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RESTORING STABILITY TO EUROPE

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Abstract

The eurozone is in political and economic crisis. This is due to the inadequate design of the institutional structure of the eurozone and to the current poor implementation of macroeconomic policy. In designing the eurozone, well established principles of economics were ignored and major decisions were based primarily upon political considerations. Thus it was only a matter of time before these defects would become apparent. In addressing the current crisis that has developed policy makers have misdiagnosed the causes of the crisis and implemented solutions that are largely counterproductive to solving it. This paper describes the underlying factors that led to the inadequate design and improper macroeconomic response and explains what will be necessary in order to create an institutional structure and macroeconomic policy framework that can restore economic stability and growth to the region.

I. Introduction

There has been no growth in the eurozone over the last five years, unemployment (since the euro was created) is at a record 11.0 per cent and rising, several governments are insolvent, the financial system is impaired and interregional financial intermediation has ceased with further government bailouts for the financial sector imminent, a double-dip recession is forecast in 2012 and any recovery in 2013 and 2014 is likely to be weak. This is of course just the overall situation; in numerous countries the situation is much direr, as some are experiencing a depression with 1930s levels of unemployment, rising homelessness,[2] insolvent governments, and social and political upheaval including increasing support for extremists' political parties.[3] Less worrisome but with equally significant implications has been the rise of eurosceptic sentiment throughout Europe. In the eurozone over one half of its economies will have a real GDP in 2012 that is below that achieved in 2008. In five peripheral eurozone economies (Greece, Ireland, Italy, Portugal, and Spain) real GDP at the beginning of 2012 was below that at the beginning of 2006 and still declining. Unemployment is over 10 per cent in Cyprus, Estonia, and France, approaching 15 per cent in Ireland, Portugal, and Slovakia and well over 20 per cent in Spain and Greece.[4] In Spain and Greece almost fifty per cent of youth are unemployed. Current IMF projections are for unemployment in Greece still to be about 15 per cent five years from now in 2016 and 2017. In the five periphery economies approximately one-quarter of the population satisfy at least one of the EU's criteria for being at risk of poverty or social exclusion. In Greece, preliminary evidence (Kentikelenis et al., 2011) suggests that suicides, homicides, and theft have almost doubled since the start of the crisis; there have also been significant increases in heroin use, HIV infections, and prostitution. A decade ago

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[1] An earlier version of this paper was presented at the 22nd Conference of the International Trade and Finance Association held at the Universita di Pisa, in Pisa, Italy during May 23 - 26, 2012. The author expresses his appreciation for comments received from conference participants.

[2] For example, in Greece homelessness has increased by 25 per cent in the last three years.

[3] For example, in the May 2012 Greek elections, the neo-nazi Golden Dawn Party got 7 per cent of the vote.

[4] Italian unemployment was at 9.8 per cent in March 2012.

the modern European welfare state was viewed as having best achieved a workable economic system that could provide a high standard living with social equity and the European Union represented the pinnacle of regional economic cooperation. Now the economy of Europe is viewed to be broken, and characterized by poorly designed and unworkable institutions. European solidarity and cohesion has been replaced by dissension and nationalism. What created this rapid deterioration in the economic situation and what can be done to recreate the prosperous Europe of two decades ago?

The similarities between Europe today and during the crises of the 1920s and 1930s are striking. 1) Each began with a global financial crisis that created a once-in-a-generation economic downturn resulting in high levels of unemployment and rising debt levels. 2) Each crisis revealed a dysfunctional monetary system that policy makers were reluctant to abandon or reform. Today it's the eurozone, then it was the gold standard. The design of both monetary systems constrained the effective implementation of macroeconomic policy. 3) In both cases the instability was compounded by the lack of an "international" lender of last resort. 4) Unit labor cost (or real exchange rate) misalignments were a central component of both crises, and the major adjustment mechanism used to correct these imbalances was wage deflation; in neither case did it work effectively, if at all. 5) Governments failed to enact the necessary fiscal stimulus because of ideological doubts about the effectiveness of fiscal policy and concerns about debt levels. 6) Harsh "reparations" were imposed on a debtor which inflicted severe damage; then the debtor was Germany, now it's the periphery of Europe. In both cases the repayment of these "reparations" was made extremely difficult by complications of the transfer problem.[5] 7) And finally and most importantly, countries made policy to maximize their own particular advantage instead of implementing a more coordinated European solution, and just as in a prisoner's dilemma in game theory, the result was that every country ended up worse off.[6] As the great economic historian Charles Kindleberger wrote of the 1930s, "When every country turned to protect its national private interest, the world public interest went down the drain, and with it the private interests of all."[7] Most historians have concluded that the catastrophe of the 1930s was the result of numerous policy failures; the same appears to be unfolding today as this is a crisis caused by policy failures of historic proportions both at the national and European level: both in the institutional design of the eurozone and in the current conduct of macroeconomic policy.

The failure to understand the need and role for macroeconomic policy led to the establishment of institutions that were not suited for the economic challenges which they would face.[8] As the system slowly began to unwind, there has been one macroeconomic policy mistake after the next that has further contributed to the economic chaos that has developed. An appreciation of the systemic nature of the crisis and the need for each country to sacrifice for the common good in order to achieve the best regional outcome has instead been replaced with national recriminations and moralizing with most of the sacrifice being

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[5] A transfer problem exists when a country must significantly reduce its terms of trade in order to make the financial transfer from debtor to creditor.

[6] Perhaps an eighth similarity which is complementary with point seven is that France played a central role in both crisis; it hoarded gold in the 1930s as it increased its share of world gold reserves from 7 to 27 per cent causing global deflation and a more severe depression (Irwin, 2010), and in the 1990s resisted creating a fiscal union when the EU monetary union was created thus contributing greatly to the current crisis.

[7] Charles Kindleberger, *The World in Depression*, 1929-1939, 1973.

[8] This was explained in detail in a prior paper by the author (Shelburne, 2005) well in advance of the financial crisis; it was only a matter of time before something like today's crisis would happen.

inflicted on those most vulnerable and with the least bargaining power. Historical analysis of the Great Depression has generally concluded that it was largely the result of policy mistakes; history will ultimately judge the current generation of European policy makers similarly.

Section II provides background on how underlying economic conditions and policy choices made over the last two decades have led to the current predicament. Section III assesses the current situation and section IV provides a set of immediate policies that can begin to restore economic stability to Europe. Section V describes how the institutional structure of the eurozone will need to be reformed in the medium term in order to return to prosperity.

II. How did Europe get into this mess?

The current institutional design of the eurozone is unsustainable. With the current state of affairs, it has become fashionable for economists to say that they knew the eurozone was poorly designed and would not last without a significant redesign; however, in the majority of cases these economists are cherry picking from their writings and speeches; by and large there were but a few economists who correctly anticipated the problems that would develop in the eurozone.[9] There are 11 fundamental underlying economic and political causes as to why the current design of the eurozone is inadequate and these have led to the current economic malaise.

1) Firstly, Europe has aging demographics; the decline in workers relative to the dependent population, which has been occurring and is likely to continue, means that pay-as-you-go social safety systems are untenable. Although with perfect foresight and some idealized political system this may be properly addressed, under more real-world assumptions of poorly informed and short-sighted electorates, the result is likely to be excessive government deficits. It is simply no coincidence that almost every country facing the issue of an aging population is also facing problems of consolidating their budgets. Thus aging demographics leads to excessive debt.

2) Secondly, low to negative population growth presents a totally separate demographic problem that results in excessive adjustment costs. Changing consumption patterns, technological change and globalization mean that there will be sectoral changes in the underlying production structure. If a country is growing by four per cent a year, a sectoral shift that would require a relative decline by three percent can be absorbed with just slower growth of about one percent in the sector. However if overall growth is only one percent then the sector will have to decline absolutely by about two percent in order to adjust. Declining absolutely means plant closures, labor layoffs etc., which is more costly than just growing slowly. Thus low population growth combined with low productivity growth creates an economy with high adjustment costs which further reduces growth. With a well-developed welfare state, this creates excessive government expenditures.

3) Thirdly, Europe's economic catch-up phase is over. Throughout the post-World War II period, Europe had a lower level of per capita income and productivity than the US and was able to grow fast through a catch-up process by assimilating US technology. This

[9] The only internationally prominent economist that correctly understood the importance of the design flaws of the eurozone (that I am aware of) was Harvard's Martin Feldstein.

rapid growth allowed an extensive social welfare state to be created since it could be financed out of future growth. However by the early 1990s this process had come to an end and Europe's growth became more dependent on expanding the frontiers of knowledge. With lower growth the financing of the welfare state needed to be modified but this was not done. It should be noted that western Europe's per capita income never reached that of the US, stalling at about 75 per cent of the US, but its productivity per hour had largely reached that of the US and that is the variable relevant for convergence.[10] Europe's lower per capita income was due to the fact that they worked fewer years (largely retiring earlier) and fewer hours per year (longer vacations and less work hours per week).

4) Fourthly, the eurozone or Europe more generally is made up of small countries. As the European economies became increasing integrated and especially after capital flows were liberalized, the basic macroeconomic policy tools of monetary and fiscal policy in these small economies become emasculated. Fiscal policy spilled out through trade linkages, and monetary policy which theoretically could have worked through exchange rate depreciation proved as a practical matter not to be a viable policy tool. Exchange rate changes proved undesirable given the extensive financial and trade integration and even became ineffective as market participants came to insist on indexing after this policy was used repeatedly. As a result policy makers came to believe that there was no such thing as macroeconomic policy; instead in Europe, every macroeconomic problem came to be viewed as a structural problem. When the eurozone was created, instead of realizing that they were creating what would be a large country in the context of macroeconomic policy making, they kept their "small country" mindset and simply recreated their national macroeconomic institutional structure. As a result, they created an institutional structure with no role for macroeconomic policy; as a result economic growth in the prior two decades to the current crisis was extremely low.

5) Fifthly, the very traumatic history of Germany created a society with an irrational fear of inflation. The largest eurozone economy is Germany; Germany is not just any other country. German aggression caused two world wars and it is generally accepted that hyper-inflation was a significant factor which brought these aggressive governments to power.[11] The wars and inflation twice destroyed Germany in the last century and as a result the fear of inflation is now a central part of the German psyche. Given that there is often some tradeoff between inflation and employment, Germans always err on the side of low inflation. Thus Germans have a natural aversion to any stimulative macroeconomic policy in general and ensured that the ECB inflation target would be set extremely low.[12] The two per cent target is too low for achieving the needed level of negative real interest rates that are often required during economic downturns. In addition this excessive fear of inflation has led the ECB to raise rates prematurely at several critical junctions during the crisis when in fact they needed to lower them. For example in mid-2008 between the collapse of Bear Stearns and

[10] For example, 2010 OECD statistics of GDP per hour find that compared to the US, Ireland's was 108 per cent, Belgium and the Netherlands 100 per cent, France 98 per cent and Germany 91 per cent (west Germany would be closer to 100 per cent).

[11] However, Paul Krugman and Harold James (2012) argue that it was not the inflation of the 1920s but the deflation and depression of the 1930s that ultimately destroyed German democracy.

[12] The Germans were able to get most of what they wanted in the design of the European Central Bank because they were reluctant about its creation (favoring political union before monetary union) and only agreed to do so as a pro quid quo for being allowed by France (which favored monetary union because their monetary policy was already being dictated by Germany) to integrate West and East Germany after the breakdown of communism and the Soviet Union.

