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Please find attached my most recent paper on the European debt crisis.

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Kind regards

Stefan Collignon

ατ-18

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**DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICIES**

ECONOMIC AND MONETARY AFFAIRS

Debt Restructuring is No Free Lunch

Briefing Note

Abstract

This paper emphasises the cost of sovereign defaults and voluntary debt restructuring. It argues that the debt crisis is a crisis of liquidity and recommends rolling over public debt and providing liquidity to Member States in distress. This view is based on the analytic assessment that sovereign debt in Europe is sustainable and no Member State is insolvent, provided European authorities and Member State governments avoid accelerating the crisis. It concludes by calling for a European Institute of Economic Reconstruction that could buy assets from Member States, restructure them and then either keep them in the collective European interest or privatize them.

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EXECUTIVE SUMMARY

There is no free lunch. This is the Iron Law of economics. Everything has its price. The issue of debt restructuring in countries where public finances are in distress is no exception. After the near-fatal meltdown of the euro in 2010, European authorities have provided emergency funds to Greece, Ireland and now also to Portugal in order to prevent a liquidity crisis turning into default. Access to financial support from the European Financial Stability Facility (EFSF), which will be replaced by the European Stabilisation Mechanism (ESM) in 2013, is conditional on severe fiscal adjustment programmes. Nevertheless, in the Greek case, the objectives set by the programme have not been met, because revenue has fallen short of expectations. This has now reignited debates about Greece's solvency and the potential need, or the desirability, of restructuring sovereign debt. These debates have, of course, spillover effects on other Euro Member States with sovereign debt fragilities. Afraid of the consequences, some commentators have suggested Greece should leave the Euro, at least temporarily. Others see the solution in a Greek default and debt restructuring. A third solution consists in a massive bail-out of public debtors. It seems increasingly clear, however, that the triad of No exit, No default, No bail-out is no longer consistent with the economic environment of slow growth in Southern European Member States. Hence one of the three No's would have to go. However, each option carries costs. A responsible policy must seek to stabilise debt developments in Europe at minimal costs. This paper seeks to evaluate the options.

1. NO EXIT FROM THE EURO?

The most prominent person asking to exclude Greece from the euro area has been the German Chancellor Angela Merkel. At the outbreak of the Greek debt crisis she demanded in the German Bundestag, the most official of all settings for such an announcement, a change in the EU Treaty that would allow kicking out a Member State from the euro area.² Previous German governments, notably those of Chancellor Kohl, were guided by the Leitmotiv that the Euro constituted a Schicksalgemeinschaft (a community of common destiny). Merkel's argument was based on the much looser idea that the euro area is a club, where members can join and leave, but have to stick to the rules. However, had she kept the line of her predecessors, the European debt crisis would probably never have taken the proportions it has now attained. It would have turned out much cheaper for German taxpayers. One lesson from this experience is, however, that one cannot assess the costs of political decisions only by their immediate impact; one has to consider the total cost over time.

Proponents of a euro exit also do not consider the conditions under which a Member State may find it difficult to fulfil the requirements of the Stability and Growth Pact. The Greek debt crisis was seen as being caused by irresponsible public spending, rather than as a consequence of revenue losses after the Global Financial Crisis. While it is true that manipulating data by the Karamanlis government has badly shaken the trust of the euro area's governance, the biggest factor contributing to the Greek debt crisis has been the loss of revenue. Some economists have recognised the interdependence of slow growth and government revenue, but instead of seeing it in the global context they have argued that Greece and other Southern Member States are at fault because they lack competitiveness. Especially in Germany, economists have demanded that Greece should exit the euro and devalue the exchange rate of the new currency to the euro.³ Such step would create extremely high social, economic and political costs. Exit from the euro area is "the mother of all defaults" and we need to discuss why it is not a viable solution to the debt crisis.

First of all, in the long run, manipulating the exchange rate is not an efficient policy tool for Member States participating in the Single European Market as it undermines price stability without durably improving competitiveness. Currency devaluations may well lower export prices in the short run, but they will also make imports more expensive, and over time wage increases will seek to recuperate the loss of purchasing power. Thus, in Europe, devaluations fuel inflation and not competitiveness. The experience in Europe during the 1970s and 80s has shown that weak currencies did not help to improve economic performance in the long run. In fact, it was precisely this insight, which has fostered the monetary policy consensus that made European Monetary Union possible. Hence, the ~~devaluation-for-competitiveness~~ argument does not stand on firm empirical grounds.

Secondly, even if one would admit the devaluation-competitiveness argument, one has to keep in mind that changes in exchange rates do not only affect relative prices of goods and services, but also those of assets and liabilities. In a modern economy most liabilities are

² Deutscher Bundestag – 17. Wahlperiode – 30. Sitzung. Berlin, Mittwoch, den 17. März 2010, Seite 2719: " dass wir für die Zukunft ein Vertragswerk bekommen, aufgrund dessen es als Ultima Ratio sogar möglich ist, ein Land aus dem Euro-Raum auszuschließen, wenn es die Bedingungen langfristig immer wieder nicht erfüllt. Sonst kann man nicht zusammenarbeiten."

³ For example: <http://www.insm-oekonomenblog.de/allgemein/griechenland-sollte-waehrungsunion-verlassen/>. Note however, that the CER (Centro Europa Ricerche) Report on Europe 2011 (Competitiveness in the euro area) reveals that competitiveness has improved in Greece over the last decade, in contrast with nearly all other Southern European economies. <http://www.centroeuroparicerche.it>. This positive development in Greece coincides with the assessment by the IMF in 2008 (see: <http://www.imf.org/external/pubs/ft/wp/2008/wp08112.pdf>)

nominally fixed. In the case of an exit from the euro, assets denominated in the new currency will be devalued, while liabilities like government and private bonds will remain fixed and denominated in euro because the euro is not dissolved among other Member States. Hence, previously issued domestic euro debt would effectively become foreign debt. This means that the debt burden would dramatically increase after the exit from the euro. For example, if the public debt ratio is 150%, devaluing the new currency by 20% would push the debt burden up to 180% of GDP. Furthermore, not only government but also all private debt would also be re-valued, while assets are depreciated. The resulting deterioration in firms' balance sheets would make it much more difficult for companies to become the engine of growth needed to generate tax revenue. Evidence from developing countries shows that it takes a country often a long time before satisfactory growth is restored after a devaluation. One may argue that one could convert debt held by residents at any arbitrary rate into the new currency. But this would imply a de facto default and the expropriation of creditors. It is not reasonable to assume that they would accept such currency reform lightly.⁴ Endless court battles would be the consequence, generating an environment of uncertainty and bitter recriminations. Negative wealth effects would dampen economic growth. Under these circumstances, an exit cum devaluation would actually make things worse for the exiting Member State, not better.

Thirdly, a Member State's exit would also be very costly for the rest of the euro area. No European economy would remain unaffected. An exit would put the survival of the Single Market into question. The connection between the Single European Market and Monetary Union was first outlined by Tommaso Padoa Schioppa in 1987,⁵ when he described the inconsistent quartet of free markets for goods and services, free movements for factors of production, exchange rate stability and autonomous national monetary policy. One of these four objectives had to be abandoned, and the sustainability of the Single Market required that this had to be national monetary policy. The reason is that the logic of efficient markets requires the free movement of goods and services, so that factors of production (labour and capital) are allocated according to comparative advantages. Comparative advantages reflect differences in quality, efficiency, and productivity of companies and economies. However, if countries operate with different currencies, their exchange rates reflect expectations among investors in the foreign exchange market, which have little to do with comparative advantages of firms. Hence, flexible exchange rates will always distort relative prices and incentives in a single market. They will give rise to demands of protectionism and sooner or later cause disruptions in the Single Market.⁶ Hence, the single currency is a necessary condition for preserving the Single Market. They will even threaten the existence of the European Union as we know it. It is therefore not only a fundamental economic, but also a political requirement that all Member States of the European Union will join the euro and stay in Monetary Union.⁷

Opponents of monetary union have objected by referring to a paper by Robert Mundell on optimum currency areas (OCA)⁸ and argued that the EU was not an OCA and therefore European Monetary Union for all EU Member States was a bad idea. Mundell has repudiated

⁴ A currency reform might be modelled on German monetary unification in 1990, although that was a totally different situation with an inconvertible currency in East Germany where the people openly demanded access to the higher quality Deutschmark of West Germany. In case of an exit from the euro, the opposite would be the case: citizens would obtain a low quality currency at reduced value.

