU, ECB and IMF, which put together the bailout package for Greece, would also suffer a serious blow. As a result, market forces would bring forward a complete instead of controlled bankruptcy, and the return to the drachma would be more precipitous.

#### 6. Default and exit the euro zone

**Default on the debt payments, break the constraint e = 1 by dropping the euro and readopt the drachma!** There will be positive and negative effects associated with this option. On the positive side, abandoning the euro will result in a huge devaluation of the drachma which will improve the Greek trade balance and alleviate the need to borrow abroad large amounts of money all the time; we'll see less BMWs in the streets of Athens, more German tourists in the Greek islands and perhaps more feta cheese on the selves of

German stores. Traditionally, devaluations work for the domestic economy by stimulating exports, provided the devaluing economy has a robust productive potential that can take advantage from the devaluation. Unfortunately, in Greece, over the last 30 years, manufacturing and light industry, the most productive sectors of the economy, have declined at the expense of more services such as tourism, shipping and banking services, which have become more competitive internationally. With a weak productive base presently, it is doubtful if devaluations will have the desired effects and lead to export-led growth, as has been the case in Argentina.

All the negative aspects of debt restructuring, discussed above, apply with more force in the case of exiting the euro zone. Any move or public perception to leave the euro and readopt the drachma will take time, and during the transition period there will be recurrent bank runs with a devastating impact on the Greek banks. A good indication is what happened in Argentina in 2001-2002. Due to piling up unsustainable federal and state debt in the late 1990's and early 2000's, investor confidence was lost and flight of money out of the country accelerated. In 2001, people, fearing the worst, begun withdrawing large sums of money from their accounts, turning pesos into dollars, at the 1-to-1 exchange rate, and taking them out of the country, causing a run on the banks. The government reacted by enacting a set of withdrawal restrictions which in effect froze bank accounts for 12 months. This decision was followed by social unrest and political instability. In December 2001, the country defaulted on a large part of its national debt of about \$132 billion, and in January 2002, the Duhalde government abandoned the fixed 1-to-1 peso-dollar parity and dictated peso-fication, by which all dollar accounts in the banks would be converted into pesos at the "official" rate of 1.4 pesos per dollar. In a few months the exchange rate was floated and the peso suffered a huge depreciation which led to import-led inflation. For the rest of 2002 and 2003, many firms closed down, output growth fell dramatically and unemployment rose to 25% in 2003. The living standards of the average Argentine fell proportionately. Remarkably, the country recovered thereafter and since 2003 its annual rate of economic has been high, thanks to devaluations of the peso, increased exports and import substitution policies.

The situation in Greece will be complicated by the fact that the drachma has been abolished and will have to be reinstated. **If Greece becomes insolvent in the near future and defaults on its debt payments, it will have to finance future deficits by issuing its own currency, the new drachma.** However, the mere issuance of the new money will create a run on the Greek banks, as depositors try to avoid converting euro deposits into drachmas. Similar to Argentina, at this point the Greek government will dictate drachma-fication of all deposits at some official rate, presumably the original rate that Greece entered the euro zone in January 2001: 340.750 GRD for every euro.

Assuming that the Greek economy and banks will survive the debt default and the capital flight due to bank runs, the new drachma will be devalued repeatedly leading to further banks runs, rising inflation, high interest rates and unemployment rates, and falling real incomes. It is not hard to imagine real incomes falling to €300 or less per month. Living standards would collapse, and the country will be isolated internationally for several

years, if not decades. At the same time, it will have to generate enough money to pay off the remaining debts to foreign creditors. The everyday lives for most people will be a harsh reality, full of hardship and misery, as can be attested for example by the Greek bankruptcies of 1893 under H. Trikoupi and 1932 under E. Venizelos.

Greece joined the euro zone, rather prematurely, for political as well as economic reasons. The economic benefits from adopting the euro resulted from borrowing monetary credibility from countries like Germany, at the expense of giving up Greek monetary and exchange rate policies; the latter is the reason why Denmark, Sweden and the UK did not join the euro zone. While this borrowed credibility resulted in lower inflation and interest rates in the last 10 years or so, it has evaporated through irresponsible Greek fiscal policies, and an expanding public sector. The last decade was really a missed opportunity for Greece to improve its public finances, by exploiting the low interest rates and robust economic growth in order to reduce the annual deficits and the national debt. Instead, the governments used false statistics to understate deficits and debts and borrow more money to pay salaries and pensions and increase consumption, at the expense of investment and future growth. Eventually the wrong data were discovered by international agencies, and global financial markets would longer lend money to Greece. The result is the current situation of high interest rates to service the ever expanding national debt, which has become unsustainable in the face of the global recession which started in 2008, low economic growth, corruption, tax evasion and a weak and regressive taxation system.