Lehman Brothers when the crisis was entering its most intense and dangerous phase the ECB actually began raising rates to a seven year high (although they reversed course later) and then again in 2010 when the initial recovery was beginning to stall, the ECB starting raising rates again. In summary, because of German history, the Europeans have created a central bank whose mandate and internal culture cause it to conduct monetary policy in a manner that is not consistent with stability and growth.[13]

6) Southern Europe has a history of competitiveness problems and joining the euro did not eliminate this. Traditionally these countries periodically used depreciation to restore competitiveness but that option is no longer available. The problem was exacerbated by the fact that these economies no longer had control over their monetary policies and therefore did not have the tools to contain inflationary excesses when they arose in the early 2000s. So the theory was that with these countries no longer in charge of monetary policy inflation would be controlled, but the reality turned out to be that the creation of the eurozone created excessive capital inflows which could not be controlled and these created excessive inflation (especially of property values) in the periphery.

7) In the case of Greece, there was clearly mismanagement of government finances and concealment from their public as well as the European Commission about the true state of affairs. For the other problematic economies it is not so clear that their pre-crisis budget policy was grossly negligent. For Spain their net debt of only about 25 per cent in 2007 had been on a downward path for the decade prior to the crisis and was considerably below that of France and Germany. Italy had a high net debt slightly below 90 per cent in 2007 but it had also been on a downward path as it had been over 100 per cent in 1998. Ireland had very low sovereign debt and it had been on a downward trend since the early 1990s. Portugal's debt had increased slightly in the few years prior to the crisis but still was not significantly greater than what it had been two decades earlier in the mid-1980s. Thus other than Greece, none of the other periphery countries had a systematically growing debt problem. (General government gross debt 2006-2012 is provided in Appendix 1).

8) Over the last decade Germany has been implementing a stealth beggar-thy-neighbor depreciation policy. There is only one currency for the eurozone so a country cannot undertake a traditional beggar-thy-neighbor depreciation of its currency in order to get market share and export its unemployment abroad. In the wider global and historical context, such a depreciation has been recognized as an inappropriate policy and the IMF was set up after WWII partially to oversee exchange rates and ensure that this type of policy was not implemented. However, there is an alternative to a depreciation and that is a policy of reducing unit wage costs; its ultimate outcome on trade and production patterns is identical to a currency depreciation. Germany has been implementing such a policy of wage deflation over the last decade while the other eurozone economies have not. As a result, German unit labor costs increased by less than one per cent per year, which over a decade accumulated into a large competitiveness gap between itself and the rest of the eurozone. As a result Germany today is running the largest trade surplus (about $200 billion a year) in the world with slightly less than half of this against other eurozone members. The Germany framework for restoring competitiveness was generally part of the German Social Democrats Agenda 2010 which was launched in 2003. It made it easier for firms to fire

[13] Some might argue that this is Monday morning quarterbacking; although it is clear in retrospect that these were policy mistakes, given the facts at the time they were sensible choices. However, that is not the case; most observers viewed these interest rate increases at the time to be counterproductive.

workers and cut jobless benefits to encourage workers to find and accept new jobs. Germany also has some other fairly unique labor market institutions such as its co-determination union representation on corporate boards and its work-sharing programs; the degree to which these contribute to competitiveness has been less studied.

There is an issue as to the appropriateness of this German policy. Flassbeck and Spiecker (2011) have argued that in joining the eurozone Germany had an implicit commitment to ensure that its wages increased by at least the monetary union's targeted inflation rate plus its productivity growth rate so that its unit labor costs would increase at the targeted inflation rate of 2 per cent. Obviously, Germany did not do this. It is also the case that those in the periphery did the exact opposite and thus they are equally responsible for the competitiveness gap. According to Flassbeck and Spiecker, France appears to be one of the few countries to get it right. Although these authors are correct to point out that this difference in wage growth was a principle cause of the crisis, their assessment that Germany had an obligation to ensure that unit wage costs increased at the agreed upon inflation rate of 2 per cent is questionable. If Germany had had full employment at the beginning of the decade then this policy guideline might make sense, but considering that unemployment in Germany between 1997-2006 averaged 9.4 per cent, it is apparent that its unit wage labor costs were too high to achieve full employment and thus it was necessary to reduce them. Thus although German policy created a competitiveness gap within the eurozone, this policy was needed to correct a macroeconomic misalignment within the German economy. As for France which is credited with doing what was essentially right, its unemployment also averaged 9.4 per cent over 1997-2006 and is currently over 10 per cent. Based upon this performance it is hard to see how its labor policy can be presented as the one that was appropriate. It would therefore appear that the criticism of German wage policy is unwarranted as convergence of wage costs is only one objective, the other being the full utilization of labor.

Nevertheless there is today a problem of divergent labor costs that must be addressed. The periphery's will have to fall relative to Germany. The only question is whether this will be accomplished by inflation in Germany or deflation in the periphery. Once this occurs then there would be a euro exchange rate that would be consistent with full employment in both Germany and the periphery. Whether the actual exchange rate would equal this full employment exchange rate is another question discussed in a later section.

All of the above 8 points are contributing causes of the current crisis but the crisis may or not have happened even if one or more of these did not exit. However, the really fundamental causes of the crisis are to found in the institutional design of the eurozone. More specifically:

9) At the time of creation, it appears that the German government correctly understood that a monetary union required a political union, but it was the French government that insisted on having a monetary union without a fiscal or political union. The Maastricht convergence criteria were the compromise. Thus the French insistence on maintaining their national sovereignty over their government finances while also insisting on creating a monetary union introduced the key design defect into the eurozone.[14]

[14] As pointed out in section I France is also credited with causing the Great Depression with its insistence on redeeming its international currencies for gold which led to global deflation between 1929 and 1933 (Irwin,

10) History has demonstrated that a capitalist market system benefits from having a lender of last resort to deal with liquidity issues that periodically arise. Yet, for several reasons but primarily point 5 above, the eurozone was designed without a lender of last resort. The charter of the ECB restricts it from acting in this role especially regarding its backing of sovereign debt. It should be noted that although many of the most important central banks today (US, UK, Japan, etc.) stand behind their sovereign debt, that isn't always the case; a country's commitment to a fixed exchange rate or currency board could keep it from doing so. It appears that the German Bundesbank prior to the creation of the euro was like the ECB today in that it did not stand behind sovereign debt.

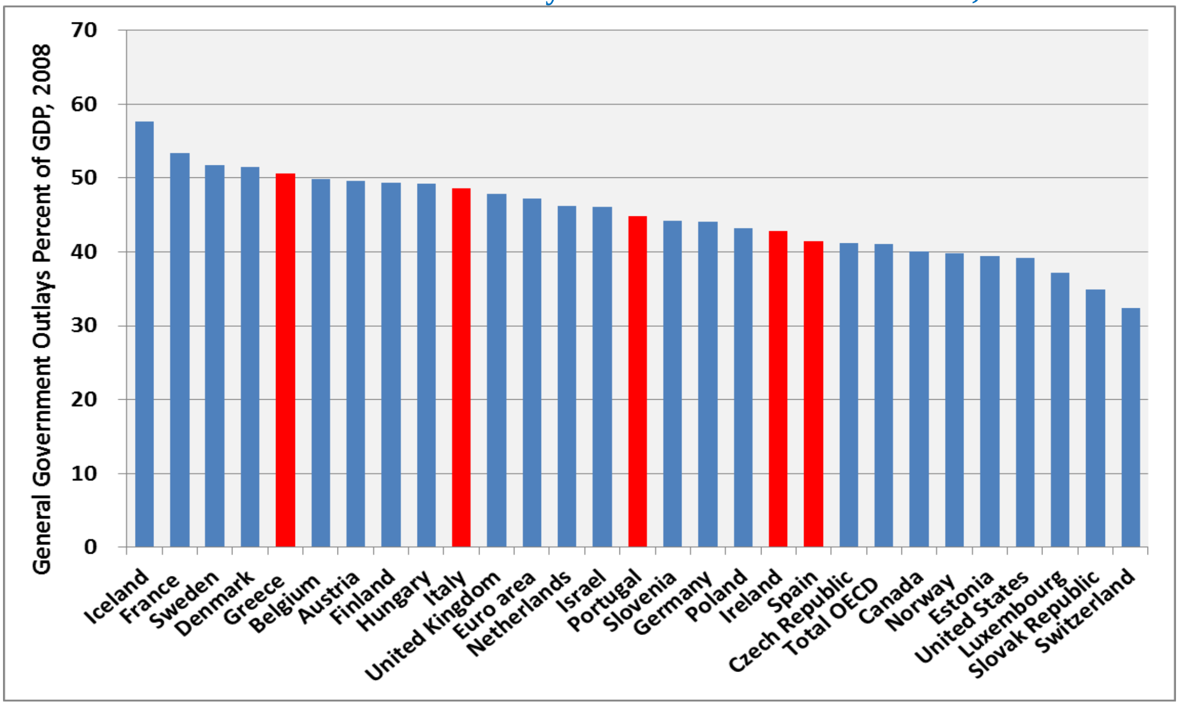
11) Finally, and perhaps most importantly, the eurozone is not an optimal currency area and no alternative mechanisms were created to compensate for this deficiency. Central to being an optimal currency area is the ability of the sub-regions to eliminate trade imbalances through some adjustment mechanism. The adjustment mechanism in most economies consists of labor mobility and fiscal transfers. However, neither exists to any degree in Europe. Other than constrained counter-cyclical fiscal policy for short-term shocks, their only adjustment mechanism for long-run shocks is through changing wage levels; and given the low inflation target this means deflation in deficit regions. The inefficiency of deflation in bringing about adjustment is probably the most central concept of macroeconomic analysis. The significance of the absence of alternative adjustment mechanisms is revealed by comparisons of Taylor rule interest rate estimates from different regions of the US and eurozone. In the US the Taylor rule suggests that monetary policy does not need to be appreciably different in different sub-regions of the US since other mechanisms help even-out shocks. In the eurozone however, Taylor rule estimates for the periphery and core economies differ substantially with differentials twice that of the US; this is due to the fact that other adjustment mechanisms are not operative and shocks are not being evened out (Malkin and Nechio, 2012). History has demonstrated that adjustment through deflation either does not work or works so poorly as to make it an unacceptable mechanism. The gold standard primarily was abandoned because it relied on this dysfunctional mechanism.

These are eleven underlying factors that are at the core of the crisis. There are several factors which are often incorrectly cited as being responsible for the crisis. Thus these need to be addressed. Many European policymakers have viewed the eurozone's current predicament as fundamentally a sovereign debt problem since that is its most obvious manifestation. However the sovereign debt problem is more the result of the crisis than the cause of the crisis as is apparent from the trends in deficits and debt in appendix 1 and 3. This is most obvious from noting that two of the periphery economies had government surpluses and relatively low debt prior to the crisis but all five had large current account deficits. The current account deficits resulted in excessive borrowing and corresponding excessive consumption versus production; in some cases it was too much government borrowing and in other cases it was too much private sector borrowing. Soon after the financial crisis began, however, the private sector debt had to be converted into public debt to avoid a collapse of their banking systems. Thus the core problem was that there was no mechanism to effectively eliminate current account deficits and instead they were allowed to persist until they became problematic.

2010). With this record it is ironic that the French seems to have perpetually captured the IMF's managing director position.

Also it should be noted that the current crisis is not the result of the European social welfare model. This is most obvious from the fact that the economies in Europe such as the Scandinavian economies that have the most developed social safety nets and the widest governmental provision of education and health benefits are not the economies in crisis. As shown in figure 1, overall the periphery economies appeared to have general government outlays that are fairly typical for European economies (the periphery are in red) with outlays in the 40 to 50 per cent of GDP in 2008. However, one area where Greece and Spain do stand out is in the size of their pensions. The average pension for a worker with a mean income is 96 per cent of the worker's income in Greece and 81 per cent in Spain; this compares to the EU average of 62 per cent (OECD database). In Portugal and Ireland the pension replacement ratio is below the EU average while in Italy it is similar. Thus where deficits were an issue prior to 2008, the problem was not too much government spending but insufficient tax receipts; a slight qualification being the size of pensions in Greece and Spain.

