The Euro Area Crisis: Policy Options Ahead

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1 Introduction

The global financial crisis quickly affected the euro area economies. The initial response of significant fiscal expansion to address shortfalls in domestic demand due to corrections in housing and asset markets was followed by a phase of gradual fiscal retrenchment. What started as a Greek fiscal crisis with significant market risk premia on the Greek sovereign quickly transformed itself into a crisis affecting five euro area economies. Greece, Ireland and Portugal are under financial assistance programs. Spain and Italy face heavy market pressure from elevated yields on their sovereign debt.

This is not the place to describe the developments of the last two years and the fundamental policy mistakes that have been made. Clearly, the handling of Greece and the responses of the eurogroup and the European Council have not been enough to stop the fire from spreading. In short, the euro area is in a precarious situation.

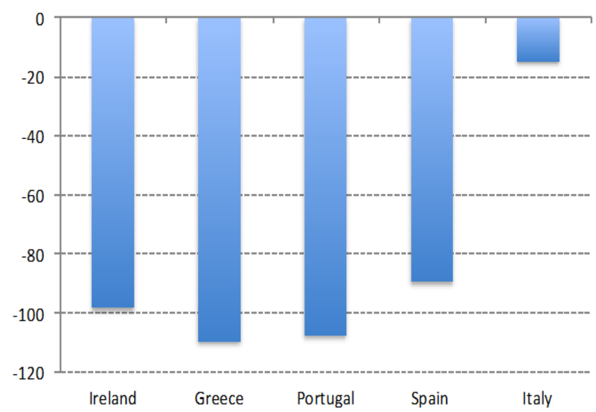
Against this background, the paper discusses a number of the policy proposals that are on the table. In particular, it attempts to discuss the conceptual and legal limits and opportunities of the approaches, setting them in the general economic context. The remainder of the paper is structured as follows. The second section sets out the issue in broad macroeconomic terms. A discussion of debt restructuring follows in section three. Afterwards, in section four, the eurobond is discussed, paying special attention to the concept of a "joint and several" guarantee and its implications for the euro area governance set-up. The EFSF/ESM solution is discussed in section five, pointing to its limits, and the solution proposed by Gros is presented. The sixth section discusses euro area break-up, which is found to be a disaster. The final section concludes.

2 The Issue

The current euro area crisis is characterized by a combination of both an overhang in public and/or private debt as well as significant adjustment needs in terms of price competitiveness. The combination of these two factors renders this crisis so dangerous, resulting in large banking sector fragility and weak economic growth.

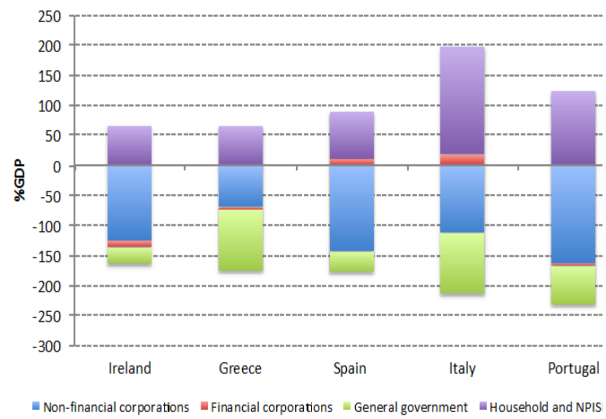
Figure 1 documents the net external financial liability to GDP ratio of Greece, Portugal, Ireland, Spain, and Italy. As can be seen, net external liabilities currently exceed 100 percent of GDP in Greece and Portugal and are close to that in Ireland. Spain is around 90 percent. Only in Italy are the net external liabilities more limited, not exceeding 20 percent of GDP. Large external liabilities reflect the past increases in domestic net liabilities, which have increased differently in the different sectors of the economies. Figure 2 provides the figures of net assets of the different sectors of the economy. As can be seen and as would be expected, households are typically holders of net assets, while corporations and governments have a net debt position. The figure also reveals clearly that in Greece the main driver of large liability positions is the government sector while in the case of Spain, Portugal and Ireland the large accumulation of liabilities results from the corporate sector. In Italy, large government debt is offset by large asset holdings of the household sector so that the net position of the economy is more balanced.

Figure 1: Net external financial liabilities as percent of GDP (2009)



Source: EUROSTAT.

Figure 2: Net liabilities in the different domestic sectors as percent of GDP (2009)



Source: EUROSTAT.