⁵ Padoa-Schioppa, T. (1987). *Efficiency, stability and equity: A strategy for the evolution of the economic system of the European Community*. Brussels: European Commission, II/49/87.

⁶ For example, after the devaluation of the Spanish peseta in 1993, French car dealers asked to close the French border to Spain because imported French cars were cheaper than those coming from French factories.

⁷ The opt-outs for Denmark and the United Kingdom are so marginal that they do not profoundly undermine the functioning of the single market.

⁸ Mundell, R. A. (1961). A Theory of Optimum Currency Areas. *American Economic Review* 51 (4): 657-665.

this interpretation,⁹ claiming that these economists had misunderstood his theory which was meant to show that currency areas are a political decision. Yet, while the question of whether the euro area is optimal has not gone away, the idea that the optimality of a currency area may be endogenous has become more accepted during the first decade of the euro: economic shocks are often caused or amplified by monetary policy and exchange rate movements. The occurrence of asymmetric shocks will therefore diminish with a single currency. Collignon (2003) has shown that the economic optimality of a currency area simply boils down to maintaining price stability, while the threats for the euro's sustainability arise in the political domain.¹⁰

The stability generated by the euro has protected the standards of living for citizens all over Europe. In fact and contrary to the claims by Euroskeptics, economic performance has been better than in the non-euro Member States, as Table 1 proves. Because comparisons are easily distorted by accelerated catch-up dynamics in new Member States, we compare the performance of the original 12 members of the Euro area with non-members of developed high income states in the EU. Table 1 shows that economic growth in the euro area 12 was higher than in Denmark, but lower than in Sweden, and the UK. However, growth was significantly more stable (the standard deviation is lowest for the euro area), which meant that the amplitudes of the business cycle are reduced and output is more stable. This is an indication for the endogeneity of optimal currency areas. The euro area's advantage was also confirmed in 2008, when the impact of the Global Financial Crisis (the minimum growth rate) was weaker than outside the euro. The higher output stability has translated into more stable and growing employment. In the first decade of the euro, 15 million jobs were created in the euro area, more than ever before in history. In terms of job creation, the euro area has done better than Denmark and the UK and the stability of jobs has been higher than in Scandinavia. Thus, ordinary citizens inside the euro area fare better than outside.

Table 1

GDP growth performance of euro area and non-members: 1999-2012

	EA12	DENMARK	SWEDEN	UNITED KINGDOM
Mean	1.50%	1.14%	2.54%	1.78%
Maximum	3.80%	3.47%	5.39%	3.84%
Minimum	-4.18%	-5.35%	-5.48%	-5.00%
Std. Dev.	0.0188	0.0224	0.0277	0.0217

Job creation: Euro area versus non-members

	EA12	DENMARK	SWEDEN	UNITED KINGDOM
Mean	0.82%	0.26%	0.90%	0.64%
Maximum	2.40%	2.72%	2.43%	1.38%
Minimum	-1.86%	-3.13%	-2.04%	-1.59%
Std. Dev.	0.0108	0.0159	0.0134	0.0071

Source: Ameco

⁹ In a series of articles in the *Wall Street Journal* on 24 and 25 March 1998.

¹⁰ Collignon, S. (2003). *Monetary Stability in Europe*. Routledge London; Collignon, S. 2003. The European Republic. Federal Trust, London (downloadable from www.stefanollignon.eu).

The major threat to the survival of the euro is not economic performance, but political chauvinism. It has also led to faulty economic analysis on the one hand, and to anti-European populism on the other. Opponents of monetary union have now revived the OCA argument by claiming that "one size does not fit all", as if economic policy could be explained by fashion designers. They have re-discovered the famous critique by Margaret Thatcher's advisor Alan Walters who referred to simple textbook models, where investment and economic activity depends on the real interest rate.¹¹ If a boom in one country generates higher inflation, its real interest rate will fall and thereby further fuel the boom. The opposite happens in a stagnating economy. Hence, Walters argued, having the same monetary policy (i.e. interest rate) in these two economies is generating perverse effects. However, this argument suffers from a "bias in favour of the familiar", i.e. chauvinism.¹² We customarily measure inflation rates by national statistics and are therefore familiar with calculating real interest rates by using these national indices. Yet, in a single market, this is misleading. Why should one bundle German cars with Currywurst in a German price index and bundle Italian cars with pasta in an Italian index and then talk of German and Italian "real interest rates"? In a functioning single market, it would be more appropriate to bundle all cars together and then look at price-cost competitiveness in the car industry. What matters in this case is the cost of capital and labour. While wages depend on collective wage bargaining, which does make them dependent on Member States' jurisdiction, the cost of capital is the same for all debtors of similar quality, because of arbitrage in the single market. Hence, a fully integrated financial market is necessary for the efficient allocation of capital and that requires a single currency. Efficient and integrated financial markets are also a matter of fairness, for why should speculation be allowed to make Spanish taxpayers pay interest rates that are nearly twice as high as in Germany, when their public debt ratio is lower than in Germany? The political decision of abandoning the euro would affect the economic conditions of all citizens negatively – at a time when frustration and suffering is already widespread.

It is, however true that, especially in the early period of monetary union when many Southern Member States saw their interest rates come down and converge to Northern standards, the rapid reduction in the cost of capital has generated asset bubbles, notably in Spanish and Irish housing markets. If asset bubbles are a general phenomenon, monetary policy should be tightened.¹³ However, if they are limited to local or sectoral bubbles, as observed in Spain and Ireland, such problematic developments should be controlled by strict and efficient financial supervision. This would be far more cost-efficient than using different currencies.

Optimistic arguments about the sustainability of monetary union are based on sound economic logic, but they do not take into account political mistakes. Merkel's threat of excluding a Member State has opened the door to a destructive debate about the desirability of participating in monetary union. The Greek Commissioner Maria Damanaki has made the choice clear when she declared: "The biggest achievement of postwar

¹¹ The real interest rate is usually calculated as the difference between the nominal interest rate and the rate of inflation.

¹² Dictionaries define chauvinistic as: 'prejudiced belief in the superiority of one's own gender, group, or kind' or 'a blind belief in national superiority'. Hannah Arendt (Imperialism, Nationalism, Chauvinism", in *The Review of Politics* 7.4, October 1945, p. 457) found that "Chauvinism ... almost natural(ly) ... springs ... from the old idea of the 'national mission.' (...) (A) nation's mission might be interpreted precisely as bringing its light to other, less fortunate peoples that, for whatever reason, have miraculously been left by history without a national mission". Ravenscroft (*Philosophy of Mind. A Beginner's Guide*, Oxford, Oxford University Press, 2005, at p. 58) has described chauvinism simply as 'a bias in favour of the familiar'.

¹³ For an alternative view, see Posen, A. S., 2006. Why Central Banks Should Not Burst Bubbles. *International Finance* 9:1: 109–124.

Greece, the euro and the European path of the country are in danger. The scenario of Greece leaving the euro is now on the table together with its implementation. I am obliged to speak openly. We have a historical responsibility to see the dilemma clearly: We either agree with our lenders for a program of difficult sacrifices with a result, taking up our responsibilities for our past or we return to the drachma. All the rest is secondary under the current circumstances."¹⁴ The French leader of the Front National, Marine LePen, has pushed the logic to completion, when she conceded that leaving the euro is only a first step to break up the European Union and construct "l'Europe des nations".¹⁵

To summarise, an exit from the euro area is a form of debt default that would significantly increase the burden of financial debt for the public and private sector and would cause severe economic and political disruptions for all Member States of the European Union regardless of what their currency is. Long term benefits of having a national currency in the Single Market tend against zero and the cost of an exit from the euro can hardly be justified on rational grounds. The large euro area has ensured greater macroeconomic stability than was achievable with small national currencies. The major conflict is today between a fully integrated monetary economy and heterogeneous policy jurisdictions. The fathers of European Monetary Union have always emphasised that a single currency must be completed by political Union. Europe has now reached the point where it has to fulfil this pledge or the euro will disappear. The costs of a default of the European Union project are incalculably high. This is our fate and destiny, our Schicksal.