Figure 1
The Size of Government Outlays in Selected OECD Countries, 2008

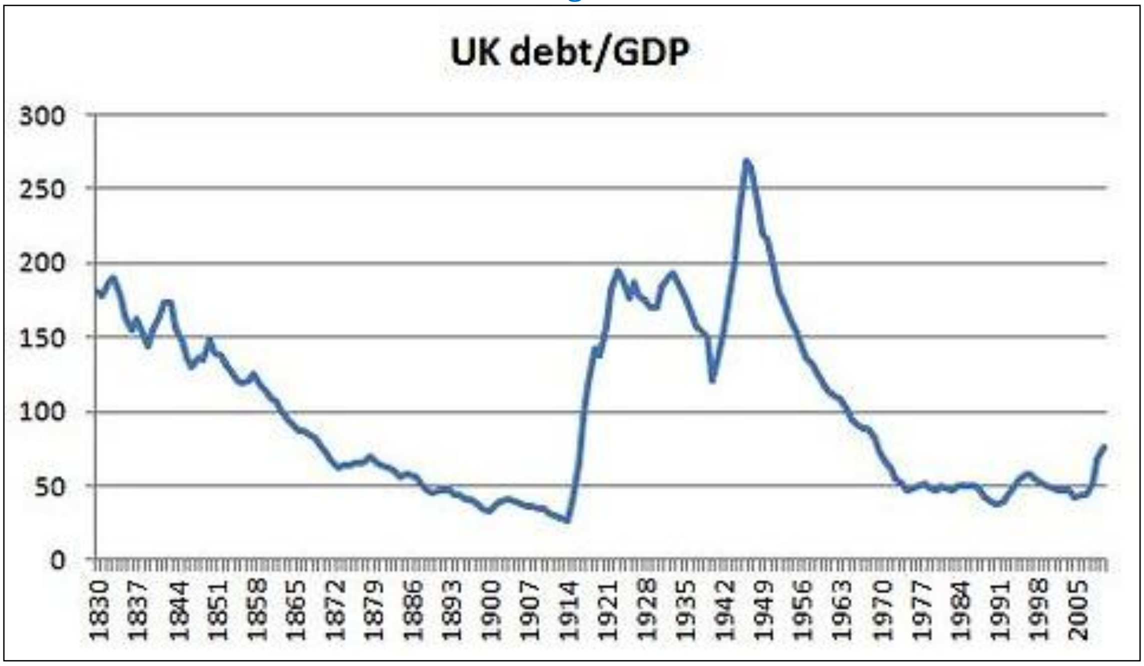


Source: OECD database.

III. The current economic catastrophe

The current European economic malaise is due largely to the failure to implement more aggressive macroeconomic stimulation and the failure to have in place a set of institutions that would support such a policy stance. The opposition to using macroeconomic policy has been largely ideological and based upon an opposition to Keynesian fiscal stimulation or government spending in the abstract. The UK situation highlights this clearly without all the complications involved with the eurozone. The British economic collapse therefore has been an especially large policy failure as it was implemented without any pressure from the bond market, the EU, the ECB or the IMF. The debt level in the UK is not particularly high by historical standards (figure 2) and interest rates are at their lowest levels in 300 years. Yet the government has plunged the country back into recession and made millions unemployed over a supposed pressing need to control debt, for which there is no evidence that it is problematic. The situation is similar in the core areas of the eurozone; that being austerity induced recessions without any real pressing debt problem. Both the UK and the eurozone core should be implementing a more expansionary macro policy not only for their own economies but to provide support for the periphery which has less policy space. In the periphery the level of debt is a problem but it is a problem that results principally from the design of the eurozone; thus if they were not in the eurozone their debt levels would not be particularly problematic, Greece being the exception.

Figure 2



Source: Krugman (2011)

The economic situation in the European Union is quite poor and there is little reason to be optimistic about any fast improvement; the overall situation in the eurozone is slightly worse (than the EU non-eurozone) in terms of most indicators such as growth, unemployment, deficits, debt, and current account imbalances. This differential is likely due to a number of factors but simply being out of the eurozone is probably the most important. In March 2012 the unemployment rate was 10.9 per cent in the eurozone and 10.2 per cent in the EU which means it was only 8.9 per cent (or two percentage points lower) in the EU non-eurozone. This differential is much larger than usual and dates from the 2008 crisis; before that time the differential was quite small and between 2000 and 2004 unemployment was actually lower in the eurozone than in the EU non-eurozone. The current differential is therefore due to cyclical factors and not structural ones. Currently the IMF is forecasting that unemployment in the eurozone will stay above 10 per cent through 2015 and fall to 9.6 per cent in 2016. The overall pattern for growth is similar but slightly more favorable for the non-eurozone EU. In the decade before the crisis the non-eurozone's average annual growth rate was over a percentage point higher (3.5 per cent vs. 2.4 per cent), during the crisis about a half point better (0.4 vs. -0.2), and in the forecast for the next 4 years this differential is to grow even larger (2.8 vs. 1.4). The debt situation between the two is similar although slightly worse for the eurozone (see table 1 below) but what stands out is the much greater increase in the non-eurozone compared to the eurozone; between 2007 and 2011 the debt of the non-eurozone increased by 25 percentage points of GDP while that of the eurozone increased by 16.4 per cent. The forecast for the 2011-2014 period also shows that the debt of the non-eurozone will increase twice as much as the eurozone. In some cases this is due to constraints in the eurozone on the ability to create debt to finance government expenditures but in other cases this is due to needless austerity.

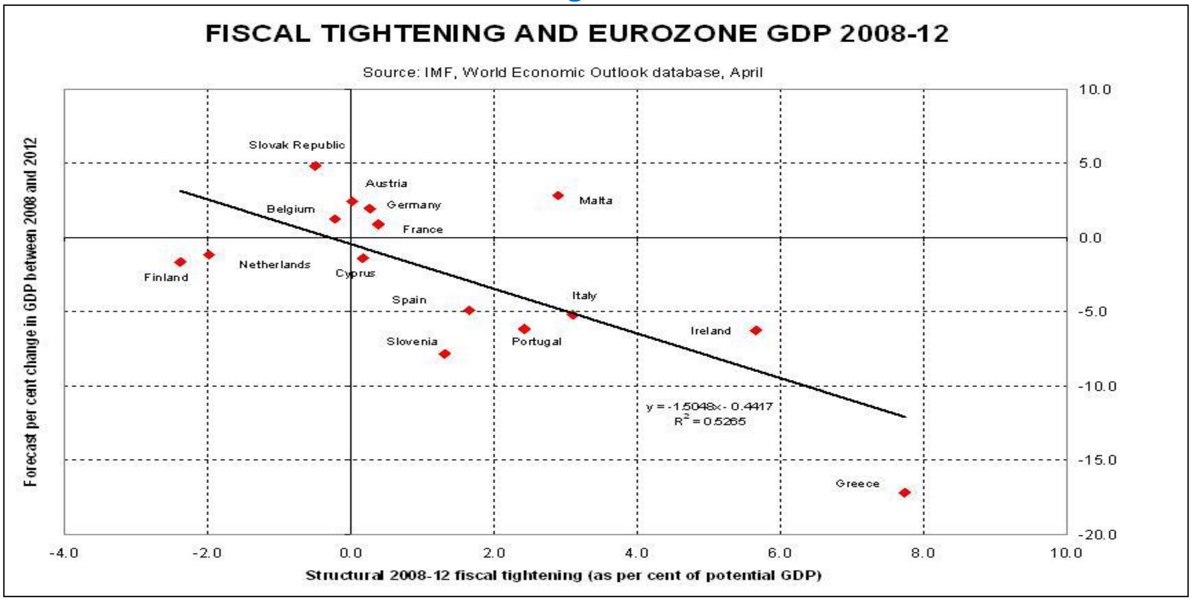
Table 1
Debt Levels in the EU, per cent of GDP

		2007	2011	2014
Eurozone	Net Debt	52	68	72
	Gross Debt	66	88	91
Non-eurozone	Net Debt	30	55	62
	Gross Debt	41	66	71

Source: Derived from IMF data.

The slow or negative growth and high unemployment in Europe are due to the austerity programs that were implemented early in the recovery in 2010 and 2011. In figure 3 the size of the (structural) fiscal tightening between 2008 and 2012 are plotted against the change in GDP between 2008 and 2012 (Martin Wolf, 2012). Clearly those that have tightened the most have grown the least. If this pattern of fiscal tightening continues as is currently being planned (see figure 4) the economic downturn will only intensify. For example, the current plan was for Spain to reduce its budget deficit from 8.5 per cent of GDP in 2011 to 5.3 per cent in 2012, and back to the SGP limit of 3 per cent in 2013. (Recently the EU agreed that Spain should be given one additional year to reach the 3 per cent target.)

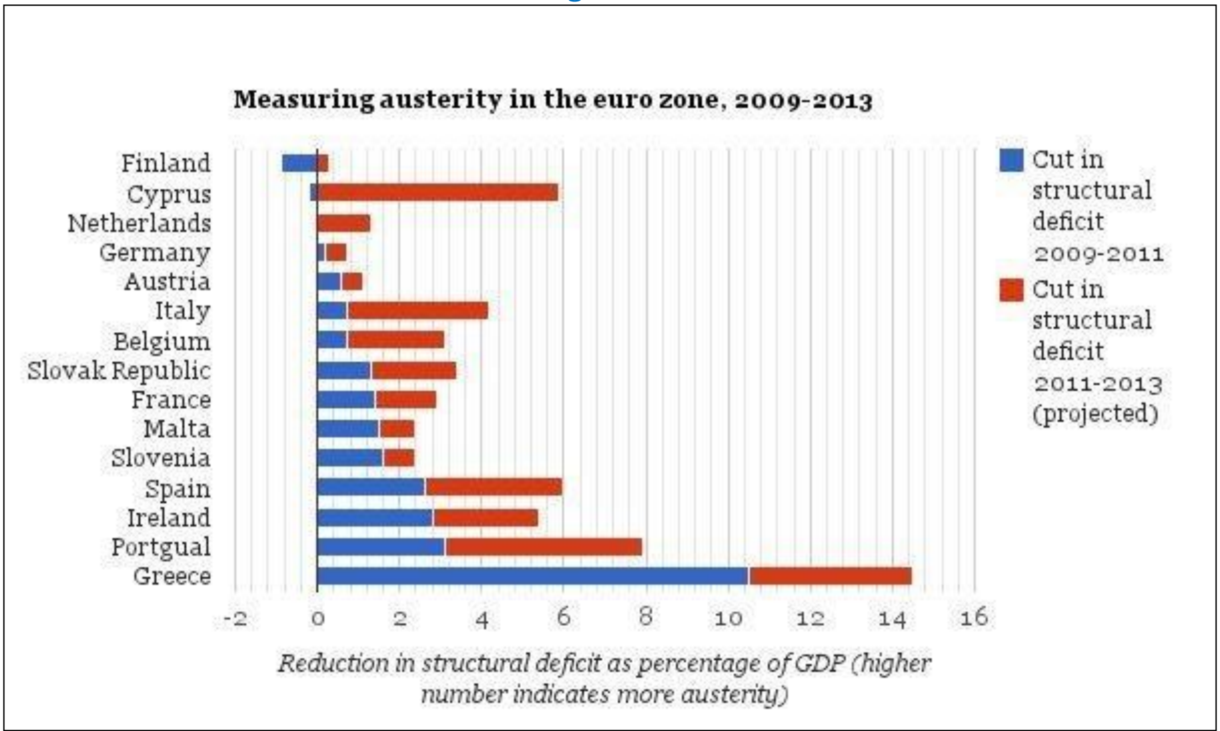
Figure 3



Source: Martin Wolf, 2012.