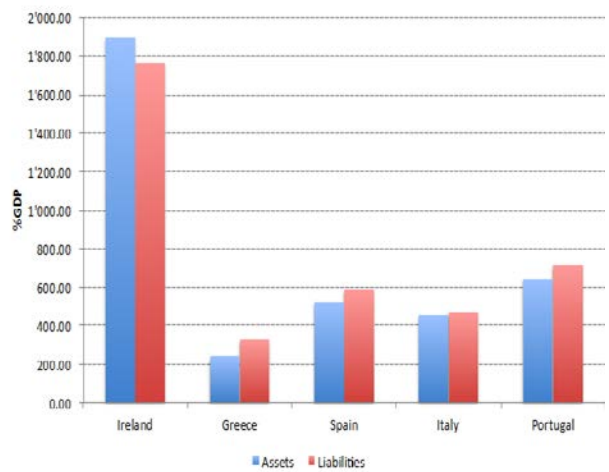
These net positions conceal very large gross financial asset and liability positions. Ireland certainly stands out with a financial assets and financial liabilities of around 18 times GDP. But also the numbers for the other countries are non-negligable, easily constituting stocks of assets and liabilities exceeding several years' worth of income.

Such large stocks can render economies susceptible to changes in the prices of assets and liabilities. Suppose that assets react differently to changes in economic circumstances than liabilities. Any economic event then has easily the potential to dramatically change the net asset position of an economy. Take again the extreme case of Ireland, where assets are mostly in the form of debt and liabilities mostly in the form of shares (Figure 4). In 2007, Ireland was only in slight net external liability (less than 20 percent), while 2009 this number had climbed to almost 100 percent. An important part of this increase is related to valuation effects. [1]

A large part of the increase in net liabilities is in the form of debt, ie securities other than shares (bonds) and loans (Figure 4). This comes as a heavy burden to the economies concerned in a recessionary environment as the value of the debt remains unchanged while income and non-financial assets go down massively.

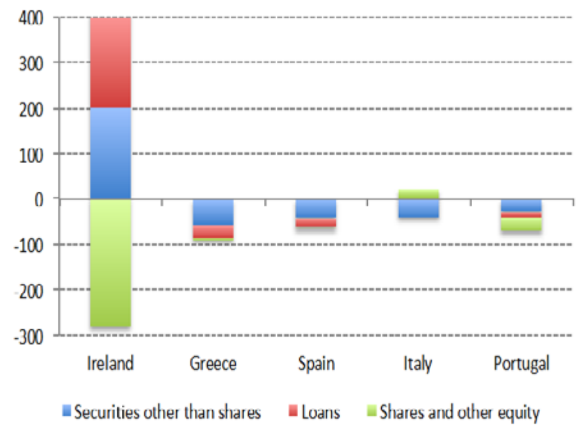
[1] An extensive discussion of valuation effects can be found in European Commission (2010).

Figure 3: Gross assets and liabilities as percent of GDP (2009)



Source: EUROSTAT.
Note: Assets and Liabilities obtained as the sum of the three categories Securities other than shares, Loans and Shares other than equity.

Figure 4: Net assets/liabilities across categories as percent of GDP (2009)

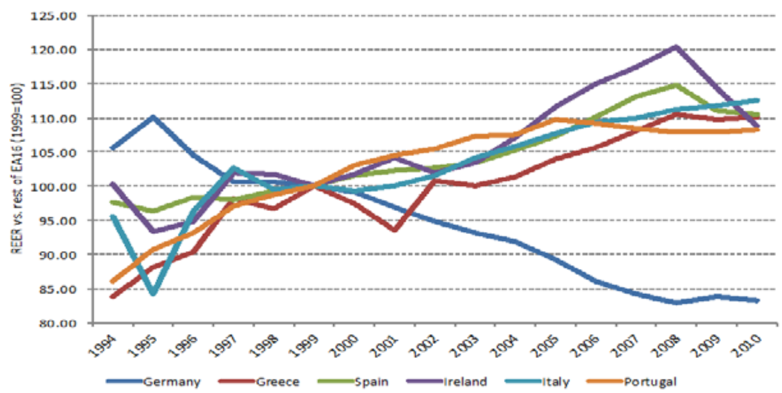


Source: EUROSTAT.

This high external and internal debt burden combines with significant competitiveness adjustment needs. Figures 5 summarizes the divergence in competitiveness based on unit labor costs for the economies concerned. As can be see, there has been a continuous divergence in relative unit labor costs since 1999. The crisis has not massively corrected this divergence in competitiveness except for the case of Ireland and to some extent Spain.