Even though the option of dropping the euro sounds extreme, it may be a credible threat for the strong euro zone partners, in order to cooperate in solving Greece's and the other euro zone countries' such as Ireland's and Portugal's debt crises. If these countries exit the euro zone, they may threaten the very existence of euro itself! The project for European integration that has been going on for the last 50 years or so would also be in jeopardy.

The very nature and definition of money should also make this very clear. Money can be anything that satisfies the functions of: (a) medium of exchange (b) store of value (c) unit of account and (d) means of deferred payments. In the absence of a monetary regime in which money is backed by a precious metal, such as gold or silver, money is worthless pieces of paper, or fiat money, which acquire value only because of government regulation or law, which makes it legal tender: a legally valid medium of payment for settling private and public and debts. The euro is a special case of a legal tender: the euro banknotes are worth their stated values because of the credibility of the signature of the president of the ECB on them, and the collective trust in the euro zone countries` parliaments. However, unlike other currencies such as the US dollar, this signature is not legal tender. The main reason for this is the fact that the euro zone is not a political union yet, and the European parliament does not have the legal authority to declare euro banknotes legal tender. Instead, national laws of the members of the euro zone specify that the euro is the country's legal tender. Given this important detail, if Greece or any other of the 17 member countries defaults on its national debt and exits the euro zone, the euro will no longer be a legal tender and such country will not be legally

obliged to settle its debts in euro. The signature of the ECB president will also be worthless, including all the useful functions of euro as money.<sup>1</sup> It is thus optimal for a country that defaults to drop the euro and forgo its debt payments in euro. By backward induction, it is optimal for each other country in the euro zone with a debt crisis to do the same, and thus lead to the destruction of the euro altogether. It follows that no euro zone country should earn the distinction of being the first one to exit the euro zone.

#### 7. Extend the payment period of the national debt

Recently, an option that is being discussed by EU officials and policy analysts is to extend the payment period of the Greek national debt of €340 billion by 10 to 15 years and also reduce the interest rate payable on it. This option, if implemented, will reduce the burden of the debt in the short run and at the same time it will buy valuable time for the Greek economy to recover in the medium run and make the national debt payments viable in the long run when the economy is fully recovered and the structural economic and policy reforms have delivered the desired outcomes. This option is not without costs either. Some institutions that hold Greek debt depend on the larger payments associated with the initial rather than the extended maturity of the debt. Potentially then such institutions may be in financial distress if the maturity period of the Greek debt is extended. Nonetheless, given the present dismal economic situation and the fact that the consequences of debt restructuring or exiting the euro zone will be devastating for the Greek economy and potentially other euro zone countries, this solution may gain momentum in the coming months. The probability of this happening will also increase, since one can detect an evolution and convergence of thought among EU, ECB and IMF officials, noted economists and policy analysts that a restructuring or default on the Greek debt will be a very negative development for the euro zone, and, as noted above, it may jeopardize the very existence of the euro and the EU itself. It should therefore be avoided at all costs.

# III. Political and institutional reforms

In the modern theory of dynamic international macroeconomics, economic agents, including governments, maximize their welfare by making their consumption/saving decisions subject to their budget constraints and then determine how much to import and export, or the balance of trade. In this context, the causality between internal and external deficits goes from the former to the latter: governments maximize society's consumption by shifting their budget constraints through borrowing, thus creating an internal budget deficit, and some of the additional consumption comes from increased imports from abroad, thus causing a trade deficit. Borrowing in itself is not a bad thing to the extent that the country can generate enough resources to pay for the principal and interest over time. This way, the society consumes more and everybody is better off than without

<sup>&</sup>lt;sup>1</sup> Unless the country becomes a pariah state, it will have to pay its remaining debts in the new currency it creates, presumably the old national currency with doubtful international value. No one would be happy about such a development.

borrowing. However, **problems arise when borrowing becomes unsustainable: that is when an individual borrows to keep a high level of consumption without generating any real wealth to pay for it at the end his life, or when governments lose elections and leave behind a negative level of wealth or equivalently a large debt for future generations to pay off.** Charles Ponzi (1882-1949), an Italian immigrant to the US in the early 1920's, borrowed money to buy international reply coupons (IRCs) from Italy for the purpose of redeeming them for higher valued US stamps, thus promising investors high rates of return. In practice, the overhead on buying and selling large amounts of IRCs precludes profitability, and the scheme eventually collapsed with a lot of investors losing their money. Ponzi himself was tried and convicted several times for fraudulent investments. He died in Brazil penniless, leaving behind a large unpaid debt, at the expense of naive investors.