One thing that has become absolutely clear over the last year is that the advocates of austerity significantly underestimated the growth reducing effects of their programs. For example, in its October 2010 forecast for Greece, the IMF predicted that Greek GDP would decline by 2.6 per cent in 2011 but it actually declined by 6.8 per cent. Its forecast for Portugal was 0.0 per cent but it actually declined by 1.7 per cent. These poor projections were not due to the fact that these countries ended up implementing significantly more austerity than was anticipated; this discrepancy was due to the fact that the IMF grossly underestimated the damaging effects of austerity. Note that world growth in 2011 of 3.9 per cent was quite close to what they predicted (4.2 per cent) in 2010; thus the explanation is not that world growth deteriorated and that is what dragged Greece and Portugal down. Without access to their model and other internal discussions, there is no way to know for sure exactly why their forecasts were so wrong. However, a reasonable guess would be that they assumed that the austerity packages would have similar effects (after controlling for their sizes) as those untaken in other countries over the last several decades. However, the growth reducing effects of those packages were limited to a large degree by declining interest rates due to less borrowing by the government or a more accommodative monetary policy to compensate for the decline in net government stimulus. Not only did the lower interest rates help increase investment and consumer spending but they also lowered the exchange rate resulting in increases in net exports. However, in the current situation those mechanisms were no longer operative. Interest rates were already near zero and the exchange was fixed by being in the euro. Under these circumstances the multiplier was much larger than that suggested by empirical estimates from more normal times. Thus the decline in net government spending led to large declines in national income.

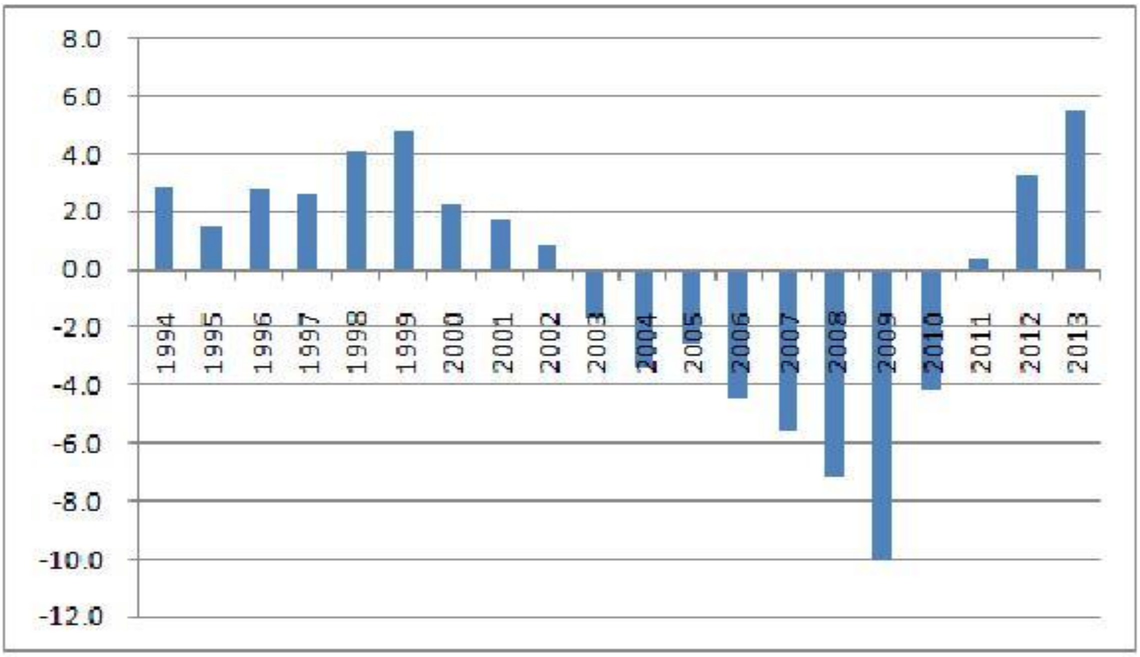
Figure 4



Source: Brad Plumer, 2012.

One of the more disturbing aspects of the current crisis given European history is how the situation has stoked nationalism and cultural moralizing. The northern or core countries have repeatedly implied that the current situation is the fault of the periphery and more generally that there is a cultural problem of laziness or irresponsibility on their part that underlies their problem. It has been repeatedly alleged that mismanaged government finances were the cause of the crises when for several of these economies the poor state of government finances is the result of the crises not the cause. This is most obvious in the case of Ireland and Spain where the governments' debts and deficits were low prior to the crisis but where they had to assume the debt of the private sector to keep the financial system from collapsing.

Figure 5
The Geek Fiscal Position



Source: OECD Economic Outlook 2012

IV. Resolving the current crisis

The current crisis has persisted and become so serious because European policy makers have fundamentally misdiagnosed the crisis; as a result they have implemented policies that have had only a marginal impact and in some cases have actually worsened the situation. The political dimension of the economic policies that have been implemented in Europe should be recognized. These policies do not follow from basic economic logic nor are they somehow European solutions, instead they are the specific solutions being proposed by a fairly strong right-wing of the political spectrum in Europe. In the eurozone in early 2012 center-right parties have been in control in all of the large important economies and many of the others. Angela Merkel of Germany and Nicolas Sarkozy of France, both of right-wing parties have set the agenda for the eurozone; the Netherlands, although small it still has considerable influence since it is one of the few eurozone governments with a AAA rating, has been a strong advocate of the conservative position. The center-right government of Mariano Rajoy in Spain has cooperated fully in implementing it. It is true that governments in Greece and Italy are middle-of-the-road coalitions but they have not had a substantive voice in deciding policy; their role has simply been to implement what they were told to do. In the UK the conservative prime minister David Cameron has likewise imposed a right-wing austerity drive on his country. Thus it has been the political right that has shaped eurozone or even more broadly EU economic policy. Of course, as the economic situation has continued to deteriorate there has recently developed a political backlash to the austerity policies with the election of the socialist Francois Hollande in France. Although the government in the Netherlands collapsed due to opposition to austerity policies the austerity policies themselves (a higher VAT, cuts to international humanitarian assistance, reduced health benefits, etc.) have survived at least until the September 2012 elections (under a threat from Brussels of a fine for exceeding the deficit target of 3 per cent).

What are the steps needed in order for Europe is to get out of this downward cycle of austerity creating more debt which then creates more austerity?

Stabilization of the current crisis requires:

1. Insolvent countries need debt relief. Where countries are insolvent, debt restructuring is needed; this was definitely the case for Greece and some of that restructuring has now occurred. In March 2012 under a collective action clause, Greece restructured its sovereign debt essentially eliminating €105 billion of its €348 billion of debt; investors were forced to take a loss of 78.5 per cent (i.e., they had a recovery value of 21.5 per cent). More specifically investors were required to accept a portfolio of 24 different securities in exchange for their Greek bonds; this included 3 different types of EFSF bonds with maturities between 6 months and 2 years, a GDP linked bond, and 20 Greek bonds of varying maturities from 2023 to 2042. This was the largest debt restructuring agreement in history. The International Swaps and Derivatives Association ruled the "voluntary default" was a credit event, resulting in the payment of €2.5 billion in CDS insurance. The objective of the restructuring was to put Greece on a path to lower its debt from 160 per cent of GDP to 120 per cent by 2020. As a result, Greece received €130 billion in new official loans which included €28 billion from the IMF which will be distributed over the next four years. Only time will tell if the lingering Greek debt will need to be restructured yet again, but given the weak growth outlook there is a significant probability that there will be another default in 2013 or 2014 of the remaining debt held by 'official' creditors. This was the opinion expressed recently in a UBS Wealth Management Research memo to its investors; they concluded that "the debt situation of Greece remains unambiguously unsustainable and a massive additional haircut will be required" (UBS, 2012). Given this assessment, they initiated a sell recommendation for all of the restructured Greek bonds.

What about Ireland, Italy, Portugal, Spain and perhaps some others like Belgium, France, Cyprus and Slovenia? Whether these countries become insolvent or not depends on how fast they can grow in the coming years and what interest rate they will have to pay on their debt. For Portugal and Ireland, both of which have lost access to private capital markets and are relying on EU/IMF bailouts[15], some type of debt write-down is more than likely at some point although they have avoided a default so far. Spain and Italy have what is most probably a liquidity crisis but if market sentiment remains against them and if economic growth is not restarted these liquidity problems will turn into solvency problems. The probability of a default is also probably dependent on the degree that the debt is held externally. About three-fours of Portuguese debt is owed externally while one-half of that of Spain and Greece is, and 40 per cent of Italian debt.

As the state of these economies deteriorate, the credit quality of their banking sectors deteriorates (and thus nonperforming loans increase) as unemployed mortgage owners

[15] Recently in the spring of 2012 Portugal has been able to sell a small amount of short-term Treasury bills; Portugal has a €78 billion EU/IMF bailout.

default on their loans, as property prices fall and wipe out collateral, and as businesses fail. In some countries sovereign debt got high to begin with from having to aid the private banking sector, so as conditions in the banking sector deteriorate due to the austerity programs it further raises concerns about potential government contingent liabilities and the possibility that deficits may end up being even larger than currently estimated. Thus insolvent countries will ultimately default, but right now there is much uncertainty about which countries are or will be insolvent; much depends on how the recovery proceeds.

2. Insolvent banks need recapitalization. Reducing the sovereign debt of the heavily indebted economies, certainly Greece, and most likely Portugal, Ireland and Spain, will have implications for the solvency of banks which own much of this debt and they may need to be recapitalized quickly to avoid a credit crunch. In addition in those economies with real estate busts, the level of non-performing loans also threatens the solvency of the banking systems. Additional capital will need to be raised from either private investors, governments, or as a last resort some EU entity.

It remains unclear if significant segments of the Spanish banking system are largely insolvent or not as there is great uncertainty about the viability of many real estate loans and their holdings of Spanish government debt. However, some level of state support or recapitalization for the banking system will ultimately be needed. Spanish banks own about 40 per cent per cent of Spanish sovereign debt and the problems in the real estate sector are likely to result in increasing numbers of non-performing loans.[16] The Spanish government has already announced a bailout for its third largest bank, Bankia. The overall problem is that the Spanish government must borrow any money it uses to bail out its banks. Given the problem with Spanish sovereign debt, this is a problem in itself but it further means that the value of government bonds becomes even more questionable (especially the non-senior debt that the banks hold) and thus the solvency of the banks (which hold a lot of this) is further eroded. A way to break this cycle would be for the European Stability Mechanism (discussed below) to make loans directly to the banks instead of the government (which would then lend to the banks). This option has been resisted by Germany and may not be consistent with the design of the ESM without a re-write of the treaty. In Ireland, the solution to bank insolvency was the creation of a bad bank that could take over the questionable assets. Spain may ultimately have to consider this option. Italy potentially has a similar problem with its banks and any problem with Italian sovereign debt will have significant consequences for Italian banks since they own 57 per cent of Italian sovereign debt. The banks in Cyprus were heavily exposed to Greek debt and lost the equivalent of 25 per cent of Cyprus's GDP due to the haircut on Greek sovereign debt; they will seek a bailout.

One of the major "surprises" that occurred after the write-down of Greek debt in March 2012 was what little implications it had for banking stability in Europe. Undoubtedly this was due to the huge expansion of liquidity by the ECB in the months prior to the write down. However, given all the warning and lobbying by the financial industry, it does raise questions about the degree that policy makers may have been misled by the financial industry about the severity of this problem.