The five economies discussed in this paper therefore face a double challenge. On the one hand, they have to deal with a large debt burden. This debt burden is too high in a situation where interest rates on public debt increase and credit availability to firms and households is restricted. This is all the more difficult when income is falling due to the recession, which in part is aggravated by the public budget consolidation needs. On the other hand, the economies in question need to increase their competitiveness in order to be able to service their foreign debt. This is particularly relevant for those economies that hold large external debt positions. Repaying external debt means that you need to run current account surpluses. This can presently only be achieved with a strong increase in exports. (While the Italian export performance is not good and price competitiveness indicators are not looking good either, this is somehow less of an issue in Italy as the external debt problem is more limited.) The combination of the two factors, i.e., the need for a competitiveness adjustment and the debt overhang renders the current situation toxic. While downward wage adjustments may help on the competitiveness and export side, they may also reduce the overall income (depending on the time profile of job creation) rendering debt repayment more difficult.

Figure 5: Divergence in competitiveness
ULC-adjusted REER (1995=100)



Source: DG ECFIN Price/Competitiveness Database.

In the following, I want to discuss the different policy options:

3 Debt Restructuring

One obvious option to get rid of a debt overhang is to default on this debt. This will imply a transfer of resources from the creditor to the debtor thereby alleviating the situation of the debtor. But a debt restructuring certainly comes at a price. In this section I only discuss sovereign debt restructuring and leave aside the important issue of household and corporate debt overhang and restructuring. Restructuring in these two sectors is governed by clearer rules, which are, however, very country specific. Conceptually, I think of a debt restructuring as a significant decrease in the face value of sovereign debt.[2]

A significant debt restructuring may limit future borrowing capacity. Empirical evidence on this is, however, limited. In fact, if the debt reduction is sufficient to bring down the primary deficit to zero, there is no borrowing requirement. The discipline imposed by markets may even be the kind of limit needed to prevent future debt increases. Of course there is also the option to use limited fiscal transfers from the creditor countries to smooth the impact on expenditure and revenues of a tax cut. The decision when to do the debt cut therefore does not depend on the level of the primary deficit if foreign lenders are willing to accept temporary budget help to more gradually decrease the primary deficits.

A more serious issue to explore is the impact of a debt restructuring on the banking sector and financial industry at large. I have argued that this should be systematically explored by the euro area institution in charge of it, the European Systemic Risk Board (ESRB)[3]. It is not straightforward to make such an assessment as it depends on numerous and different channels.

A necessarily preliminary assessment by Darvas (2011) comes to the conclusion that a restructuring of Greek debt may not be a significant problem for financial stability. Here, I do not want to replicate all the arguments but exposure in terms of debt, CDS and financial functions of the

[2] There is a large and sometimes imprecise body of terminology out there on different forms of debt restructuring. Basically, they can all be thought of in terms of different sizes of the reduction of the face value of debt.
[3] Wolff (2011), ESRB should act on sovereign risk, Eurointelligence, 5 May 2011.

rest of the euro area is limited. The major fall-out would come for the Greek banking system itself. The financial assistance program for Greece, however, already foresees some means to address such a problem and further capital for bank recapitalization could be provided.

Instead, I want to focus on banking sector exposure to sovereign debt of the five euro area countries discussed, using some recent data of the European Banking Authority's (EBA) stress test. The columns of the table provide data on how much of the debt of a country x is held in the seven different countries' banking systems that are part of the current exercise. EBA and the national authorities designed the stress tests such that in every country at least 75% of the total assets of the banking system would be covered.

A number of interesting observations can be made. First: sovereign bonds of a country are typically held by the banks located in the same country. Second, a debt restructuring in Greece or Ireland would have very limited direct effects on the banking sectors of the other countries in difficulties. Spain has significant exposure to Portugal and Italy. Greece, Ireland, and Portugal's respective banking systems have no exposure to Italy. Italy in turn has no significant exposure to the other four countries. Direct fall-out from a debt restructuring in any of the five countries on the other peripheral economies is therefore limited.

Table 1: Exposure of banks to sovereigns as tested in stress test

	GR	IE	PT	ES	IT
FR	10.1	2.1	4.8	14.6	53.0
DE	7.9	1.0	3.6	18.6	36.8
GR	54.4	0.0	0.0	0.0	0.1
IE	0.0	12.5	0.2	0.3	0.8
PT	1.4	0.5	19.6	0.3	1.0
ES	0.4	0.1	5.5	231.7	7.4
IT	1.4	0.2	0.4	3.2	164.0

Source: EBA, July 2011.