¹⁴ <http://www.damanaki.gr/>

¹⁵ http://dailymotion.virgilio.it/video/xg2gt2_marine-lepen-comment-sortir-de-l-euro-pour-l-emploi_news

2. NO DEFAULT?

A default occurs when a debtor does not repay the debt or interest under the terms of agreement made in the debt contract. The reasons may be lack of will or lack of capacity. When a debtor cannot raise the cash to meet the debt service but the value of his assets exceeds the liabilities, he is solvent and the default is due to liquidity problems. By contrast, if the liabilities are higher than the assets, a debtor is insolvent. In private law, an insolvent debtor is put under bankruptcy procedures. In earlier centuries, defaulting debtors were put into prison towers; nowadays one seeks to find ways how creditors can recuperate the maximum value of the debtor's assets. This is the purpose of bankruptcy laws and they have significantly stabilized modern financial systems. Yet, for sovereign defaults, there are no bankruptcy procedures and there are no courts that can easily enforce payments. This makes sovereign defaults disorderly and potentially dangerous. Although creditors can take insurance against a default and reduce their exposure by buying Credit Default Swaps (CDS), the destabilizing consequences for the banking system are enormous. An "orderly sovereign default" is an oxymoron.

Credit defaults are a moral calamity. Because a debt contract is a promise to pay, debt defaults go to the core of the moral cohesion of society.¹⁶ A broken promise always causes losses to credibility. Even if there are circumstances when defaults are not considered a crime, they are a violation of the fundamental human right to the protection of property. They expropriate creditors in favour of debtors and destroy the wealth of nations. Defaults must therefore not be taken lightly.

When dealing with defaults, one should distinguish between a "credit event", which means a debtor cannot pay his liabilities when they are due, and a "rating event" when rating agencies and financial markets evaluate the likelihood of a default before it occurs. Credit events trigger CDS payments; rating events are relevant for the liquidity management of creditors and are of particular concern for the banking system and monetary policy.

When a debtor can no longer honour the contracted debt obligations, the debt may need to be restructured in order to relieve the burden for the debtor and save the assets for the creditor as far as possible. A distinction is made between post-default restructurings, which are usually messy and carry higher costs for debtors and creditors, and pre-emptive pre-default restructuring processes, which require cooperation between debtors and creditors.

Restructuring can take several forms. First, a portion of the principal debt amount is written off. This is frequently called a haircut.¹⁷ The debtor's liabilities are reduced, but the creditor carries the loss. In its crudest form, creditors are coerced by law to accept the write-off. This is in effect an expropriation of creditors and violates property rights. However, creditors may choose more or less voluntarily to accept a partial write-off, if it is the only way to liquefy blocked assets. If it is entirely voluntary, such restructuring does not cause a credit event. Secondly, a default also occurs when the debtor does not put into question the obligation to repay the principal, but is no longer able to service the debt's interest. The net present value (NPV) of the creditor's claim is thereby reduced. A restructuring of sovereign debt that extends maturities and/or lowers the interest has this

¹⁶See: S. Collignon, 2010. *The Moral Economy of Money and the Future of European Capitalism*; in Talani, L.S., (ed), *The Global Crash: Towards a New Financial Regulatory Regime?*, London: Palgrave; *Die Moral des Geldes und die Zukunft des europäischen Kapitalismus*; In: *Vorgänge Heft. 2/2009*, S. 4-22

¹⁷ A haircut is defined as "the reduction of value to securities used as collateral in a margin loan. That is, when one places securities as collateral, the brokerage making the loan treats them as being worth less than they actually are, so as to give itself a cushion in case its market price decreases". See: <http://financial-dictionary.thefreedictionary.com/Haircut>

effect. Thirdly, reprofiling of debt is a softer form of restructuring, which includes a voluntary extension of debt maturity and thereby postpones (and does not cancel) repayment. We will now assess the costs of defaulting and reprofiling and then look at some evidence from emerging countries' experience.

2.1. The cost of defaulting

Defaults carry heavy costs.¹⁸ The creditor's wealth is reduced, and the debtor loses reputation and possibly access to future credit. If the creditor's losses are so important that they wipe out his net assets (the difference between assets and liabilities), they can cause systemic default chain reactions. The risk is particularly high in the banking sector, but it is in no way confined to monetary and financial institutions. Given the weight of sovereign debt, sovereign defaults carry a higher risk of systemic debt crises than private bankruptcies, although the Lehman collapse is a reminder of the high cost of large debtor defaults. In fact, Lehman was really "too big to fail", and the dogmatic attitude of letting the market deal with the misallocation of credit and the vindictive desire to punish "rich bankers" have caused welfare losses far higher than anyone ever imagined. A sovereign default in Europe is likely to have even worse consequences.

The sovereign debt literature usually focuses on two key costs of default: reputational or penalty costs for borrowers and the broader cost for the domestic economy, although there are additional factors, which can further increase the costs of defaults.

1. Reputational or penalty costs operate through three channels. First, a defaulting debtor may lose the potential for market access. Although this argument is well-established in economic theory and history, there has been less evidence for it in the more recent past. Richmond and Dias (2008) have studied defaults that took place between 1980 and 2005 and found that, on average, defaulters regained partial market access after 5.7 years and full market access only after 8.4 years. Borensztein and Ugo Panizza (2009) look at other evidence and conclude that, while countries lose access to financial markets during default, once the restructuring process is fully concluded, financial markets do no longer discriminate between defaulters and non-defaulters.¹⁹ Nevertheless, in the European context, any form of restructuring would lower the rating of sovereign debt to levels, where institutional investors (insurance and pension funds) would no longer be allowed to accept such paper. The reputational cost would also pose a serious problem for collateral held by the ECB. Second, some studies have seen the imposition of trade sanctions by creditor countries as the only viable mechanism that makes governments repay their debts.²⁰ However, in practice there has been little evidence that creditors have imposed trade sanctions in the aftermath of a default. In the European context, using trade sanctions as a penalty mechanism is incompatible with the Treaty on the European Union. Third, a default will have adverse effects on the government's cost of future borrowing. Although the empirical evidence does not suggest that a default necessarily closes off market access, it does point to clear adverse effects on borrowing costs. The experience from developing countries shows that such increases in borrowing costs are particularly prevalent in the case of 'serial defaulters'. In the European context, however, the non-negligible risk of

¹⁸ For a more detailed discussion, see: Eduardo Borensztein and Ugo Panizza, 2009, *The Costs of Sovereign Default*; *IMF Staff Papers* Vol. 56, No. 4

¹⁹ Richmond, Christine, and Daniel A. Dias, 2008, "Duration of Capital Market Exclusion: Stylized Facts and Determining Factors" (unpublished; UCLA), quoted by Borensztein and Panizza, 2009: 699.

²⁰ Dooley, M. P. 2000. *International financial architecture and strategic default: can financial crises be less painful?* Carnegie-Rochester Conference Series on Public Policy, Vol. 53, Issue 1, Pages 361-377

default is already enough to push up the cost of borrowing. Greece, Ireland and Portugal have lost access to financial markets and needed to be funded by the European Financial Stabilisation Facility, although it was not obvious that any of these Member States was insolvent. Reputational costs can therefore generate defaults as self-fulfilling prophecies, which makes subsequently returns to sustainable debt ratios more difficult.

2. Broader financial costs for the domestic economy of a defaulting state go beyond those caused by the tightening in the terms and conditions for borrowing imposed by foreign creditors. A number of studies suggest that a sovereign default is often associated with a loss in output growth and increases in unemployment. There is evidence that the harsh conditions imposed on Greece for getting access to the EFSF have re-enforced the recession and are responsible for the loss of government revenue (see below). Such broader output costs can occur because of the impact of a default on the domestic financial system, as many developing countries have experienced in the past, but it has also been witnessed during the Global financial Crisis after the Lehman default. The mechanism, which generates these output losses, is the high liquidity preference by risk adverse banks, which reduce corporate access to external finance. Empirically, it has been found that on average, real GDP shrinks by 7.5 percent in countries that default through payment suspensions, whereas it only declined by 3.6 percent in countries that went through a crisis but restructured their debt pre-emptively.²¹ Thus, it is clear that a default does not come without substantial costs to countries' welfare.