[16] Spanish banks, pension funds and insurance companies own 67 per cent of Spanish sovereign debt; the estimated 40 per cent for banks is based upon a figure of €247 billion with Spain's total sovereign debt of €572 billion.

3. For countries with a liquidity problem, liquidity needs to be provided. Countries are essentially like banks, they have long-run assets (future tax revenues) and short-run liabilities (current spending plus the need to periodically rollover existing debt); thus just like a banking system they need a lender of last resort. Most logically, the central bank should provide this function but in designing the eurozone the central bank (ECB) was purposely restricted from providing that function. Perhaps there was a feeling that if countries met the targets in the Stability and Growth Pact (SGP) that liquidity support for sovereigns would not be needed. There was no plan B in the event that either countries did not meet the SGP targets, or the SGP targets would be insufficient even if met. When it became apparent after the financial crisis that there was a liquidity problem, the logical response to make the ECB the lender of last resort was never considered seriously at the political level, instead the EU attempted to patch something together that could act as an alternative lender of last resort.

The European Financial Stability Facility (EFSF) was established with resources of €440 billion from guarantees by eurozone sovereigns with AAA credit rating. It provided about €200 billion in assistance to Greece, Portugal and Ireland. In January 2012 after the Standard and Poor's downgrades of France and Austria to AA+ the EFSF was also downgraded to AA+. This facility is due to expire in July 2013 and is ultimately to be replaced with the permanent €500 billion ($660 billion) European Stability Mechanism due to begin in July 2012.[17] The perceived problem with this mechanism is that it is too small to cover the financing needs of a really large country like Italy or that of several medium size countries at once. There were discussions that this facility could leverage its resources and thereby lend a lot more, but given the risks inherent in leverage and perhaps the bad association with excessive leverage that came out of the financial crisis, that idea failed to garner political support. Due to this need for a larger facility there have been discussions about the degree to which the two funds might co-exist during the 2012-2013 period. Nevertheless even the combined resources of these facilities are insufficient and unless market access at reasonable interest rates improves, their size will have to be increased. However, the most sensible option is not to keep increasing the size of this facility but to further empower the ECB to undertake this responsibility. The ECB did purchase €200 billion of periphery government debt between 2010 and mid-2012 under its securities market program (SMP) and this did have some beneficial effect; however the purchases were not large enough to have more than a marginal impact and by being classified as senior debt it made the holdings of the private sector even less secure.

Thus at this point the eurozone has created a fund for dealing with small liquidity crises but not large ones; unfortunately it increasingly appears that the eurozone is experiencing a large liquidity crisis. And to repeat, the need for all of this could have been avoided if the ECB had simply been created to be a “normal” central bank.

4. A credible plan needs to be convincingly put forth to deal with government deficits in the medium term. Government expenditures have not been particularly high in the problematic economies (as shown in figure 1); the problem has been that revenues were too low due to poorly designed tax systems and poor compliance. This observation is yet another reason why the large scale budget cutting that has been imposed by the EU and IMF is misplaced. Why cut education and health programs today that will need to be re-created again in a few years? Italy has been somewhat of an exception in this regard as higher taxes

[17] Although this may be delayed as Germany debates the legality of the ESM.

have been given more emphasis in its reform program. Thus it is not that spending needs to be cut but that higher taxes will be needed in the medium term to keep budget deficits down or even achieve surpluses. In most cases there is no real long-term problem in reducing deficits in these economies since their tax levels are lower than in many other European economies and thus can be reasonably raised without creating any significant economic or political problem. The problem, however, is one of timing, as raising taxes now would be largely counter-productive since it would depress demand (and GDP). Instead what is needed is legislation now which raises taxes in several years in a way that will be credible (i.e., cannot be reversed later). It is highly unreasonable that a country would expect or need to receive a permanent (or continuing) fiscal transfer from another country (although the NMS have been doing so with the transfers under the structural funds). However, in the short to medium run it may be necessary for a country to receive a fiscal transfer from another country, and in those cases it has to be recognized that those contributors will have to be given some type of control over the deficit country's finances during these periods.

5. Growth needs to be restored. In designing a growth promotion strategy the two critical points are: 1) the current problem is one of insufficient demand and not supply or structural, and 2) aggregate demand stimulation needs to be implemented throughout Europe in a regionally coordinated manner. In the short-run, the focus must be on reviving aggregate demand, there is no substantive role for structural reforms as they take too long before their effects would be noticeable. It needs to be stated clearly that proposals for structural changes to deal with Europe's supposedly sclerotic labor market and regulatory policies are not serious proposals to restart growth in Europe. Although there may be some need to make reforms in these areas over time to improve the longer-run growth prospects in Europe, they cannot be effective in stimulating growth over the next year or two and are largely a political smokescreen to advance long-run political reforms under the pretense that they offer a solution to the current situation.[18] Many structural reforms such as making it easier to lay off workers could even create harm in the short-run and thus these types of reform need to be postponed. A possible exception might involve the possibility that some structural reforms could induce some additional investment which would stimulate demand. Even ECB President Mario Draghi has proposed that a growth pact should complement the fiscal compact.

Clearly stabilizing the financial systems and further increasing liquidity through unconventional monetary measures are a critical component of any growth strategy. However, given the current situation it hard to see how these policies would be sufficient. The Bank for International Settlements assessment that too much is being expected from monetary policy is largely correct. In addition, with interest rates near zero there would appear to be no mechanism to bring about a significant currency depreciation which historically has been important in restoring growth in economies after a financial crisis. Additional fiscal expansion would appear to be the only viable tool for significantly increasing aggregate demand under current circumstances. As discussed, concerns about the effects of this on increasing sovereign debt, or more importantly debt to GDP ratios, are misplaced. Under current conditions, where there is no crowding out and possibly actually

[18] French president Francois Hollande's economic policy advisor, Philippe Aghion, (FT, 2012) has described the socialist president as an advocate of supply-side growth not Keynesianism and as a result the government has pledged to meet its deficit targets; this is not likely to be an effective policy framework for promoting growth.

crowding in of private investment, the fiscal multipliers are likely to be large enough so that the fiscal expansion is largely self-financing.

There is one important caveat to this argument: this assumes that the fiscal expansion is large and implemented throughout Europe in both the core and periphery economies. These policies need to be undertaken throughout Europe because given the small size and openness of these economies there are large leakages of stimulative policies through increased imports which means that one country, acting alone, cannot be particularly effective in increasing aggregate demand. More generally the multiplier for a European-wide fiscal stimulus is bigger than that calculated for one country. This is one major reason why no one European country has been willing to implement a large fiscal expansion even if they view the eurozone austerity drive as counter-productive. This situation also means that there is a free rider problem; those that don't contribute to the solution by increasing fiscal stimulus and thus avoid the costs (i.e., worsened debt levels), nevertheless benefit due to the aggregate demand leakages. The expansionary policies need to be implemented in both the core and the periphery for several addition reasons; these include: 1) the core made the loans to the periphery and are thus equally responsible for the current state of affairs, 2) the current situation is characterized by large current account imbalances and adjustment is necessary for both the deficit and surplus economies, and 3) the surplus economies have the fiscal space for fiscal expansion while that is less true of the periphery, and fiscal expansion must be a substantial component of any stimulus package.[19]

In order to limit leakages through imports, it is important that the expansion be increased government spending, especially towards government services (education, health care, etc) and not tax cuts which will be saved or spent on increased imports. The 3 per cent of GDP limit on deficits makes little economic sense, but since it is not politically feasible to eliminate this target (of the SGP) it certainty makes sense for the EU to postpone further into the future the date countries are expected to achieve this target. There is already some hint that EU commissioner Olli Rehn will do this given the continued deterioration in budget positions and the rising opposition to austerity measures; he has just recently extended the date to reach the target by a year from 2013 to 2014 for Spain, hopefully more will follow.

Thus what is needed is a regionally coordinated fiscal expansion, but with debt high in most economies, those that are doing reasonably well have little short-run self interest in further fiscal expansion. It remains more open to question whether an agreement amongst a group of the willing which would include the periphery and a few other high unemployment countries such as France would be sufficiently large to ensure a reasonable multiplier. The degree to which a more limited coordinated expansion might work would depend on a number of factors but principally the size of that group and the type of expansion. The possibility of forming a group of expansionists however has not been considered seriously due to constraints imposed by the institutional design of the eurozone including the objections of the Germans (including the Finns and Dutch) and right-wing political opposition within the periphery economies themselves.

[19] A coordinated fiscal expansion including the rest of the world would be even more successful. The desirability of a globally coordinated set of macroeconomic stimulus is demonstrated with simulations of the United Nations Global Policy Model and presented in the UN's 2012 *World Economic Situation and Prospects*.

Increased investment by the European Investment Bank (EiB) as advocated by French President Hollande would also be effective in providing stimulus but it is doubtful if the quantity of loans would be sufficient to make a real difference and whether they can be implemented in time frame that would be useful.

Although what is needed now is most importantly increased fiscal expansion, integral to any framework for increasing aggregate demand is the need to maintain an accommodating monetary policy. Although interest rates were lowered during the crises and recovery, in some cases to all-time lows, the ECB did not lower them as soon and far as they should have and even began prematurely reversing course in mid-2011. However, in the second half of 2011 after Mario Draghi became ECB president this increase was quickly undone with two separate quarter point interest rate declines which took rates back to their previous historical low of one per cent.

Given that interest rates are near zero (but nevertheless not as low as they should go) some additional unconventional measures are needed to inject liquidity into the system. Quantitative easing is needed to get more liquidity into the system. Like the US Federal Reserve, the UK Bank of England (BoE) has used quantitative easing to lower the interest rates on longer term maturities. The ECB's recent longer-term refinancing operation which has provided 3 year loans at one percent interest to EU banks is similar in some ways to quantitative easing but different in a fundamental way. Specifically the ECB lent €489 billion (equivalent to five per cent of eurozone GDP) to 523 banks at the end of 2011 while also broadening the eligibility criteria for collateral. This was followed in March 2012 with a second liquidity injection of €529.5 billion to 800 banks. These actions averted an impending credit crunch and also resulted in lowering the yields, which had reached unsustainable levels, on Spanish and Italian sovereign debt.[20] In the two months after the first ECB action the interest rates on Italian 10-year debt declined from 7 to 5 per cent and Spanish yields fell from 6 to 5 per cent. These declines were due to a number of factors but clearly resulted from increased purchases of sovereign debt by banks in their respective countries. However, after a few months banks had bought up all the sovereign debt that they considered prudent in order to remain sufficiently diversified, and as they began to cut back on purchases, interest rates on Spanish and Italian sovereign debt began to increase again and were back to around 6 per cent by the end of April 2012. The ECB longer-term refinancing operation had limited impact on Greek, Portuguese and Irish sovereign debt as these countries had already lost access to private capital markets. As the possibility of countries leaving the eurozone increases, the public will demand more cash which will put more pressure on the ECB for additional liquidity injections.[21]

This ECB liquidity operation was similar to (US and UK) quantitative easing in that the net effect was to increase the money supply by replacing bank's holdings of government debt with money which would hopefully be loaned out. However, there was one fundamental difference. The US and UK central banks purchased government debt from the banks; thus this debt was off the banks' books for good. In the ECB case, the banks' government bonds were provided to the ECB as collateral for cash, but they will have to

[20] Although one can never be sure of what would have happened otherwise, it is reasonable to suggest that these operations averted an impending financial collapse in the eurozone.