Turning to the exposure of France and Germany to the five countries discussed, a number of interesting observations need to be made. First, France is much more exposed than Germany, with overall French exposure at €85bn and overall German exposure at €68bn. Relative to GDP, France would thus incur much greater losses. However, the largest part of the difference comes from the exposure to the Italian sovereign. In the cases of Greece, Ireland and Portugal, the differences are of small macroeconomic relevance.

Addressing the insolvency of Greece[4], but potentially also of Ireland and Portugal, by a significant hair-cut on the existing debt would lead to relatively limited direct losses for the banking systems in France and Germany as well as the banking systems of the other four countries. Only the banking system of Greece itself is heavily exposed to its own sovereign.

In the case of Greece, a 50% haircut that is considered necessary by many economists would basically wipe out the entire equity of the Greek banking sector. Large-scale financial instability in

[4] The insolvency of Greece is discussed in length in Darvas, Pisani-Ferry and Sapir (2011).

Greece would need to be avoided in order to prevent Greek problems spreading in the region.[5] One would have to agree to a nationalization and recapitalization of the Greek banking system, potentially involving foreign banks. The financial means needed for this are quite limited. A recapitalization fund of around €25 billion would be sufficient. Greece's first financial program already foresees €10 billion for the banking system so that another €15 billion would have to be found.

If a country has such a credit event and restructures debt, what would happen to its relations with ECB? The ECB has repeatedly claimed that it would not be able to accept collateral of a government that had recently defaulted. However, there is no clear rule that would force the ECB to do so, and it is a discretionary decision of the governing council. Obviously the rating of a defaulted country would be very low. Economically, however, the quality of restructured debt would be much higher, as a much lower debt burden would stand against the same revenue stream. It therefore sounds plausible that the ECB would continue accepting defaulted bonds as collateral. And the ECB would certainly provide unlimited liquidity to the financial system if needed as it has an obligation to contribute to the financial stability of the system.

Major restructuring of Greek debt would, however, lead to a re-assessment of the appropriate price of the other sovereigns concerned. Clearly now, prices include the implicit assumption that other euro area sovereigns would partly pay up for the current exposure of the financial sector. A restructuring would thus be a credible signal that banks can actually lose money on sovereign debt. Note that this contagion does not come from the direct exposure of the financial system which implicitly enjoys the national sovereign back-stop.[6] The contagion comes from a re-assessment of the size of the hair-cut.

The difficulty of the situation comes from the fact that this re-assessment of the potential losses can, by itself, render a default more likely. For Italy, most economists would probably agree that there is no solvency issue unless the market is driving up the interest rate thereby triggering a self-fulfilling liquidity-solvency crisis (de Grauwe 2011). The doubt about Italy started because of the surfacing of major structural difficulties when the finance minister started to have political difficulties. The resulting spreads render the political as well as economic situation in Italy more difficult. On the other hand, the resulting spreads have also helped to increase the pressure for much needed reform. At current interest rates, Italy could survive for quite a long time without major economic implications in terms of debt sustainability. However, certainly doubts about fiscal sustainability could have become very quickly self-fulfilling if the banking system had experienced a bank run.[7]

In the following section, I therefore want to discuss ways to address self-fulfilling crises or true insolvency.

4 Eurobond: Possibilities and Difficulties

The most widely discussed eurobond concept is certainly the Blue Bond/Red Bond concept proposed by Jacques Delpla and Jakob von Weizsäcker (2010). The proposal suggests that sovereign debt in euro-area countries be split into two parts. The first part, the senior 'Blue' tranche of up to 60 percent of GDP, would be pooled among participating countries and jointly and severally

[5] Greek banks are important players in Bulgaria, Romania and some of the former republics of Yugoslavia.
[6] For a discussion of the feed-back loop between exposure of the banking system to its own national sovereign and how to address this, see Marzinotto, Pisani-Ferry, and Wolff (2011).
[7] In Wolff (2011), Changing of the guard—huge challenges ahead for the new ECB President, Bruegel Policy Contribution, I therefore see in principle no alternative to the ECB's SMP at this stage.

guaranteed. The second part, the junior 'Red' tranche, would keep debt in excess of 60 percent of GDP as a purely national responsibility.

One of the central advantages of this proposal is that it maintains a large incentive for market discipline and prudent lending behavior by the financial industry. The red debt would certainly be a very expensive way of borrowing from the market and parliaments will have a strong incentive to reduce the red part of the debt.