To eliminate Ponzi games, economists impose another condition in their optimising models: the **no Ponzi condition**, which precludes the possibility that one can go on **consuming or investing by continuous borrowing and leaving behind debts**. Alternatively, the present value of one's debts at the end of his life should be zero. Have successive Greek governments violated the no Ponzi condition by accumulating a debt to GDP ratio in the order of 142 %? At first glance, the answer is ambiguous. Some people would argue that the global recession that started in 2008, combined with low economic growth (1%, -2.25 and -4.6 in 08, 09 and 10, respectively) and high interest rates to service the debt (about 8%) contributed to the violation of the no Ponzi condition. However, the no Ponzi condition applies over long time horizons, not just the last three years. What is true is that the Greek national debt has been rising steadily over the last 30 years, even during periods of higher economic growth than the EU average, as was the case in most of the 1990s and early 2000s. Both the two main political parties, PASOK and ND that have governed the country over this period have increased the national debt. The political and institutional factors that contributed to this increase include:

**1.** The **large expansion of the public sector** by each of the two governing parties with main motive to "buy" votes and get re-elected. There is a lack of meritocracy in hiring public employees, which is often based on political connections, nepotism and favouritism. It is not uncommon individuals who worked in the political campaigns of politicians, after every election, get jobs in different ministries or in local governments basically without any skills for the tasks they are assigned to perform. This practice, besides creating economic inefficiencies and a huge bureaucracy, has contributed to a ballooning of the government deficits and the national debt.

# 2. The generous salaries, pensions and retirement packages of public employees, especially the directors and managers of public corporations or DEKOs, among others, in the telecommunications, transportation, public utilities and health sectors. Mismanagement of the DECOs has resulted in large amounts of accumulated debts in most of them. There has been a real pillage of public funds by senior managers of some of these entities. For example, the organization of national railways or OSE has over a €7 billion debt and the public hospitals have over a €5 billion debt.

**3.** Corrupt civil servants and elected ministers who pocket large sums of money in the form of bribes through the awarding of governments contracts to domestic and foreign firms. Scandals involving minsters who were bribed by certain multinational companies to win government contracts for the military and telecommunications industry have been surfaced recently, causing the public outrage and diminished credibility for the whole political system in Greece. The funds of these illegal activities have been channelled into foreign bank accounts and offshore company accounts. What has outraged the public the most is the lack of punishment of the offending ministers because they are protected by a law about "ministerial responsibility" which takes such cases away from the judicial system and into the hands of parliamentary committees, which decide on a preliminary investigation of corruption cases upon a petition signed by a minimum of 30 members of parliament. This procedure leads to the politicisation of issues of corruption, and as a result no minister or public official has been punished or put in jail so far. What is more outrageous, if the felonies or misdemeanors have been committed five years or more in the past, they are automatically barred and are not considered even by parliamentary committees, let alone the public courts.

4. Tax evasion is rampant in Greece, which costs the country an estimated €15 billion per year. There are several reasons for this. First, there are frequent changes in the tax code which translate into an inherent weakness in the check-and-balance procedures and tax collection of the Greek taxation system. Often tax evasion cases are litigated in courts under different tax regulations and loopholes, which lead to waste of resources, reduced taxes and delays in tax collection. Second, about one-third of the labour force consists of self-employed individuals with small businesses, which operate on a cash basis that is almost impossible to monitor and collect taxes from. More generally, the Greek shadow economy is about 25% of GDP, the highest among the euro zone countries. Third, there is a general mistrust of elected government officials by the public, who feel that the government does not represent their interests, and thus have less of a sense of duty for the state. As a result, tax evasion is a common phenomenon in many professions. In a well publicised government survey last year, 150 rich doctors from the upscale district of Kolonaki in Athens reported that the made less than €30,000 per year, and 30 of them reported income of less than €10,000 per year. Fourth, there is rampant corruption by tax officials. Media reports are rife with stories of corruption of tax officials accepting bribes to reduce tax penalties. Recently, 14 high ranking tax inspectors were charged for reducing or eliminating tax obligations by several private firms. Fifth, more important, there is a fundamental flaw in the tax system called "diakanonismos" or "pereosis," which allows for a negotiated settlement of tax arrears between the tax payers and the tax auditors. This flaw creates an incentive for firms to accumulate unpaid taxes over several years until they become a large amount and then enter into negotiations with the tax authorities to pay only a small fraction of the unpaid taxes. This flaw, in addition, has been a constant feature of all tax reforms and thus makes the whole tax system less credible and more prone to abuse.