[21] If a country leaves the eurozone, bank accounts would most likely be involuntarily converted to the new currency which would rapidly depreciate; holding euro notes however would be one way to protect one's wealth.

take it back in three years. However, once the crisis is over and more normal conditions are achieved, the US and UK central banks will most likely reabsorb their liquidity injections with open market operations. Thus several years from now it may ultimately be the case that there will be no real fundamental qualitative difference between US/UK quantitative easing and the ECB refinancing operation. However, there still appears to be a quantitative difference. The US Fed tripled its balance sheet between September 2008 and April 2012, the UK BoE almost quadrupled its balance sheet, but even with the refinancing operations the ECB barely doubled its balance sheet.

Monetary expansion is also needed to keep the average inflation rate up so that the periphery need experience less deflation. The periphery need to improve their competitiveness relative to Germany and the only way to do this is to reduce their price level relative to Germany's (or more precisely their unit wage costs). If Germany's inflation is low, then the periphery have to have deflation; if Germany has more moderate levels of inflation the periphery need only keep their prices stable. The second scenario is far superior as it minimizes the economic loss associated with restoring competitiveness to the periphery (see point 6 below). Overall, for liquidly and inflation reasons, the eurozone needs more monetary expansion.

Growth also needs to be restored because without it the debt dynamics will likely deteriorate. It has been pointed out by some that the "austerity can only worsen debt" position is fundamentally the flip-side of supply-side economics, and supply-side economics has been largely discredited. However, there are two versions of supply-side economics as an empirical matter. One is the conservative view that lower taxes stimulate work and risk-taking and increase real economic growth and net tax revenues even in periods of relatively full employment. That belief has been fully discredited. An alternative supply-side interpretation is really a Keynesian demand-side tax-cut stimulus. This channel is much stronger and what evidence there is of a supply-side effect comes from this. This explains the beneficial effects of tax cutting in the early Reagan presidency (as well as the Kennedy presidency). The key point is that this channel is likely to be especially operative during a high unemployment liquidity trap situation and that has not really been tested by past experiences. Thus to discount the revenue effects of "supply side" tax cuts based on the experiences of the US or other countries in the 1970-2008 period is an incorrect guide to what effect they would have in today's environment. In pre-crisis times, tax cuts have a tendency to reduce investment spending through crowding out, but in the current environment they will increase investment by restoring confidence in the economy.[22] In addition the normal partially offsetting effects of exchange rate movements from tax cuts would not be operative in the periphery eurozone economies.

Computer simulations using the Global Policy Model (as elaborated in the recent *World Economic Situation and Prospects 2012*) show that a more expansionary policy is more effective than austerity in improving the debt to GDP dynamics in the medium and longer term. Clearly the outcome of any model depends critically on a number of assumptions, such as the size of the multiplier, and here there is considerable disagreement, and of course it depends on the type of stimulus. More specifically, the UN simulations assume that the surplus economies provide more fiscal stimulus and the monetary authorities remain accommodating. Under this set of assumptions not only is national income higher,

[22] There is a confidence fairy but it appears with tax cuts not tax increases as the freshwater conservatives allege.

unemployment lower but the debt dynamics improve and more progress is made in correcting current account imbalances which are really at the core of the eurozone's problem.

It should be recognized that the austerity programs make paying the debt back harder by reducing income and employment which provides the country and government (through lower tax revenues) with less income. In addition, an ultimate objective of these adjustment programs is for the higher unemployment to reduce wages and prices through internal devaluation. Over time the level of wages and prices fall while the nominal value of the bonds remains the same. As a result the real value of the bonds increases since the fixed nominal value of the bonds is able to buy more goods and services. Thus even if the austerity programs did not create unemployment, they still result in a process that increases the burden of debt on the workers in the periphery. The result is similar to the balance sheet effects that occur when a country with foreign-currency denominated debt devalues. This brings up yet another issue that historically was central to Keynesian thought: the transfer problem. Just as for Germany in paying off its WWI reparations, Greece today is facing a real transfer that is actually greater than the financial transfer.

6. <u>The large current account deficits in the periphery need to be eliminated</u> since the current crisis is as much of a current account crisis as a sovereign debt crisis. For the eurozone economies, exchange rate depreciation is not possible, and structural adjustments can have only a small effect over a long time horizon, so the only solution is internal devaluation. Analysis by Goldman Sachs estimates that to return the current account to near balance, Portugal requires a depreciation of 35 per cent, Greece 30 per cent, Spain 20 per cent, and Italy 10 to 15 per cent. A compounding problem is that in some of the periphery the export sector is quite small, and is in sectors for which improved price competitiveness is unlikely to produce large increases in exports because of inelastic demand or because foreign competitors will be able to match the periphery's lower prices. This is especially true for Greece. Its export to GDP ratio is 19 per cent which is quite low for a small country with only 11 million people; Belgium with a similar population has an export ratio of 73 per cent of GDP. The austerity programs have so far not been successful in bringing about adjustment in the current accounts. After four years of negative growth leading to unemployment of almost 23 per cent, according to the IMF the Greek real effective exchange rate is higher today than in 2006. In addition Greek real exports were 20 per cent lower in the first quarter of 2011 than they were in the first quarter of 2008. Of course imports are about 30 per cent lower but that is due largely to their GDP declines. Thus this approach of creating massive unemployment as a way to lower wages and improve competitiveness is a grossly inefficient process.

Ideally the surplus countries should do more in terms of reducing their competitiveness through inflation so as to limit the amount of deflation required in the periphery. As Keynes rightly pointed out, when there is an imbalance the surplus countries are equally at fault and they should bear an equal responsibility for resolving the crisis. The fact that they do not is the result of power politics not logical economic reasoning. To keep to the ECB target of 2 per cent inflation, the core might have an inflation rate of 3 per cent and the periphery 0 per cent. But this process would take a decade to restore competitiveness in the periphery. A higher overall inflation rate is needed but this does not appear to be politically likely. As a result there is appears to be little alternative to an extended period of deflation in the periphery. With positive nominal interest rates, perhaps even higher in the periphery than the rest of the euro due to extra risk, and deflation, the resulting high real interest rates will keep investment down and ensure that medium to long-term growth stays low and unemployment remains high.

The recent acceptance by Germany's finance minister, Wolfgang Schauble, of a 6.5 per cent wage increase for 3.6 million engineering workers on top of a 6.5 per cent increase over two years for public sector workers was a major step in the right direction. This will not only help stimulate demand but will work to reduce trade imbalances in the eurozone as well. Schauble has also recently acknowledged the need to address imbalances in Europe although no specific policy has been proposed to deal with them. In fact, a failure to have targets for current accounts in either the Maastricht criteria or SGP has been a major design defect of the eurozone.

One perspective that must be addressed is the issue as to the relevancy of the recent experiences of the three Baltic economies in correcting their large current account imbalances. These economies instituted rather hash austerity measures, and despite extremely large economic downturns with high unemployment, they appear to have been fairly successful at reducing their current account deficits and restoring growth. Thus at first glance their experiences might support the EU/ECB austerity approach being prescribed for the eurozone periphery. The Baltic economies were similar to the periphery in that prior to the 2008 crisis they had experienced booms financed by large capital inflows accompanied by large current account deficits. Once these economies experienced a "sudden stop" to these capital inflows a full blown crisis developed.

These three economies had exceedingly large economic downturns in 2009 which were by far the largest in the EU; Latvia's over 20 per cent GDP decline over 2008-2010 was the largest in the world and roughly similar to that experienced by the US during the Great Depression. Despite reasonably solid growth in 2011, even today their GDPs remain significantly below pre-crisis levels and perhaps only one-half of what might be expected based upon pre-crisis trends. Their average unemployment rate tripled by increasing from under 5 per cent in early 2008 to almost 19 per cent by mid-2010 before starting a slow decline to about 13 per cent at the end of 2011. Also emigration has been extensive and worked to limit the increases in unemployment; Latvia's labor force declined by 5.5 per cent between 2008 and 2011. Their large current account deficits were quickly reduced as exports increased marginally and imports declined significantly, but much of this adjustment in imports was due to lower imports because GDP remained so much lower and was not the result of being more competitive. It remains uncertain at this point what will happen to their current accounts when their economies recover and unemployment falls back to its pre-crisis levels. The Baltics implemented large austerity programs which cut significant items such as schools and hospitals and they pushed through large wage cuts for the public sector and others. However, since they had very little sovereign debt prior to the crisis, they had more flexibility than the periphery and were able to expand their debt levels to store up some safety nets for those most negatively impacted, and this limited public opposition to their adjustment programs. In addition, their banking systems were not impaired by questionable sovereign debt, and in some cases even benefited from recapitalizations from neighboring economies. Thus the Baltic economies do provide a good example of a fairly rapid adjustment of current account deficits, although it was quite costly initially and resulted significantly from declining imports due to declining income; in addition they benefited from some advantages that the periphery do not have. Thus, the Baltic region provides no magic cure for current account deficits and their experiences are probably of limited relevance for the periphery. Their experiences instead highlight that the economic hardship that will need to be undertaken in the periphery will be quite severe under the current wage deflation process.

What happens if a member leaves the eurozone?

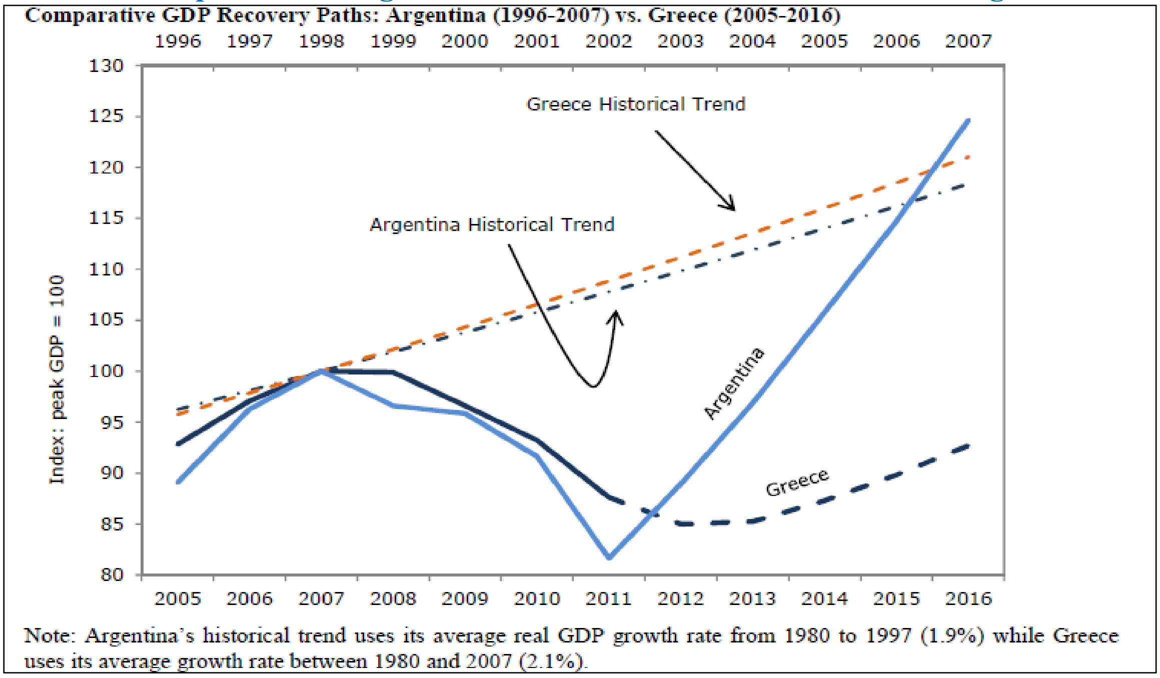
The above list of policy actions for resolving the current crisis is based upon actions that have some political possibility of being implemented. Nevertheless there are strong political reasons (as opposed to economic reasons) why some of these policies have not been implemented; if there is simply too much opposition to doing what is necessary to save the current eurozone structure, what is the plan B, especially if the harsh austerity results in a periphery economy (most likely Greece[23]) refusing to implement the EU/IMF program and defaulting unilaterally?[24] This was always a potential outcome of the austerity option which needed to be considered in the design of those programs. The most binding constraint on the periphery in just rejecting the EU/IMF assistance and defaulting is that they are currently running primary deficits (deficits before interest payments are added). As such if they were to default, they would unlikely be able to borrow initially from anyone and would thus have to implement further austerity (budget cuts or tax increases) in order to balance their government finances. Thus if they kept the euro the austerity that would accompany a default is likely to be greater than the austerity with an EU/IMF loan. Over the medium term if they were to default but stay in the eurozone, the country would avoid the interest costs on the debt plus paying back the principle; in time this could easily amount to 5 to 10 per cent of GDP annually. These resources could be used to restore social services, increase infrastructure investment, etc. However, since they would be defaulting on official creditors (primarily the EU and ECB) the EU might retaliate in some fashion by withholding structural funds and the ECB could make it life quite difficult for Greek banks. Thus in the short run after a further default Greece would be less well-off and even in the medium run they could be less well-off even though they would avoid some debt repayment. Overall then the option of defaulting and staying in the eurozone does not appear to be an attractive alternative.