A central concept that needs to be understood when discussing a common eurobond (in this case the Blue Bond) is the concept of joint and several guarantees. *In extremis*, this implies that every country can be held fully liable for all the debt issued under the scheme. At a pinch, if all countries but one (say all countries except Luxembourg) decide not to service their obligations, the remaining country would need to service the total stock of debt. This example shows that a true joint and several guarantee has vast implications for national fiscal policy:

1) A clear mechanism needs to be developed that ensures that every country is obliged to service its blue debt under all circumstances. In other words, the seniority of blue debt needs to be established. This needs to be done not only at the country level but also at the European level so that the group of euro area countries participating can control the payment obligation of every other country.
2) In the case of a bond issued by a bank, seniority can be easily established by a simple contract. This contract is enforceable in law and the bank can be taken to court. For a sovereign, this becomes much more difficult as the sovereign needs to commit itself to respect its own contract. This is not a trivial thing to do. De facto, it can only be credibly done if the country ceases to be the sovereign and gives up sovereignty to a supra-national institution.
3) The introduction of a eurobond would thus certainly have to involve a change in the EU Treaty. This change in the treaty would have to specify what areas of sovereignty would be given to the EU. This would certainly have to include the level of the budget deficit. It may even include a veto on the composition of revenues and expenditure so as to force the national finance ministry and parliament to first pay the interest on the eurobond. Such a huge transfer of sovereignty from national parliaments to the European level should then go hand in hand with a massive stepping-up of democratic accountability at the European level. In other words, the European Parliament would be given some form of EU budget authority.
4) Giving up such a degree of sovereignty at the national level and passing it to the European level would have to involve changes in constitutions of several euro-area member states.

Overall, the introduction of a common euro-area bond involving joint and several liability will have to involve massive changes in the legal and institutional set-up of the EU and its member states. It does not appear likely that this could be done in a short period of time. On the contrary, even if a decision to go ahead with a eurobond was taken today, it would probably take two years to implement it.

The assessment that massive legal and institutional changes are needed to introduce eurobonds is also confirmed in the recent German constitutional court ruling. Karlsruhe makes it clear that all major decisions with a major budgetary impact can only be taken by a democratically elected parliament.[8] While the ruling allows the set-up of an EFSF, the size thereof may not be

[8] "In this context, the Bundestag, as the legislature, is also prohibited from establishing permanent mechanisms under the law of international agreements which result in an assumption of liability for other states' voluntary decisions, especially if

extended beyond a value that would de facto severely inhibit budgetary autonomy.[9] It is also clear that the German court again stresses the intergovernmental nature of the EU in which democratic legitimacy comes exclusively from the nation state. Already in the ruling of 2009 on the Lisbon Treaty, the court demanded a strengthening of the national legislature. Ultimately, the court denied that the European Parliament could be the source of democratic legitimacy.[10] In this sense, the latest court decision does not come as a surprise. It stands in a long tradition of, on the one hand, not stopping the European integration process while, on the other hand, setting clear limits. A further integration step introducing eurobonds with joint and several liability is thus only conceivable from the Constitutional Court's point of view under a new treaty setting up a democratically legitimate EU structure. In parallel, the German constitution would need to be changed (certainly Article 23 but others as well).

In the area of economics, an important critique that has recently been voiced on the Blue Bond and Red Bond proposal is that the split of the debt into a senior and junior tranche would increase the overall interest burden. This would make it very difficult to introduce it for high debt countries such as Italy. However, at a first approximation, the overall interest burden should remain unchanged (Modigliani-Miller theorem). It may be, however, that not all of the assumptions of Modigliani-Miller are fulfilled, so that the overall interest burden could increase. This could, however, be offset by the greater liquidity of the Blue Bond. Overall, the validity of this criticism is therefore not established.

The latter critique shows that a simple introduction of Blue and Red Bonds would not immediately solve the crisis and could not fend off self-fulfilling liquidity crises becoming solvency crises. It has therefore been proposed to introduce the Blue/Red Bond concept gradually. This would involve all newly issued debt, including the debt that is rolled over, being issued in blue debt up to a predefined threshold. This would involve the following:

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they have consequences whose impact is difficult to calculate.
http://www.bundesverfassungsgericht.de/en/press/bvg11-055en.html

[9] "Article 38 of the German constitution (http://www.artikel5.de/gesetze/gg.html#art38) requires, in connection with the tenets of the principle of democracy (Article 20.1 and 20.2, Article 79.3), that the decision on revenue and expenditure of the public sector remain in the hand of the German Bundestag as a fundamental part of the ability of a constitutional state to democratically shape itself. As elected representatives of the people, the members of parliament must remain in control of fundamental budget policy decisions in a system of intergovernmental governance as well. When establishing mechanisms of considerable financial importance which can lead to incalculable burdens on the budget, the German Bundestag must therefore ensure that later on, mandatory approval by the Bundestag is always obtained again."