3. Several additional factors that can augment the cost of a default. First, the length of the crisis determines output and employment losses. The longer a country stays in arrears, the higher will be the long term output losses in terms of potential growth rates because of hysteresis effects in the labour market and the reduced accumulation of capital and technology. Secondly, a sovereign default could cause a banking crisis. In this case, the output losses tend to be particularly severe, because in addition to the loss of financial asset values, the real economy will experience a credit crunch. Thirdly, the frequency of defaults not only in time, but also in space, i.e. affecting several Member States, will further compound the negative effects. With the integrated banking system in the EU, credit problems will quickly spill over into other countries and the damage is not confined to defaulters. Some studies have found that in times when several countries are facing a default, 'good' countries can also lose access to international capital markets thereby leading to further sovereign defaults. In the EU, the risk is particularly high and it is not limited to the Euro area.

2.2. The cost of restructuring

Rating agencies, like S&P, will downgrade a sovereign bond to selective default status (or equivalent categories) if the sovereign has failed to pay one or more of its financial obligations when it was due.²² The downgrade will automatically occur when the restructuring is coercive (i.e. when it occurs under the threat by the sovereign to default). In case of a voluntary restructuring, there will also be a selective default status, but this

²¹ ECB, internal paper; mimeo

²² An obligor rated "SD" (Selective Default) has failed to pay one or more of its financial obligations (rated or unrated) when it came due. An "SD" rating is assigned when Standard & Poor's believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. A prime example of "Selective Default" is the series of full faith and credit sovereign obligations issued as the "Chinese Government Five Per Cent Reorganization Gold Loan", scheduled to mature in 1960 and which debt remains in default as an external payment obligation of the successor government of China (i.e., the Communist Chinese government, which was established on October 1, 1949). See: http://globalsecuritieswatch.org/Sovereign_Ratings_Definitions_and_Criteria

status would only be allocated to the old bonds once it is clear to the rating agency that the exchange offer will be successful. Hence, voluntary restructuring is less costly than coercive solutions. An example is the Uruguay restructuring in 2003.

If coercive defaults are extremely costly, it may appear cheaper to negotiate a debt restructuring agreement through a debt exchange offer. Under an exchange offer, the sovereign issues new bonds, which reflect the debt restructuring plan, and exchange this bond with existing "old bonds". Yet, in recent years, government debt restructuring has become more complicated, because financing has shifted from bank loans to bonds financing. The mobility of bonds makes the coordination of creditors' opinions and the identification of creditors more difficult and this increases the cost of voluntary debt restructuring. The exchange offer must therefore provide sufficient incentives for bond holders to be willing to give up their rights and to trade the old bonds in. The trick is finding the right incentives for bondholders that will improve the perception that the sovereign debt is sustainable. If bondholders of existing bonds reject the exchange offer, there is no legal way to force them to accept it. This problem is called the hold-out problem.

Voluntary restructurings always involve mild haircuts. If a sovereign debtor is insolvent, the debt write-off may be insufficient to restore solvency. Thus, voluntary restructuring is mostly appropriate for liquidity problems. However, if such a restructuring is perceived by market participants as not solving the fundamental problems, this could actually lead to an increase in the default probability after the restructuring (this was for instance the case in the Ukraine restructuring of 1998). We must conclude that the costs of voluntary debt restructurings are also substantial, even if they may be less than for an outright default.

However, the biggest looming cost factor is the potential for a banking crisis. Given that banks carry a large part of government debt in their portfolio, a write-off of government liabilities or a reduction in their net present value would seriously reduce banks' assets and net capital. This would have negative effects on bank's lending capacity.²³ It is fashionable to ask for the involvement of the private sector in a potential restructuring of public debt. In clear language this means that banks rather than taxpayers should pay for restructuring losses. However, pushing the buck does not solve problems; it may actually make them worse. Table 2 shows the exposure of banks in some Member States with respect to our Southern European economies as a percentage of banks' net capital. The exposure towards Greece, for example, is relatively low for the euro area, but significant for Portugal, so that a Greek default is most likely to spill over into Portugal and from there to Spain and then to the Netherlands, Belgium, Germany and France. Overall, a default of the four risk sovereigns with a recovery rate of 50% would wipe out between 1/5 to more than 1/3 of banks' own capital reserves. This would come after banks have already made losses of similar proportion after the Lehman crisis, to which governments had to respond by emergency funds and nationalizations. Experiencing so quickly after Lehman a second major financial shock would have devastating economic, social and political effects.

²³ See ECB, Monthly Bulletin 05/2011, Box 2.: Results of the April 2011 Bank Lending Survey for the Euro area.

Table 2. Bank Balance sheet Exposure vs Southern Europe

(claims % on total capital)

	Area Euro	France	Germany	Belgium	Netherlands	Italy	Greece	Ireland	Portugal	Spain
Exposure vs Greece	4.5	8.9	6.7	2.6	3.7	0.9		0.6	17.7	0.3
Exposure vs Ireland	8.6	4.6	23.2	34.3	12.3	2.9	0.8		8.9	2.6
Exposure vs Portugal	6.4	4.2	7.1	4.8	4.8	0.9	0.1	1.8		22.4
Exposure vs Spain	19.3	22.0	35.7	29.0	56.7	6.3	0.6	10.1	46.0	
Potential Losses in Southern Europe (with a recovery rate of 50%)	19.4	19.9	36.3	35.3	38.7	5.5	0.8	6.2	36.3	12.6
Effective Losses registered during 2007-2009 crisis	13.5	9.8	22.7	42.9	18.9	7.9	15.6	16.3	0.0	10.4

Fonte: elaborazioni su dati Bis, Bce, Bloomberg.

2.3. Emerging market experience with pre-emptive debt restructuring

Sovereign debt restructurings have been frequent in international financial markets. Pakistan, Ukraine, Uruguay, the Dominican Republic, Grenada and Belize are examples for the experience of emerging market economies that went through a pre-emptive debt restructuring, i.e. debt restructurings with no missed payments.

Under pre-emptive debt restructurings, sovereigns tend to receive only limited debt reduction. The length of a pre-emptive debt restructuring episode has been between 3 and 31 months when the episode is defined as the time when negotiations start until the time the deal is implemented (e.g. exchange offer). Countries issued their first international bond 3 to 21 quarters after the debt restructuring was finalized. In all cases (except Uruguay), some capital controls were imposed in the course of the debt restructuring. Moreover, in all cases except Ukraine there was discrimination against external creditors. Sovereigns tend to discriminate against foreign creditors if they are struggling primarily with external obligations. They may base their decision to discriminate on the ex ante health of their banking system, except when a significant amount of debt is denominated in foreign currency, when intermediation is low, and/or when international capital market lending is important for the domestic private sector. In the euro area, borrowing in foreign currency is very limited and there is no risk that the euro area would run out of foreign exchange reserves. Banks get liquidity from the ECB. Discriminating between domestic and foreign creditors (mainly banks) within the euro area would be a violation of Single Market legislation. To the degree that such restrictions have contributed to the success of debt restructuring in emerging economies, they are not applicable to euro area Member States. This fact may reduce the likelihood of successful debt restructuring in the euro area.

Table 2 gives an overview of the restructuring programmes in emerging economies.