If they defaulted and left the eurozone by reintroducing the drachma their prospects would improve considerably. The primary deficit problem would no longer be binding as the central bank could finance the government. Despite a more expansionary monetary policy interest rates for the private sector would most likely increase due to higher inflation (due to cost push inflation from depreciation and concerns about monetary expansion). Therefore it is not clear what would happen to investment; higher interest rates would retard it but the fiscal stimulus could increase it by reducing the slack in the economy. Clearly there would be a significant depreciation which could provide a substantial and quick boost if the economy had an export sector that could rapidly take advantage of the situation. Unfortunately, however, the periphery with their large current account deficits over the last decade are not in a particularly good situation to take advantage of a depreciated currency and initially at least would suffer from a negative terms of change effect that would further

[23] In the May 2012 elections, 70 per cent of the Greek electorate voted for anti-austerity parties: the largest being the Syriza which came in second place.
[24] Greece, of course, has already defaulted on most of its privately held debt, but it could still default on all the bonds owed to official creditors (EU ECB, IMF).

reduce living standards. Over time, however, their competitiveness would improve. History is full of examples where countries have defaulted, depreciated and recovered rather quickly. Argentina and Russia are two recent examples and there would appear to be little reason to believe that the situation would be that different for Greece. (See figure 6 where Weisbrot and Montecino (2012) compare Argentina's default and depreciation versus Greece's current and projected path under the EU/IMF program.) In fact despite a public perception that a sovereign default is likely to impose a huge burden on a country, the evidence suggests that default has few consequences and usually initiates the beginnings of a recovery (Yeyati and Panizza, 2011).

Figure 6
Comparison of Argentina's Default with Greece's EU/IMF Program



Source: Taken directly from Weisbrot and Montecino, 2012.

In the long-run, being out of the eurozone may retard growth slightly. However, it is far from clear if being out of the euro would have an significant effect on its longer-run growth rate; its growth rate between 1999 and 2007 was significantly above the average between 1981 and 1999, but it is clear that the 1999-2007 period was unsustainable and thus would not appear to be a period that can be used to estimate the euro's effect on growth. There are no credible empirical studies that have demonstrated any increased growth effects of eurozone membership. Even if there is a slight negative long-run growth effect, this might be a small price to pay given the current outlook for remaining inside the eurozone.

A default by a periphery country, most likely Greece at this point, would also have significant implications for the remaining eurozone members. The EU, ECB and private sector banks in the EU core own much of this sovereign debt; a default would be costly and could precipitate a much wider financial crisis that could have a very detrimental impact on the core. Current estimates are that the immediate losses of a Greek exit would be about

€395 billion for the rest of the EU.[25] Contagion to the other periphery could be quite significant. If Greece defaults and exits, the need for EU support for the other periphery economies would be even greater as depositors withdrew their funds from periphery banks and periphery debt fell in value; but would the eurozone public be willing to put up even more money after losing hundreds of billions to Greece?

There is also the possibility that Greece or another periphery economy may not act rationally. In behavior experiments with people, it is often found that if a participant feels that the other participant is not cooperating in a fair manner, they often act in way that inflicts damage on the other participant even if it further lowers their own welfare. Thus if the Greek government or people feel that the EU core is not being fair with them despite their desperate situation and despite the fact that the core is partially responsible for their plight, they may well choose a course of action that further lowers their own welfare if they can inflict some damage on the EU core. Such as outcome is a real possibility and is consistent with empirical research on economic behavior.

The overall point is that if austerity is too severe there are options that might be preferred to sticking with the EU/IMF programs and these options would entail significant costs for the remaining eurozone members. Thus there is significant room for bargaining about the conditions for EU assistance and a perfectly relevant question is whether the periphery could improve the current terms of these programs.

Thus in early May (2012) when two-thirds of Greeks voted for political parties rejecting the EU austerity reforms they were essentially saying that they were willing to undergo an even worse situation in the short run if either: 1) they could impose additional costs on the uncompromising EU and Germans who were unwilling to face up to their responsibilities or 2) they could be better off in the medium run by being able to devalue as a way of increasing demand and cutting wages while also not having to pay back the debt. These are two legitimate possibilities that could reasonably result in unilateral default and thus it would make sense for the EU/Germans to carefully consider whether they are making a rational decision in pushing harsh austerity which could easily boomerang back on them.

With the May election of socialist president Francois Hollande in France, the defeat of Angela Merkel's Christian Democratic Union in Germany's most populous state of North Rhine-Westphalia, the collapse of the VVD[26] in the Netherlands as their coalition partners refused to endorse further austerity, the political backing for austerity in Europe is beginning to come undone. The European public is beginning to understand that: 1) the austerity programs are not working as they were advertised, and 2) the periphery economies are not as boxed in as they had been led to believe and might actually implement policies that may be even more costly for them (the core) than a more expansionist framework. Even hardliner German finance minister Wolfgang Schauble has begun to alter his harsh tone and moralizing with more accommodative suggestions.

[25] This includes €240 billion from international bailouts, €130 billion from intra-eurozone central bank target 2 lending, and €25 billion from commercial bank exposure (Nikolaos Panigirtzoglou of JP Morgan). Other estimates are that the EFSF own €165 billion, the IMF €22 billion, and the ECB and other eurozone central banks €155 billion. Although the French would be be the largest losers by nationality, Portugal, Spain, Italy would face losses of over 3 per cent of their GDPs.

[26] The Freedom Party for Freedom and Democracy.

V. Fixing the eurozone for a prosperous future

Once the current crisis is over, the focus of policy will need to return to a set of policies that can restore long-run growth to Europe while also reducing its vulnerability to current account imbalances, excessive sovereign debt, and financial market instability. To accomplish these goals, reforms will be needed in the design of European monetary and financial institutions and structural reforms in product and labor markets.

Reforms are needed to prevent a future crisis

1. The SGP will need to be reformed to better keep debt levels under control. The replacement for the SGP is the compact treaty (Treaty on Stability Coordination and Governance of the Economic and Monetary Union) tentatively agreed to in March 2012 by 25 of the 27 EU members (including all of the current eurozone members: only the UK and Czech Republic opted out, although the latter may sign at some point). The provisions will need to be formally written into national law in order to be formally implemented. It requires countries to limit their structural deficits to 0.5 per cent of GDP and their debt levels to 60 per cent of GDP; for those currently over the debt limit, they will need to have budget surplus that will reduce the excess by at least one-twentieth each year. The rule agreed to define the deficit in terms of the structural deficit and not the actual deficit; this will allow some small role of counter-cyclical policy. However, it introduces uncertainty and likely controversy, as there is considerable debate about how to calculate a structural deficit. Adoption of the treaty is likely as only 12 of the 17 eurozone economies need to ratify it. However there is increasing political opposition to the treaty and some countries may not ratify it. In France, socialist Francois Hollande had promised to renegotiate it if he was elected in May 2012, but it does not appear now that much will come of this. In the Netherlands, both the extreme right and left are opposed and the center may not have enough support to pass it. Ireland will have a referendum in late May or June, and given economic conditions there, anything is possible especially given their earlier rejection of the EU treaty. On the other hand, the opposition of the Czech Republic seems weak as it is much more integrated into the eurozone and thus needs the euro, and it does not share the UK interest in trying to weaken EU oversight of its financial industry. One improvement in the proposed fiscal compact over the SGP is the emphasis on cyclically adjusted budgets; this at least helps reduce slightly the pro-cyclical nature of these restraints on deficits.

In the future, debt levels will need to be lower than those prior to 2007 for two major reasons. Firstly, when the crisis hit in 2008 the European economies did not have the fiscal space to undertake the optimal amount of discretionary stimulus because of perceived debt level constraints. As has been argued, European policy makers in many cases misjudged exactly where those constraints were, and much more could have been done. Nevertheless some countries did come up to or close to their constraints and if politicians misjudged the situation this time they may do so again. Thus to ensure that they have the fiscal space they may need in the future, debt levels need to be brought down lower during prosperous times. Secondly, policymakers and economists generally had misjudged the likelihood of a second great depression. There was a view that that type of event could never happen again and therefore there was no real need to prepare for it. We now know that a major global debt collapse is still possible, even if quite infrequently, and that economies must be prepared appropriately.

2. Financial reform is needed to create a pan-European banking system with enhanced regulation. When the euro was created the national banking systems should have been simultaneously transformed into a truly European banking system with European supervision with the ability to address cross-border arrangements. The problems of separate national banking systems became apparent in the early part of the crisis in 2008-2009 and some reforms have been quickly implemented. The establishment of the European Banking Authority (EBA) in 2011 has created a European Union wide financial regulator but the implementation of policy remains with the national regulators. However European perspectives and national interests can diverge and it is likely that this separation of authority will prove to be unsustainable. Most pressing will be a need to create eurozone-wide deposit insurance. Clearly the European financial system needs more regulation as the light-touch self-regulation prior to 2008 failed miserably. Higher capital ratios, further separation of investment and commercial banking, increased supervision of derivative markets, and constraints on banker's pay and bonuses are areas in need of reform. There appear to be a number of disagreements between EU ministers regarding banking rules but mostly these are fairly technical and are perhaps not systemically important. The desire of France and Germany to postpone implementation of some of the disclosure requirements regarding the leverage ratio to 2018 would appear unwarranted. The UK appears to support stricter standards and higher capital ratios and that would appear to be the most sensible position. Given the connection between banking solvency and sovereign solvency, a bank's exposure to an individual government needs to be limited and risk assessed. The European banks reliance on US money market funds is another source of obvious risk; either the US authorities need to reform that industry (i.e., deposit insurance, higher capital ratios, or flexible valuations) or the European authorities need to limit European banks' exposure.

3. Fiscal union within the eurozone will need to be strengthened either with fiscal transfers, eurobonds or some other structure. Any type of fiscal union will necessarily require increased EU oversight of individual members' spending and tax policies. It is not tenable to have a situation where those that pay the bills do not have more control over expenditures. However, this should be done in a way that does not reduce the overall ability to use discretionary counter-cyclical fiscal policy because it is one of the few macroeconomic policy tools left. Unfortunately, however, it seems that in most of the current proposals that increase oversight also reduce the ability to use counter-cyclical fiscal policy. For example, the most extreme proposal has come from the ECB which supported a balanced budget agreement regardless of economic conditions.[27] Not only would this eliminate the possibility of using discretionary fiscal policy and would require the dismantling of automatic stabilizers, but it would actually require the use of discretionary pro-cyclical policies. During downturns taxes would need to be raised and government expenditures cut back. This of course would be a disaster, but it simply highlights the poor policy advice that routinely comes out of the ECB.