[10] „a) Die Europäische Union erreicht beim gegenwärtigen Integrationsstand auch bei Inkrafttreten des Vertrags von Lissabon noch keine Ausgestaltung, die dem Legitimationsniveau einer staatlich verfassten Demokratie entspricht. Nicht nur aus der Sicht des Grundgesetzes handelt es sich bei der Beteiligung Deutschlands an der Europäischen Union indes nicht um die Übertragung eines Bundesstaatsmodells auf die europäische Ebene, sondern um die Erweiterung des verfassungsrechtlichen Föderalmodells um eine überstaatlich kooperative Dimension. Auch der Vertrag von Lissabon hat sich gegen das Konzept einer europäischen Bundesverfassung entschieden, in dem ein europäisches Parlament als Repräsentationsorgan eines damit konstitutionell verfassten neuen Bundesvolkes in den Mittelpunkt träte. Ein auf Staatsgründung zielender Wille ist nicht feststellbar. Auch gemessen an den Grundsätzen der freien und gleichen Wahl und den Erfordernissen einer gestaltungskräftigen Mehrheitsherrschaft entspricht die Europäische Union nicht der Bundesebene im Bundesstaat. Der Vertrag von Lissabon ändert demnach nichts daran, dass der Bundestag als Repräsentationsorgan des Deutschen Volkes im Mittelpunkt eines verflochtenen demokratischen Systems steht.“
http://www.bundesverfassungsgericht.de/entscheidungen/es20090630_2bve000208.html

1) In contrast to a big-bang introduction where every bond would be split into a junior and senior tranche, the gradual introduction of Blue Bonds has a number of important advantages and disadvantages.
2) A country like Italy with a relatively long debt maturity could for several years issue only blue debt. This would help the country for several years to avoid re-financing difficulties. However, eventually, there would come a day when the Blue Bond capacity is exhausted and the re-financing of maturing debt would have to be done with red debt. It is possible that, at this stage, the interest rate would become prohibitive, leading to a default.
3) The political economy of such a gradual introduction is problematic. Upfront, there are no incentives to address structural weaknesses of the economy, in particular the day when Red Bonds become the only way of financing in the next election cycle. Once, only Red Bonds are available for financing, there will be enormous pressure from all sides to increase the ceiling of Blue Bonds.
4) If such a scenario is to be avoided, all countries would need to commit to carry out very strong structural reforms upfront while at the same time forcing the banking sector to get rid of all bonds maturing after the deadline when only Red Bonds are available for re-financing. Only if the banking sector is freed of such bonds could a restructuring become possible. But how can the banking system sell these bonds if all market participants know that there will eventually be a large haircut? Banks would incur massive losses already now.
5) Legally, it is doubtful whether a gradual introduction of Blue Bonds would be acceptable. In fact, by introducing senior bonds, all remaining bonds will be put at a disadvantage. This would certainly be challenged in court.

Given these difficulties, a gradual introduction of Blue Bonds does not appear to be feasible. Instead, it appears more sensible to split all debt in two parts upfront. This solution would not, however, solve urgent funding pressures now. The most feasible eurobond concept therefore appears to be to transform all national debt into common eurobond debt with joint and several liability in exchange for a massive transfer of sovereignty to the European level.

5 The EFSF/ESM Solution

Given the difficulties associated with a massive transfer of sovereignty and the political unwillingness to do so, other solutions have so far been sought. The EFSF/ESM solution that is currently being pursued explicitly avoids joint and several guarantees. Instead, the EFSF is an international financial institution that can borrow on the market with guarantees of the national member states. The mechanism by which this is done is quite complicated and is currently being re-drafted following the agreement of 21 July.[11]

The basic feature of the mechanism is that every state gives a certain guarantee (in the new amendments, there is no cash deposit anymore). But the debt issued by the EFSF is only guaranteed to a certain percentage by the member state (it is therefore similar to a Jumbo Bond in the German sub-national bond market[12]). This means that large overguarantees have to be given by the AAA-countries to secure an AAA rating of the debt issued by the EFSF.

[11] A summary is given in a recent note by Credit Suisse, EFSF (R)evolution, 16 August 2011. Political and legislative discussions are still not settled.
[12] Schulz and Wolff (2009) The German sub-national government bond market: structure, determinants of yield spreads and Berlin's foregone bail-out (with Alexander Schulz), Journal of Economics and Statistics, 229(1), 61-83.