**5. The fakelaki and rousfeti culture**. There is a long tradition in Greek society that often you have to pay your way to get something done, or you have to get to know politicians to get political favours. The **fakelaki involves bribes of cash in little** 

envelopes that affect everyone from hospital patients to contractors bidding for public projects. The fakelaki is closely connected to the word "rousfeti" which means expensive political favours, which include everything from hiring teachers to property deals with monks. Fakelaki and rousfeti are two sides of the same coin: the former is a social practice and the latter a political one. According to the corruption-watchdog group Transparency International, 13.5% of Greek households in 2009 paid €1,355 on average as a bribe, in order to obtain things such as driver's licences, doctor's appointments, building permits, or to reduce their tax bills. In the past a few years alone, senior politicians have resigned or been investigated for taking bribes in awarding contracts, employing illegal workers and selling overpriced bonds to public pension funds. The Vatopedi monastery scandal is a recent example of a rousfeti: in 2008 senior government ministers were accused of helping the politically connected Vatopedi monks claim ownership of a lake, and then swap it for a portfolio of prime public lands at bargain prices. According to investigators, the whole deal cost taxpayers over €100 million.

All these fakelaki and rousfeti transactions are part of the shadow economy which is not subject to taxation. Besides contributing to tax evasion, the **fakelaki and rousfeti transactions are also important factors in the unequal distribution of income** in the Greek economy: the fakelaki and rousfeti receivers end up with higher after tax incomes and the fakelaki and rousfeti (i.e., the state) givers with less.

The above discussion shows that the political system in Greece and its institutions are incapable, to a large extend, to deal with the present debt crisis and in many ways are responsible for it. Hence, there is an **urgent need for political and institutional reforms**. The particular form that these reforms can take will depend on the objectives that one wishes to achieve, and the direction that one wishes the country to take. Since 1974, important steps have been taken to tilt the country in the Western direction: Greece became a member of the European Community in 1981 and of the euro zone in 2001. Yet, despite these important successes, the factors 1 to 5 above make it clear that there have been significant deviations from the western direction. Suppose then the new objective is:

# "Eliminate deviations from Greece's Western direction and thus make the country a modern EU state."

Towards achieving this objective I suggest the following reforms:

1. Reform the political system by minimizing the incentive to hire more public employees in order to buy votes. This can be achieved by changing the electoral process so that the election candidates for each political party are chosen through a competitive process at the local districts, instead of being picked by the party leadership. This is already done in choosing the party leaders of the two major political parties, and hence the costs of applying the same procedures at the local level should be small and the benefits enormous. This reform if implemented will break the chain of connections among party leaders, candidates and the electorate and reduce their implicit relationships that lead to obligations for each winning party to hire its own foot soldiers to central and local government positions and other public organizations without proper skills and qualifications. The hiring in the public sector should be done through a competitive process that assigns jobs in the public sector based on proper qualifications, education, skills and experience as stated in the submitted curriculum vitas of the job applicants.

2. It is well known that average salaries and pensions are higher in the public sector than in the private sector. Job security is also guaranteed in the public sector but non-existent in the private sector. This situation makes public jobs more attractive than private sector ones and creates an undue unfairness in the Greek labour market. In order to make the labour market more fair and balanced, the salaries, pensions and retirement packages of public employees should be adjusted to levels consistent with their **productivity.** Since there is no reason to believe that public employees are more productive than private sector employees, a good metric of adjustment are the wages, pensions and retirement packages offered by the private sector. This is especially necessary for overpaid civil servants and the directors and managers of public corporations with doubtful contribution of value added to their entities. A quick and effective way to achieve similarity of compensation between public and private sector is to reduce public ownership of debt-ridden or government-subsidized DEKOs by selling off a fraction of government ownership to the private sector in competitive market auctions. DEKOs in the transportation (e.g., OSE), telecommunications ((e.g., OTE) and public electricity ((e.g., DEH) sectors are examples of companies that could be auctioned off.