Table 3. Key features of pre-emptive debt restructuring cases and agents involved

	Pakistan	Ukraine	Uruguay	Dom.Republic	Grenada	Belize
Restructuring announcement	May-99	Aug-98	03-Mar	12-Apr	10-Apr	08-Jun
Duration (quarters)	12	7	1	5	3	2
Debt (% of GDP)	84	42	103	56	129	98
Restr. debt (% of GDP)	31	9	43	10	53	97
Restr. debt (% of total debt)	61	53	42	17.5	41	98
Paris Club restructuring % of GDP	24.9	1.85	N	1.5	2.83	N
London Club restructuring % of GDP	1.49	N	N	0.9	N	N
External Debt	Y	Y	Y	Y	Y	Y
- Foreign currency bond debt	Y	Y	Y	Y	Y	Y
- Foreign currency bank debt	Y	Y	N	Y	Y	Y
Domestic debt restructuring	N	Y	Y	N	Y	N
Official sector debt restructuring	Y	Y	N	Y	Y	N
NPV loss (%)	(8-27)	(5-59.2)	(8-20)	(1-2)	(40-45)	(1-28)
Participation in exchange (%)	99	(82-100)	(90-99)	97	91	98
Capital controls	Y	Y	N	Y	Y	Y
Deposit freeze	Y	N	Y	N	N	N
1 st international bond issue (quarters)	21	17	3	8	Not yet	Not yet
EMBIG below 1000 bp (quarters)	11	13	1	4	N/A	N/A

Source: ECB

In conclusion, pre-emptive debt restructuring carries significant costs, although they may be less than for coercive solutions. It is not an easy way out from a sovereign debt crisis. The experience from emerging markets with weak domestic currencies and underdeveloped financial markets may not be applicable for Member States of the Euro area, and it teaches us not to expect a miracle cure from pre-emptive debt restructuring in Southern Europe. The gains from debt relief may not compensate the reputational costs. That leaves us with the option of bailing out distressed debtors.

3. NO BAIL-OUT?

The policy debate on European sovereign debt has been dominated by references to the so-called No-bail-out clause. The relevant Art. 125 in the Treaty on the Functioning of the European Union says:

“The Union shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of any Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project. A Member State shall not be liable for or assume the commitments of central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of another Member State, without prejudice to mutual financial guarantees for the joint execution of a specific project.”

This article protects taxpayers in one Member State from paying for the liabilities of another Member State. It is therefore a guarantee of the democratic principle “No taxation without representation”. Debt assumption would occur, if a debtor is insolvent and another Member State would pay for the defaulting Member States’ liabilities. However, Article 125 TFEU does allow Member States or the Union to give liquidity support in the form of credit to a sovereign debtor who has difficulties in accessing financial markets. This interpretation has been the consensus among European authorities at least since May 2010 and the proposed change to the Treaty, which is to set the legal basis for the European Stabilisation Mechanism, clearly states that such support should be given only when it is absolutely necessary to prevent harm from the euro.²⁴

Nevertheless, if the receiving Member State were insolvent, the lender would effectively have to “assume” the liabilities of the borrower. The issue of bail-out therefore boils down to an assessment of solvency. If a sovereign debtor is insolvent, providing more funding would be a violation of the Treaty; but if solvency is assured, providing the required liquidity is in the interest of financial stability. *Thus, liquidity bail-outs are conforming to the Treaty, insolvency bail-outs are not.*

In practical terms it is often difficult to distinguish between insolvency and illiquidity. Moreover, if a liquidity shortage causes a default, the consequence may be a depreciation of asset values that translate ex post into insolvency. The provision of sufficient liquidity should have avoided the insolvency. The question whether a debtor is solvent must therefore be assessed against the liquidity needs over time. The degree to which the evolution of fiscal policy is consistent with intertemporal solvency—the requirement that public debt not explode in the long run—is the key for assessing the sustainability of public

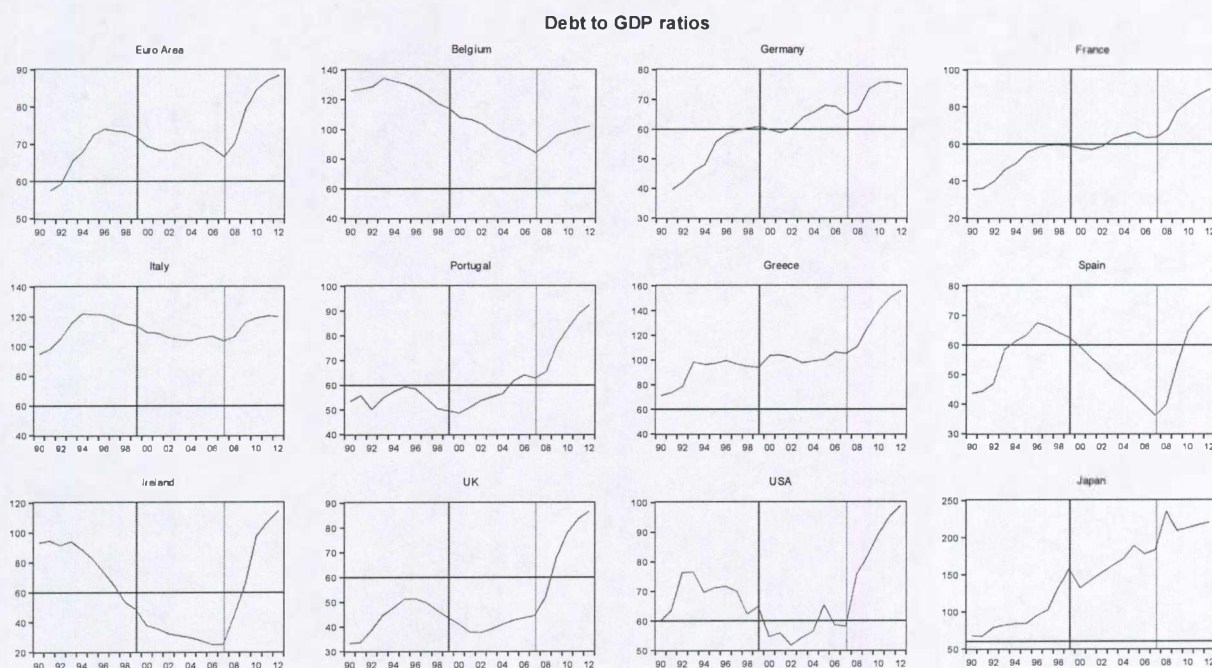
²⁴ Following opinions from the Commission, the ECB and the European Parliament, the European Council proposed on 25 March 2011 amending Article 136 of the Treaty on the Functioning of the European Union with regard to a stability mechanism for Member States whose currency is the euro by an addition with the following wording: “*The Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro area as a whole. The granting of any required financial assistance under the mechanism will be made subject to strict conditionality.*” (European Council Decision 2011/199/EU)

debt.²⁵ We will now analyze different concepts for assessing public debt sustainability and then draw the conclusions for solving the European sovereign debt crisis.

3.1. Explaining Europe's rising public debt

Figure 1 shows the evolution of the debt-GDP ratio for some EU Member States and the USA and Japan. It shows that nearly everywhere debt ratios have risen as a consequence of the Global Financial Crisis in 2008. Prior to that, public debt has increased only in Germany, France and Portugal, while it was fairly stable in Greece and has fallen in Spain and Ireland. A similar pattern is observed in the UK and the USA. In Japan, by contrast, public debt has risen more or less continuously from 60 to over 220 percent of GDP over the last 25 years without Japan facing major difficulties in financial markets.

Figure 1



Source: Ameco

Are these rising debt ratios sustainable? This is another way of asking whether Euro area Member States are solvent. Intertemporal solvency requires that future primary budget surpluses repay all liabilities; at some point adjustments are therefore needed in order to bring fiscal policy back on track. The objective in the euro area is a debt ratio below 60% of GDP, but most Member States are far from meeting this objective. In principle, a sovereign has the right to tax and (not) spend, and credible policy changes in these variables are usually assumed to make the problem of insolvency disappear. However, in a democracy (“no taxation without representation”) the government’s capacity to tax may hit the

²⁵ See Enrique G. Mendoza and Jonathan D. Ostry, 2007. International Evidence on Fiscal Solvency: Is Fiscal Policy “Responsible”? IMF Working Paper 07/56

constraint of taxpayers' willingness to pay. In this case, public debt becomes unsustainable for political reasons. Furthermore, the implementation of adjustment programmes does not only depend on political will, but also on the macroeconomic environment.²⁶ The debt service will depend not only on the level of interest rates, but also on economic growth, which will increase revenue and lower the debt-GDP ratio. The assessment of debt sustainability must take all these factors into account.