If any of these risks were to materialize, especially if Italy came to the brink, one possibility alluded to in a recent letter by President Barroso to the European Council would be to increase further the size of the EFSF, possibly to €1 trillion or €1.5 trillion. This is a very mechanical approach that ignores the fact that the EFSF relies on the existence of a sufficiently large number of strong core euro-area issuers to support peripheral countries in crisis. In fact, the possibility of contagion beyond the periphery severely challenges the very logic on which the EFSF rests. The very structure of the EFSF/ESM makes it possible to envisage a scenario whereby recourse to it would sequentially weaken one country after another after the crisis starts until it hits core countries. Should Italy need to be rescued using the EFSF, for instance, France would inevitably be hit. The EFSF architecture, instead of being a vector of stability, would become a vector of instability by being transformed into an incubating vehicle for financial distress. The endgame would be Germany providing support to all the rest of the euro area, which would exceed its fiscal capacity.

In brief, contagion, which spreads with centripetal force to the core, challenges the logic of the EFSF and the mutual limited guarantee mechanism through which it operates to provide durable and credible assistance to affected countries. Thus, a mechanism excluding joint and several guarantee could easily fail when the crisis spreads to Italy.

Given these shortcomings, Gros (2011)[13] has proposed to register the EFSF/ESM as a bank. He argues that given the described cascade structure, the size of the EFSF cannot simply be increased. Instead, the EFSF could get unlimited access to refinancing at the ECB. The ECB obviously can provide unlimited liquidity. At the same time, this solution would keep the management of debt problems in the hands of finance ministers, but it provides a liquidity backstop that is needed in case of generalized breakdown of liquidity and confidence as in the case of self-fulfilling liquidity crises. To date, I have not seen a convincing counterargument. Indeed, this solution appears feasible and would ensure ECB independence from individual countries.

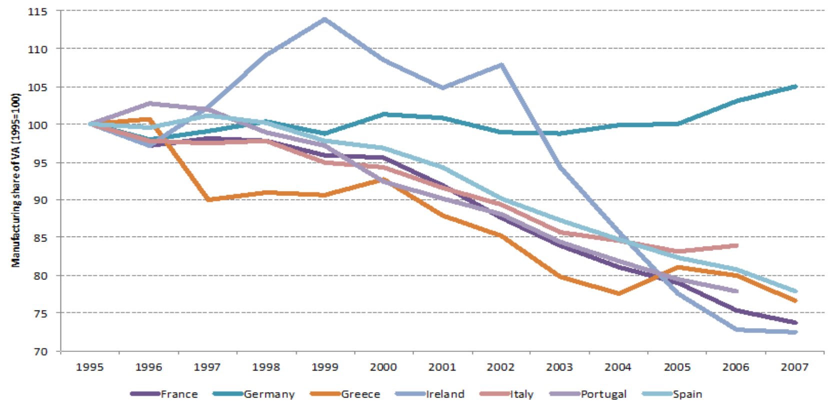
6 Euro Break-Up

Any fiscal solution is incomplete as fiscal transfers or a common assumption of debt does not address the wage and cost divergence of the last ten years. A fiscal solution is thus a necessary but may not be a sufficient solution. Even with large fiscal transfers, entire countries of the euro area will remain highly uncompetitive and value added in manufacturing and industry will remain low. Figure 6 shows the massive decline in manufacturing as a share of value added that the five countries discussed have experienced since the beginning of the euro. Value added and employment has dramatically decreased. With the collapse in construction, service sector activity and all activity related to imports, a significant re-deployment of resources from this non-tradable sector to the tradable sector is needed.

Economically, this shift of resources is achieved by changing the relative price of tradables to nontradables. In economies with a flexible exchange rate, this is achieved by a depreciation of the currency, but this option does not exist in the euro area. In the euro area instead, wages have to fall significantly (or productivity has to increase without a concurring wage increase) in order to regain competitiveness. Certainly wage increases in the core euro area countries would help somewhat but the gains are of second order as the export structure of most of the Southern countries includes only moderate exports to the core area countries, whereas reductions in ULC in the country itself will directly impact on all exports.

[13] August 2011: The euro crisis reaches the core, VOXEU, 11 August.

Figure 6: Manufacturing Share of Value Added (1995=100)



Source: OECD.

In the absence of major price adjustments, unemployment is likely to rise even further. This, in turn, will increase political instability. At some stage, there may be a populist call for dropping out of the euro area. There are also others reasons why a euro exit could be contemplated. The large increase in the cost of debt would certainly give rise to a call for more monetary policy flexibility. If this is not met by the ECB via SMP, populist calls to regain monetary independence may arise. It might also be that a member state may not accept the conditionality and therefore decide to leave the euro.

I will therefore start by discussing an exit of one southern country, followed by a discussion of a split of the euro area into two.