Regarding **job security** in the public sector, it should not be automatic. Instead **it should be based on a tenure system, which involves periodic evaluation of public servants based on performance criteria**. Initially, civil servants should be hired on a probationary basis, and should submit annual reports of their activities and evaluated by independent peer review committees every 3 years for their first 9 years of their employment. The peer review committees should submit their interim evaluation reports and if the performance criteria are met employment tenure should be granted to probationary civil servants in the 10<sup>th</sup> year of their employment. Otherwise they should be fired and a job search should start for new employees. This approach if implemented will also make labour relations within the public sector more fair by **eliminating the "free rider" problem**: as it is now there is a fraction of qualified and productive civil servants who do most of the work and the rest of them free ride on these conscientious workers.

**3.** Fight corruption to its core by imposing stiff penalties for public officials involved in corruption cases. The penalties could range from high monetary fines to appropriate prison terms determined by the penal code of public courts. More important, **eliminate the incentive for institutionalized corruption by eliminating the controversial law about ministerial responsibility**. After all, this law may be unconstitutional since the initial version of the Greek constitution states that political crimes should go to public juries.

4. Eliminate tax evasion by creating a credible tax audit system of checks-andbalances that identifies tax evaders and tax arrears using automated computerised methods. Such methods need not be new. They can be borrowed and learned from other EU or North American countries such as Canada and the US. The Internal Revenue Service (IRS) of the US or Revenue Canada (RC) have developed first class methods of tax audits that are very effective in identifying and fighting tax evasion. These methods should be adjusted to account for the specific features of the Greek economy such as the fact that about 1/3 of the total economic activity is undertaken by self employed individuals who operate on a cash basis, and thus can easily underreport their true incomes. Equally important, the fundamental flaw of the tax system, which allows for the negotiated settlement of tax arrears between the tax payers and the tax auditors, should be dropped, thus eliminating both one of the main incentives for tax evasion by tax papers and accepting bribes by tax auditors. Further, the tax auditors should be obliged to take a course on ethics in public administration, so that they have in mind an ethical standard when they conduct their audits. At the same time, the government should improve the quality of government services to the public so that citizens feel that the taxes they pay are worth their sacrifice.

**5.** The fakelaki and rousfeti culture is a non-Western residual from the past which has survived through time. Both are non-marketed activities which are part of the shadow economy and are thus important devices of tax evasion. **Even though it will be difficult to eradicate the fakelaki and rousfeti culture over night, serious steps should be taken to reduce its practice in Greek society and eventually eliminate it.** One obvious step is to make laws which assign high penalties to fakelaki and rousfeti activities. Another step would be to create a social stigma for fakelaki receivers and rousfeti receivers/givers by publishing their names on a government website for everyone to see. A third, and not less important, consideration is the **endogeneity** of the fakelaki and rousfeti culture: once the reforms 1 to 4 noted above have been put into effect, the fakelaki and rousfeti activities should also decline over time.

6. Create a credible national statistical agency which would be completely independent of political influence and would compile valid and reliable data for the country's economy. The correct measurement of important economic variables, such as GDP, employment, deficits, debts and so on, are fundamental for sound decision making by governments, policy makers and all kinds of market participants. In the past, the Greek Statistical Service under the influence of politicians produced unreliable data on government deficits and debts, they were recently caught and completely discredited, and the country was shut out of global financial markets. Further, not only are some data unreliable, they are also incomplete. For instance, Greece has one of the most incomplete time series data on major macroeconomic variables in reputable and well known international data bases such as the International Financial Statistics of the IMF. This is an important issue because it prevents research on important economic topics regarding the Greek economy. A serious effort should be made by the new statistical agency to complete and supply updated data to such international statistical agencies, so that they are readily available for all uses, including research.