There is also an issue as to whether a fiscal union only needs to oversee fiscal deficits or if it will need to provide more specific guidance on tax and spending policies. This fiscal compact of the 25 (with the UK and the Czech Republic refusing to go along) would set limits on deficits but would not infringe upon the right of national governments to allocate spending or determine the type or level of taxes. However this is likely to be only an intermediate step and is not likely to survive for long. Harmonization of taxes will be likely

[27] As advocated by Jorg Asmussen, a German member of the ECB's Executive Council; as related by Feldstein (2012).

in the future as even now there are concerns about the effects of competition (i.e., race to the bottom) in tax rates. A common approach to a number of issues, such as promoting competition as with the Europe 2020 scheme, commits countries to allocate expenditures to achieving some rather narrow targets; over time there are likely to be increasing constraints on how budgets are allocated.

In the longer term it is clear that if there is a greater fiscal union with fiscal transfers or eurobonds, there will need to be more of a political union. Thus the long run vision of Mrs. Merkel to have a European finance minister and/or budget commissar to oversee taxes and spending in individual member states seems like a prerequisite for a fiscal union. However, the French government and the European public seem somewhat opposed to this at this time. Even if eurobonds are rejected for covering fiscal deficits, there may still be room for a more limited eurobond if it is used to finance industrial infrastructure projects which would directly support growth.

4. Some mechanism will need to be devised to limit current account imbalances within the eurozone. This remains the real Achilles heel of the eurozone. The eurozone does not currently have the adjustment mechanisms such as monetary policy, exchange rate policy, significant labor migration, and fiscal transfers that other monetary areas do; its only adjustment mechanisms are counter-cyclical fiscal policy, which is constrained by debt levels and EU agreements (i.e., the SGP, etc.) and deflation, whose efficacy was discredited generations ago under the gold standard. In order to improve the functioning of the eurozone either the current mechanisms must be strengthened or the excluded ones must be re-introduced in some manner. Just as there is a need for EU supervision of fiscal policies there is also a need for some EU oversight of individual members' macroeconomic and labor market policies to ensure that large current account deficits or surpluses do not occur. Exactly how this might function is far from clear as there has been no substantive policy discussion of this. At the most basic level the IMF has provided a similar but more limited oversight of current account imbalances; whether there are any lessons to be derived from their experience requires further analysis.

5. The mandate for the ECB will need to be broadened to include growth and stability, and not just inflation. As stated several times, the ECB should be given the power of lender of last resort but that may simply not be politically feasible. The ECB needs to be given more responsibility for regulating or supervising the European financial system. Also, given the poor macroeconomic performance of the eurozone since its creation, there is a need for more robust macroeconomic policy tools to ensure full employment and faster growth. This requires enlarging the mandate of the ECB to consider growth and not simply inflation in its conduct of monetary policy and raising the targeted inflation rate from 2 to 3 per cent.

Reforms are needed to increase economic growth

6. Structural reforms are needed in product and labor markets to get long-run growth going to address long-run debt issues in the context of the demographic situation. Solving the debt problem will take a decade, perhaps two. Given this time scale, there is ample opportunity for implementing structural reforms and reaping their benefits. Given the lack of macroeconomic tools to smooth out adjustments, the region will have to be able to absorb significant shocks; thus, having flexible labor markets will be essential. An example would

be the German approach of adjusting working hours (the Kurzarbeit program) instead of employment levels; this policy worked well during the current crisis and would appear to be a model for the eurozone as a whole. In many economies two-tier labor markets have been created with those in secure permanent jobs and those in temporary positions; this structure has not proven to be efficient and needs to be dismantled. Product markets remain oligopolistic in many areas and further reforms are needed to increase completion especially by further eliminating constraints on foreign firms.

7. Labor mobility needs to be increased. In addition to fiscal transfers, another mechanism to reduce the eurozone's reliance on wage deflation as an adjustment mechanism would be increased labor mobility. Labor mobility in Europe is estimated to be only about a third of that in the United States.[28] Language differences explain much of this reduced mobility but even within countries it is considerably lower than in the United States. Although not directly comparable due to the different number and size of countries in the EU and states in the US, in the US approximately 2.4 per cent of the population moves from one state to another each year while in the EU only about 0.3 per cent do.[29] The design of housing markets is one important factor contributing to limited geographical mobility. The transaction costs from buying or selling a home in Europe (10 to 15 per cent of the house price) is two to three times as great as in the US (typically about 5 per cent). In addition rent controls are much more widespread in Europe than in the US and given that there are the usual waiting lists and needed insider information to get rent controlled apartments, people are reluctant to move if they currently have a rent-controlled unit. Increased portability of pensions, further harmonization of professional qualifications, and elimination of national citizenship requirements for public sector jobs are additional areas where reforms could increase labor mobility.

8. The Europeans are not investing the necessary amounts in education, infrastructure and research for a high growth economy. While there has been a deficit in this regard even before the crisis, cuts in these activities have been quite large during the crisis and prolonged recovery; these cuts need to be reversed. More favorable tax treatment for R&D and investments could also encourage the private sector to do more. Generally the targets established in the EU 2020 program (2010-2020) are quite sensible and more effort needs to be directed at ensuring that these targets, unlike those in the Lisbon Strategy (2000-2010), are actually met.

VI. Summary

The issues facing European policy makers are remarkably similar to those in the 1920s and 1930s: financial exuberance and crashes, high levels of long-run unemployment, liquidity traps, debates about the efficacy of fiscal policy, excessive sovereign debt, harsh reparations made worse by the transfer problem, a malfunctioning monetary system that is constraining policy options, beggar-thy-neighbor depreciations where the costs of adjusting to external imbalances is forced upon those least able to adjust -- the debtors, and policy errors of historic proportions. Although there are many underlying social and political factors that have contributed to the current state of affairs, it is the very poor design and implementation of macroeconomic policy that is at the core of Europe's problem.

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[28] Rupert, Peter and Etienne Wasmer. 2009. Housing and the Labor Market: Time to Move and Aggregate Unemployment, IZA Discussion Paper No. 4172.
[29] OECD data.

There is no question that excessively large imbalances and debt exist in Europe and adjustments will be necessary. The issue is whether the adjustments must be accompanied by large and extended periods of unemployment and low growth, rising poverty and inequality, price instability of either inflation or deflation, political extremism and instability, and perhaps even European disintegration. The current policy package being put forth by the European Commission and the Merkozy duet have already created that outcome and they continue to defend it as the only course of action that can bring about the needed adjustments. However, that stance is wrong. There are numerous policy alternatives that can bring about the needed adjustments without these needlessly high economic costs. These alternatives can not only reduce the overall costs of the adjustments but will significantly shift the distribution of the costs away from the deficit economies to the surplus economies, away from the public sector to the private sector, and away from the poor to the rich. A more balanced sharing of the adjustment costs will also ensure that the political support will be there to fully implement this alternative set of policies. Why have these alternates not been implemented? This paper is unable to provide a satisfying answer to this question for this policy failure. It seems to be a combination of blind ideology, poor economic analysis, an institutional straight jacket that limits sensible options, simple ignorance by the populations due to inadequate press analysis, dysfunctional political systems, and perhaps most importantly the inability of countries to put national self-interest aside and cooperate in order to achieve the common good.

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Appendix Table 1
General Government Gross Debt, Per Cent of GDP

	2006	2007	2008	2009	2010	2011	2012	2013
Cyprus	64.7	58.5	48.6	58.3	61.3	71.8	74.3	75.2
Estonia	4.4	3.7	4.5	7.2	6.7	6.0	5.7	5.4
France	63.9	64.2	68.3	79.0	82.4	86.3	89.0	90.8
Germany	67.9	65.2	66.7	74.4	83.2	81.5	78.9	77.4
Greece	106.1	105.4	110.7	127.1	142.8	160.8	153.2	160.9
Ireland	24.7	24.8	44.2	65.2	92.5	105.0	113.1	117.7
Italy	106.1	103.1	105.8	116.1	118.7	120.1	123.4	123.8
Netherlands	47.4	45.3	58.5	60.8	62.9	66.2	70.1	73.7
Portugal	63.7	68.3	71.6	83.1	93.4	106.8	112.4	115.3
Slovakia	30.5	29.6	27.9	35.6	41.1	44.6	47.1	48.8
Spain	39.7	36.3	40.2	53.9	61.2	68.5	79.0	84.0
Eurozone	**68.6**	**66.4**	**70.2**	**79.9**	**85.7**	**88.1**	**90.0**	**91.0**
Latvia	9.9	7.8	17.2	32.9	39.9	37.8	39.1	41.6
Lithuania	17.9	16.8	15.5	29.4	38.0	39.0	40.9	41.1
UK	43.1	43.9	52.5	68.4	75.1	82.5	88.4	91.4
EU	**61.5**	**59.5**	**64.0**	**74.4**	**79.6**	**82.4**	**84.5**	**85.5**

Appendix 2
Unemployment in Selected European Economies

	2006	2007	2008	2009	2010	2011	LATEST
Cyprus	4.6	3.9	3.7	5.3	6.2	7.8	10.0
Estonia	5.9	4.7	5.5	13.8	16.9	12.5	11.7
France	9.2	8.4	7.8	9.5	9.8	9.7	10.0
Germany	10.3	8.7	7.5	7.8	7.1	5.9	5.6
Greece	8.9	8.3	7.7	9.5	12.6	17.7	21.7
Ireland	4.5	4.6	6.3	11.9	13.7	14.4	14.5
Italy	6.8	6.1	6.7	7.8	8.4	8.4	9.8
Portugal	8.6	8.9	8.5	10.6	12	12.9	10.1
Slovakia	13.4	11.1	9.5	12	14.4	13.5	13.9
Spain	8.5	8.3	11.3	18	20.1	21.7	24.1
Eurozone	**8.5**	**7.6**	**7.6**	**9.6**	**10.1**	**10.2**	**10.9**
Latvia	6.8	6	7.5	17.1	18.7	15.4	14.6
Lithuania	5.6	4.3	5.8	13.7	17.8	15.4	14.3
UK	5.4	5.3	5.6	7.6	7.8	8	8.2
EU	**8.3**	**7.2**	**7.1**	**9**	**9.7**	**9.7**	**10.2**

Appendix 3
Government Deficits in Selected European Economies

	2006	2007	2008	2009	2010	2011
Cyprus	-1.2	3.5	0.9	-6.1	-5.3	-6.3
Estonia	2.5	2.4	-2.9	-2	0.2	1
France	-2.3	-2.7	-3.3	-7.5	-7.1	-5.2
Germany	-1.6	0.2	-0.1	-3.2	-4.3	-1
Greece	-5.7	-6.5	-9.8	-15.6	-10.3	-9.1
Ireland	2.9	0.1	-7.3	-14	-31.2	-13.1
Italy	-3.4	-1.6	-2.7	-5.4	-4.6	-3.9
Portugal	-4.1	-3.1	-3.6	-10.2	-9.8	-4.2
Slovakia	-3.2	-1.8	-2.1	-8	-7.7	-4.8
Spain	2.4	1.9	-4.5	-11.2	-9.3	-8.5
Eurozone	**-1.3**	**-0.7**	**-2.1**	**-6.4**	**-6.2**	**-4.1**
Latvia	-0.5	-0.4	-4.2	-9.8	-8.2	-3.5
Lithuania	-0.4	-1	-3.3	-9.4	-7.2	-5.5
UK	-2.7	-2.7	-5	-11.5	-10.2	-8.3
EU	**-1.5**	**-0.9**	**-2.4**	**-6.9**	**-6.5**	**-4.5**