Suppose one country decides that it wants to leave the euro. The first question arising is how this can be done in practice. Once the rumor would be in the market, there would immediately be a bank run and all capital would flee the country. Practically, the decision would have to be announced on a Friday evening. One would then probably have to introduce a couple of days of bank holidays to avoid a bank run. A law would have to be passed that would transform all domestic contracts from euro to the new currency. What would need to be done with all the contracts signed under law other the one of the country concerned? The baseline assumption would be that these contracts remain in euro. For all circulating cash, one could offer a period of one month to exchange at a fixed exchange rate. Most of the larger amounts of cash would leave the country anyway but quantitatively this is of less importance. Before the final new cash would be introduced, some form of interim cash would need to be quickly printed.

Does the EU Treaty provide for an EMU exit? Athanassiou (2009) of the ECB has provided a comprehensive study on the question. In the pre-Lisbon treaty, there was no legal provision for EMU/EU exit. The Vienna Convention on the Law of Treaties recognises limited rights of withdrawal (from treaties), but the relevance was disputed (ECJ: EU legal system sui generis, transfers of sovereignty are permanent). However Greenland's withdrawal from the European Communities was allowed in 1982 so apparently a withdrawal was conceivable as a last resort but there was no possibility of expulsion of a country. In the Lisbon Treaty, the EU negotiated an exit clause (Article 50), but no specific EMU provision. In other words, the withdrawal from EMU only is legally impossible. An EMU exit would therefore have to involve a simultaneous EU exit.

More important than these practical and legal/constitutional issues are, however, the economic challenges to a euro area break-up. The euro area is a highly integrated financial system with very large cross border asset and liability positions. Even a small country like Greece holds more than €200 billion of assets in the form of debt (bonds and loans) abroad. It owes more than €450 billion abroad (see Table 2). A redenomination could lead to large mismatches in assets and liabilities. What matters for such mismatches is, of course, the law of the contract. Government bonds issued in the country are usually issued under domestic law. But foreign law would apply for example corporate bonds issued on international markets.

It appears likely that these differences in the place of contract of the different debt obligations together with the large ensuing devaluation would lead to massive asset and liability mismatches. The gains and losses for each economic agent are difficult to predict as little is known about the place of contract of the different economic relations. It appears almost certain that as a result we would observe massive chains of bankruptcies. It is difficult to come up with precise economic estimates of this. Some analysts have tried to do so. UBS claims that the cost for a southern seceding country would amount to between €9,500 to €11,500 per person.[14] But frankly, such numbers are at best a good guess. Certainly a break-up would constitute a massive cost in terms of civil unrest, banking sector collapse, capital controls, loss of trust etc.

Table 2: Assets and liabilities, end-2007 ($billion)

	Debt assets	**Debt liabilities**
Germany	5000	4578
France	4100	4425
Italy	1602	2412
Spain	1114	2086
Ireland	2506	2000
Portugal	310	464
Greece	223	448

Source: Lane and Milesi-Ferretti.

An even more serious issue is the chain reaction that a decision by one country to leave would trigger. Basically, once the market knows how a euro area exit would work, it would have a blueprint for the future. The market would then start to immediately bet against all the other countries that are at risk of leaving. This would not only concern the financial sector, but also all other business as well as households would stop entering into contractual relations with the countries in question (no delivery of goods against trade credit etc.). From this very moment onward, the euro would stop being the euro, as a euro in Lisbon would not be the same as a euro in Frankfurt or Paris. In sum,

[14] UBS, Euro break-up—the consequences, 6 September 2011.

one country leaving would trigger a domino of further countries leaving and the euro would eventually break up.

As a gradual and successive unraveling of the euro would come with very high economic, to say nothing of political, costs some commentators have recently advanced the idea of splitting the euro in two[15]: A Neuro would consist of the countries of the former Deutschmark zone. A Seuro would be composed of essentially the Mediterranean countries and Ireland. The big question is whether France belongs to the Neuro or Seuro area. Certainly France is torn between the two groups in terms of geography, history, politics, and economics and either choice would be a disaster for Europe as well as for France.

A break-up of the euro would thus be a huge economic, political and historical mistake.

6 Conclusions

Europe is at a crossroads. In this paper I have sketched a number of possible avenues that are currently being debated. Politically and economically, three major steps need to be taken:

1) The Greek problem needs to be solved.
2) The ECB, potentially in combination with the EFSF, needs to document its full resolve to act. The EFSF or another institution needs to exercise tough conditionality.
3) Credible structural reforms to address weak economic performance need to be enacted.
4) Further integration steps calling for a common EU treasury need to be started.

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