The current Greek government is in a very tight spot having to pay for the bailout loan (€110 billion) and the national debt (€340 billion), implement the stabilization program in connection with the bailout plan and fight a deep and long recession. These are very difficult and onerous tasks to achieve simultaneously. The hope is to buy time until the stabilization program works, the economic and political reforms have been completed, and the economy recovers to positive economic growth. Unfortunately, there are no quick ways to fix the excesses and abuses of the last 30 years. In parliamentary democracies like Greece, procedural bureaucracy makes it difficult to reduce the size and waste of the public sector quickly, or to strike down laws such as the law about ministerial responsibility which have lead to institutionalised corruption and the pillage of public funds. It will be equally difficult to reform the tax system and eliminate negotiated settlement of tax arrears payments that contribute to tax evasion. Still worse, it will be very slow to change the fakelaki and rousfeti culture which leads to corruption, tax evasion and unequal distribution of income. These difficulties together with potential policy mistakes by the government make the prospect of a quick and viable recovery rather unlikely. What is really missing is a credible economic plan for growth and development that could be implemented quickly and effectively. Despite the efforts of the two main political parties to produce their own policy blue prints for growth, it has proven difficult to articulate a clear and coherent alternative. The main reason for this is the incomplete state of our knowledge regarding what factors take an economy in to a liquidity crisis or a liquidity trap and what policy mix can take it out of it. A good example of this is Japan which has been in a liquidity trap since the early 1990's and is still hovering around it, despite expansionary government policies which have taken their debt to GDP ratio over the 200 % mark! Obviously, this seems to be an important topic of future research.

Yet the situation is not hopeless. First, **Greece is not alone in this**. It is a member of the EU for the last 30 and the euro zone the last 10 years. At the Greek request, the EU came to rescue with the bailout loan which saved the country from the brink of bankruptcy. A few constitutional experts in Greece have criticised some provisions of the stabilization program (mnemonio) as unconstitutional in interfering with the internal affairs of a sovereign state. Such criticisms are rather misguided and myopic. Greece has been interfered with by outside powers in the past, for good reasons. For example, following the Asia Minor disaster Greece became a protectorate of the great European powers, the UK and France. After the end of WWII the American loan to Greece was accompanied with an American being a member of the administrative council of IKA. Since the adoption of the euro in 2001, the monetary policy of Greece is determined by the ECB, and so forth. Further, besides outside interferences, there are many things within the country which are unconstitutional, including the law about ministerial responsibility, rampant tax evasion, political corruption, and fakelakia and rousfetia, to name a few.

Second **the stabilization program**, austere and unpopular as it may be, comes with provisions for economic and policy reforms that will help the country over time to modernise and become a state with a smaller, more efficient and fiscally responsible public sector, a credible tax system, more meritorious and competitive labour markets and a more competitive economy internationally.

Third, there is realization on the part of the public that a new political order is necessary to move the country forward. The existing political establishment is viewed inadequate and responsible in many ways for the present state of the Greek economy. The two main political parties that have governed the country for the last 35 years get together about 40% of the popular vote in recent opinion polls, and 37% of voters are undecided and disappointed with the two main political parties. Following the fall of dictatorship in 1973, my generation, the "Polytechneio generation," took over the ship of the Greek state with great expectations and promises for establishing a true democracy and a just society. Unfortunately, it is for historians to analyse how the Polytechneio generation failed so badly in achieving these noble objectives. Yet, the same generation in cooperation with the present one should now create a new political force with new faces and thinking to achieve these noble objectives. Preferably, I would call this political force "New Ellas" (NE) and would endow it with the responsibility to achieve the objectives of true democracy and justice by way of eliminating deviations from Greece's western direction, noted earlier. Hopefully, this force will be created sooner rather than later, since time is of essence: it is one minute to midnight. The stakes are really very high. Unless the new political force is formed, a likely implosion of the main political establishment in future elections will take the country into either a state of anarchy or a right wing government with all the social unrest and political instability that this may entail. In the past, such instability brought dictatorships to power and closure of the Greek parliament. Thanks to Greece's EU membership, the emergence of a new dictatorship in the future is a low probability event; it is not however a zero probability event, if the country ceases to be an EU member.

### **IV.** Conclusion

In summary, it is difficult to imagine Greece outside the euro zone or the EU for that matter. As was made clear in the above discussion, the best choice for Greece is to stay in the EU and the euro zone by satisfying its debt obligations; all the other alternatives are really inferior and dangerous, not only for Greece but for the EU itself. The Greek debt crisis is the result not only of economic deficits but also of political and institutional deficits, which have been developing over the last 30 years. Now it is the time of reckoning, where ordinary Greek citizens are called upon to pay for these deficits. This is unfair since not all of them participated in the excesses and abuses of the past. It is even worse for future generations that will continue to pay off the national debt they will inherit. In the mean time, the present dismal state of the Greek economy and the sacrifices of the Greek people to avoid national bankruptcy should be used as an opportunity and a beginning to create a better economy, a more just society and a credible accounting system. As Pythagoras said long time ago "the truth is in the numbers."