However, it is important to understand that these factors are complementary and do not exist independently from views and judgments about a state's public finance. For example, the simple perception of a state as insolvent, even if it is not actually the case, may cause a liquidity crisis that pushes up interest rates, lowers growth and government revenue, and thereby causes a default that then translates into insolvency. Public debt dynamics work like quantum mechanics: an observed object is transformed by its observation.²⁷ This is why easy talk about defaults, restructuring and euro-exit are simply irresponsible.

Let us look at the "quantum mechanics of public debt". The classic formula in the literature for explaining the change of the debt-GDP ratio is:

change in debt ratio = debt service - primary surplus

$$\Delta d = (r - g)d - s$$

Where d stands for the debt-GDP ratio, r for the nominal interest rate, g for the nominal growth rate and s is the primary budget position, i.e. government revenue minus expenditure net of debt service.

From this formula, it is clear, that the debt ratio will fall when the primary surplus s is higher than the debt service $(r-g)d$. Yet, the debt service depends on the relation between interest and growth rates. Interest rates reflect financial market's perceptions of risk and liquidity preferences, but they also affect investment and growth. The order, in which these developments occur, is not irrelevant: if an exogenous shock raises the risk perception of a debt default, the intertemporal budget constraint requires that the primary budget position improves, and this may lower growth and re-enforce the risk. But if the shock raises the expectation of higher surpluses, the intertemporal constraint would lower interest rates and thereby stimulate growth. For this reason it is of paramount importance to manage expectations in financial markets and reduce uncertainty.

Political brinkmanship does not help. Unfortunately, Europe's complex intergovernmental governance with a large number of actors (not only governments, but political parties, journalists, etc.) has proven incapable to re-assure markets, as can be seen from the high interest spreads. It is in line with this understanding that the European Central Bank has called for a "quantum leap" in governance, "to draw all the lessons from the first years of Economic Union and from the weaknesses revealed by the global crisis." It is only consistent with this approach when ECB President Claude Trichet invites the European Parliament "to reinforce the draft secondary legislation that is presently examined in the 'trialogue' between the Parliament, the Commission and the Council" and calls for setting up a Ministry of Finance of the Union.²⁸

²⁶ See: S. Collignon and S. Mundschenk, 1999. The Sustainability of Public Debt in Europe; *Economia Internazionale*– Numero Speciale, Supplemento al Vol. LII, Num. 1, Febbraio

²⁷ According to the uncertainty principle of Heisenberg, if the two operators representing a pair of variables do not commute, then that pair of variables are mutually complementary which means that they cannot be simultaneously measured or known precisely (http://en.wikipedia.org/wiki/Uncertainty_principle) . In our case, the macroeconomic environment $(r-g)$ and the fiscal policy space are complementary and do not commute.

²⁸ Speech by Jean-Claude Trichet, President of the ECB, on receiving the Karlspreis 2011 in Aachen, 2 June 2011.

<http://www.ecb.int/press/key/date/2011/html/sp110602.en.html>

Nevertheless, economic theory does provide us with a theory how the “quantum mechanics of public debt” will lead to sustainable debt ratios. Ramsey’s Golden Rule says that in the long run equilibrium, growth and interest rates should converge, i.e. $r=g$, which would imply that the debt service is tending to zero. In this case, a positive primary balance would be sufficient to reduce debt ratios. However, in reality, the so-called growth-adjusted interest rate ($r-g$) varies substantially. During the first decade of European Monetary Union it was significantly lower than in the previous decade. In the South it was mostly negative and in the large economies of the euro area closer to zero (see Table 4). However, the strong negative output shock during the Global Financial Crisis has pushed up risk premia for holding financial assets in Southern economies and the growth-adjusted interest rate has now reached high levels not seen since the ERM crisis in the early 1990s. Hence the post-Global Crisis debt service has become excessively burdensome. Furthermore, because of the lack of growth, government revenue has also fallen and this has turned primary surpluses into deficits. It is therefore not surprising that public debt in Southern Member States looks unsustainable. However, a serious analysis must look at longer term perspectives. 11

Table 4. Growth-adjusted interest rates

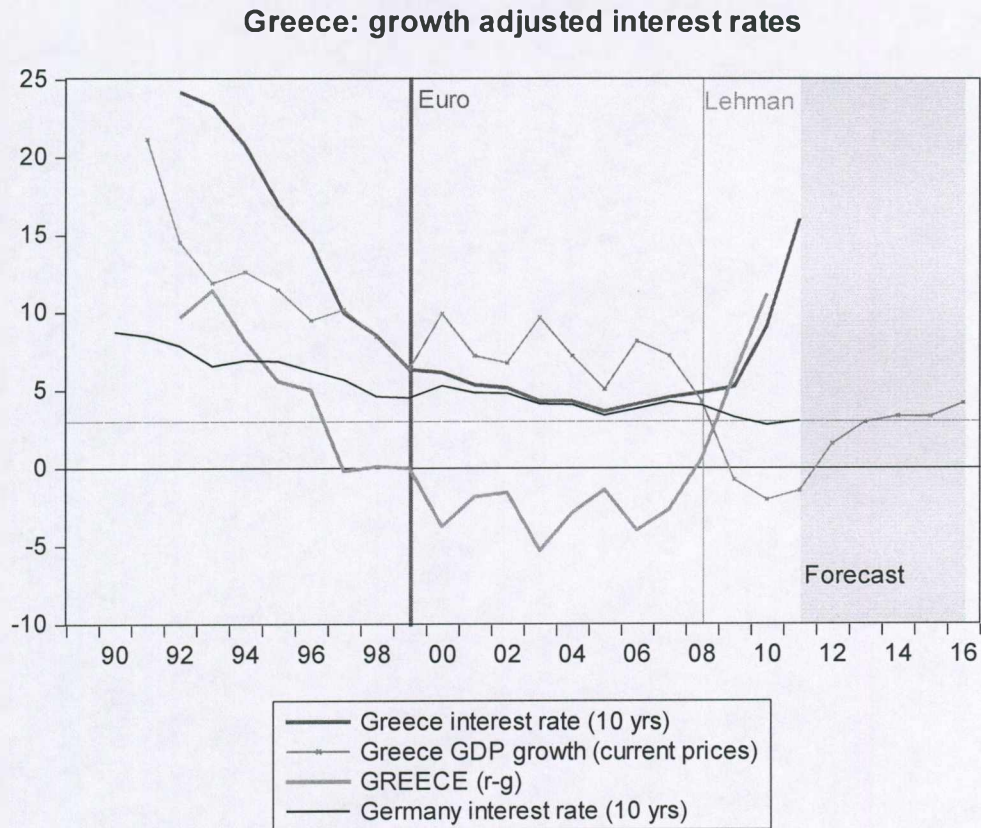
Country	period	mean	maximum	minimum	standard deviation
Greece	1992-2010	1.76	11.40	-5.35	5.42
	1999-2007	-2.64	-0.03	-5.35	1.61
	2008-2010	5.90	11.17	0.56	5.31
Portugal	1992-2010	1.05	6.53	-3.77	2.62
	1999-2007	-0.23	2.15	-2.46	1.30
	2008-2010	3.91	6.53	2.59	2.27
Ireland	1992-2010	-1.74	17.22	-9.53	7.19
	1999-2007	-5.36	-2.25	-9.50	2.71
	2008-2010	12.07	17.22	9.38	4.46
Spain	1992-2010	0.24	7.17	-4.36	3.72
	1999-2007	-2.99	-1.93	-4.36	0.80
	2008-2010	3.91	7.17	1.14	3.05
Italy	1992-2010	2.74	8.25	0.06	2.74
	1999-2007	0.70	1.51	0.06	0.55
	2008-2010	4.29	7.42	2.14	2.78
France	1992-2010	1.97	6.07	-0.96	2.18
	1999-2007	0.40	1.44	-0.96	0.94
	2008-2010	2.79	5.71	1.09	2.53
Germany	1992-2010	2.34	6.67	-1.42	1.81
	1999-2007	1.94	3.37	-0.23	1.25
	2008-2010	2.42	6.67	-1.42	4.06

Source: IMF

Figure 2 shows the evolution of the growth-adjusted interest rate for Greece and the other Southern and central economies over two decades. Because of the dominant role of the German Bund, which serves as the bench mark in the European bond market, Figure 2 also shows German interest rates in each chart. We find that in Greece, economic growth exceeded interest rates during the first decade of the euro. This changed with the Global Financial Crisis and the subsequent Greek debt crisis. While Greek interest rates were close to German levels before these crises, the two rates drifted apart afterwards. According the IMF forecasts, growth in Greece will pick up in 2011 and exceed German interest levels in 2013. A largely similar, although slightly more optimistic, picture emerges for Ireland, Spain and Portugal. In Italy, France and Germany, the growth-adjusted interest rate was

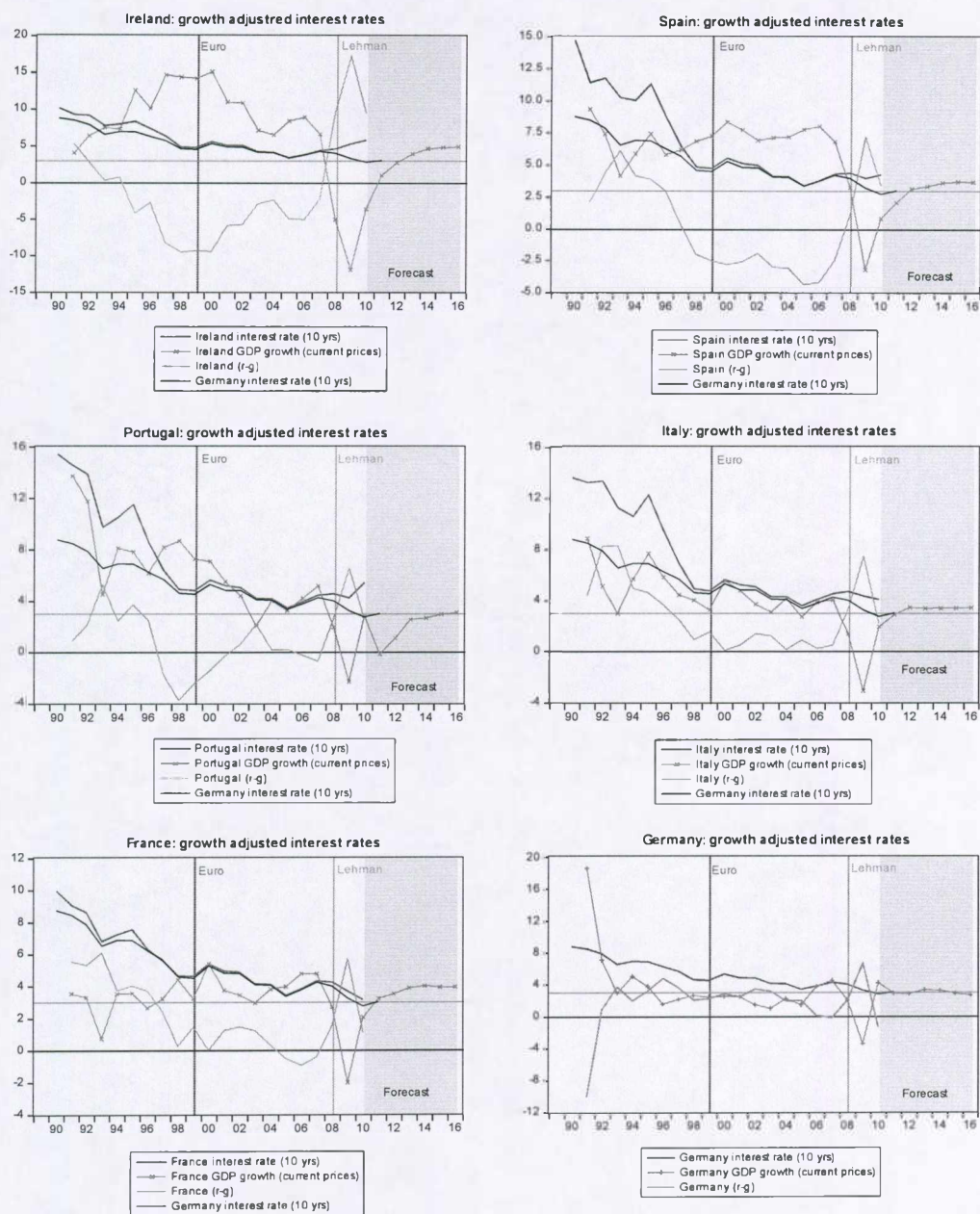
positive even before 2008, because economic growth was so low. However, if risk perception and interest rates remain substantially above German rates, the debt service will remain excessively high and this will continue to push debt levels up.

Figure 2.



Source: IMF

Growth-adjusted interest rates



Source: IMF

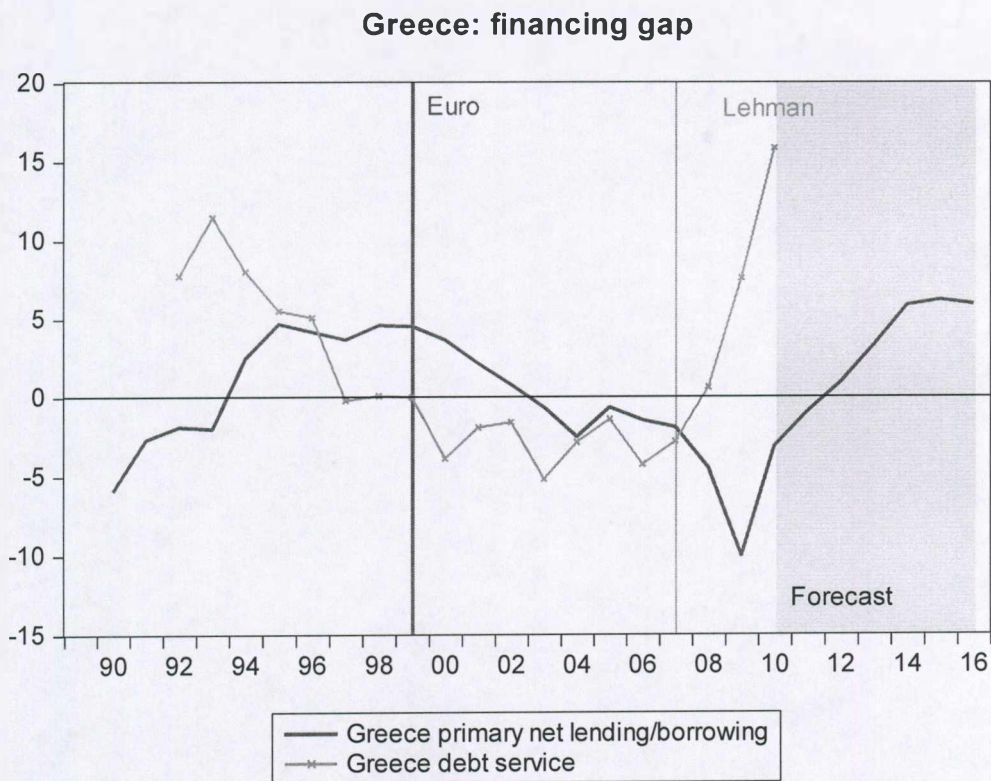
This is clear from Figure 3, which shows that the public debt service has remained negative as long as growth exceeded interest rates and was mildly burdensome in the 3 large economies. However, the primary budget position was not always positive. In Portugal it was always, in France and Germany mostly negative. This explains the rising debt ratios in Figure 1. However, note the dramatic deterioration in the primary budget position after 2007, when the Global Financial Crisis caused recessions everywhere and required fiscal stimulus packages.

The problem with Greek fiscal policies in the past was the falling primary surplus (primary net lending/borrowing), which turned negative in 2003 and could no longer service the debt after 2008. This is where the irresponsible policies of the Karamanlis government show up. But the present day problems of the Hellenic Republic are due to the high debt service,

which is 15% of GDP. Given a primary deficit of 10%, this situation would require a daunting 25% of GDP consolidation program. One may draw the conclusion that Greece is insolvent, but such judgment does not take into account the longer term developments, most importantly the return to growth and the role of interest rates.

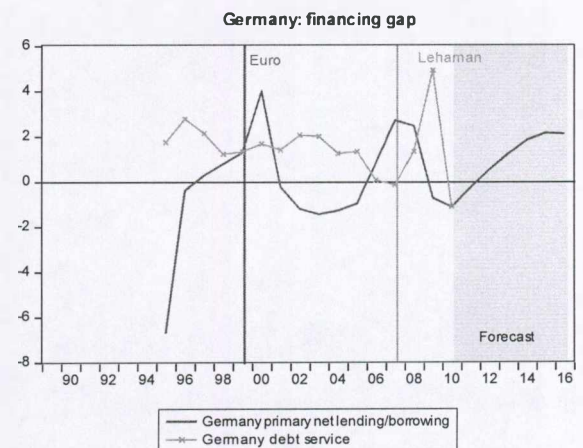
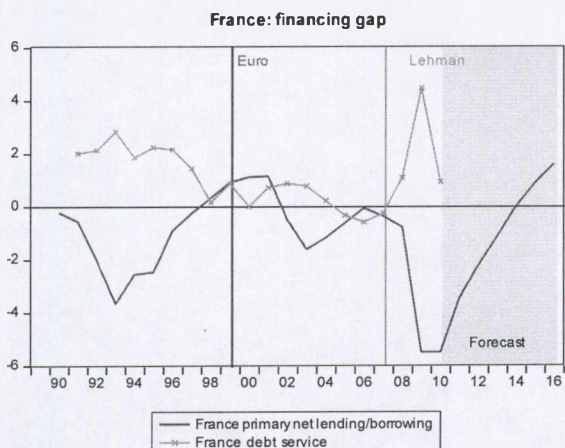
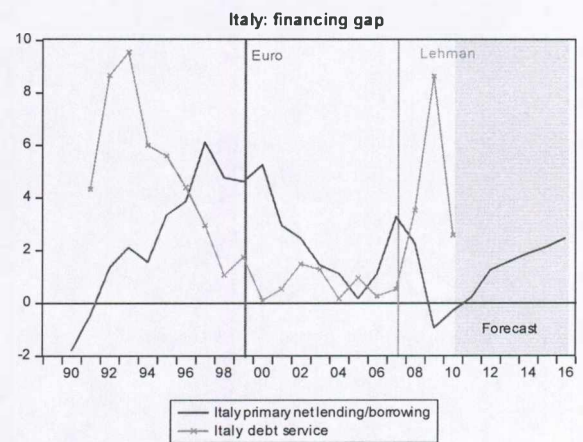
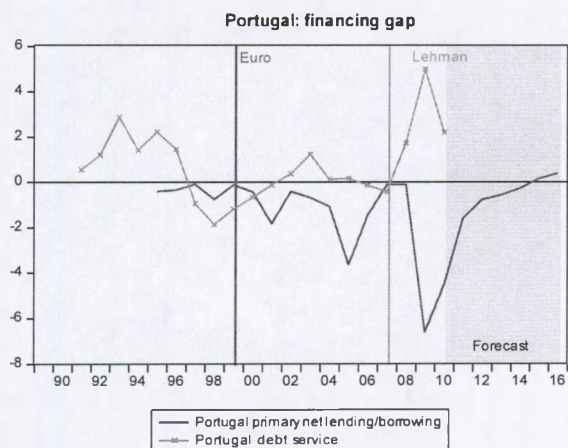
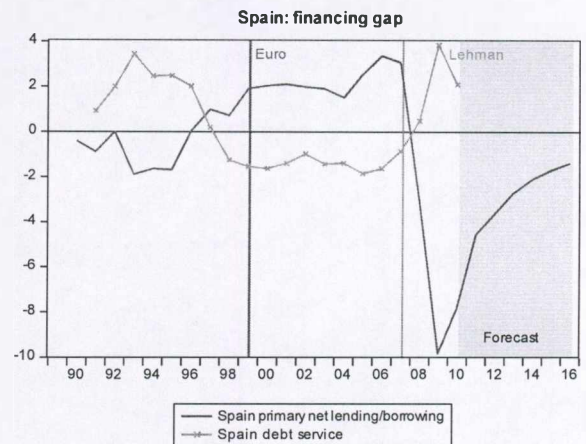
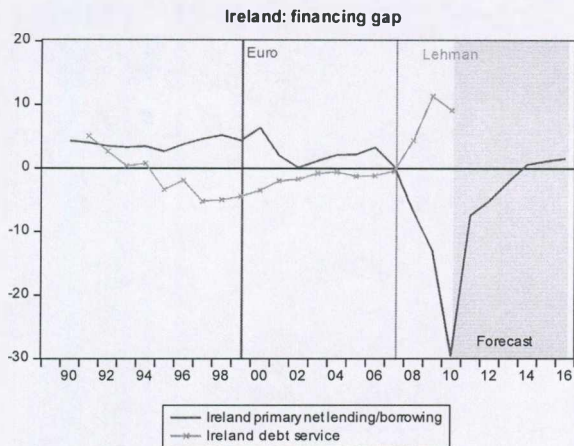
From the above mentioned formula for debt changes we conclude that two things have to happen in order to bring down Greek and other debt ratios: (1) a positive primary balance must be achieved, which according to the IMF will be reached in 2012. (2) interest rates must again come down to a level close to German rates. These are two minimal conditions which are sufficient to ensure that any Member State remains solvent. With German interest rates the Greek debt ratio will fall and will remain sustainable, if we assume conservatively that economic growth rates will exceed 1 % and inflation will be close to the ECB target of 2%. If we assume more realistically that Greece's potential growth rate is 3%, the situation looks even brighter.

Figure 3.



Source: IMF

Financing gap



3.2. Assessing debt sustainability

How can these two conditions be realized? Appropriate macroeconomic policies should bring GDP growth back to its long run potential of approximately 3%. The most immediate task is to reduce interest rates. Quite obviously, providing liquidity can bring down interest costs and therefore improve debt sustainability. However, simply bailing out Member States that have problems with accessing financial markets is no answer as it is an invitation to moral hazard. A necessary requirement for sustainable debt is that the general government of the

distraught state generates a positive primary budget position sufficient to service the debt over time. This places the primary budget balance into the centre of debt policies. However, debt sustainability does not require that primary surpluses cover the debt service at all times. There may be good reasons to "smooth" the tax burden for citizens, to respond to cyclical shocks and to finance long term investment which will yield revenue in the future. The question is then, how much adjustment is required to ensure long term debt sustainability.

The literature on this issue is long and not easy to read.²⁹ Modern approaches seek to assess, whether the intertemporal budget constraint is met, which means that future surpluses must pay for today's deficits. Bohn (1997, 2005, 2007) has formulated a framework that allows testing how "responsible" fiscal policy is. "The intuition is that a positive conditional correlation between the debt/GDP ratio and the primary surplus/GDP ratio means that [...] the fiscal authority reacts to positive changes in the public debt ratio by systematically raising the primary surplus/GDP ratio. Bohn proved that [...] a positive regression coefficient on the debt variable is sufficient to establish that fiscal policy is responsible"³⁰, i.e., will satisfy the government's intertemporal budget constraint.

However, while Bohn's approach works well for the United States, it is statistically less significant for the European Union. The reason may be that in Europe fiscal policy focuses more on deficits than on debt targets. Collignon (2011) has therefore looked at the conditions under which European policy rules like the Excessive Deficit Procedure and the Stability Pact are compatible with the intertemporal budget constraint. A very simple condition emerges: even in the worst case, public debt is sustainable if governments respond to an overshooting of the deficit target by an increase of the primary surplus relative to GDP that is higher or at least equal to the growth-adjusted interest rate. To take the case of Greece in the present environment of interest and growth rate, this means that a consolidation effort of at least €2.645 billion per annum or 1.125% of GDP would fulfill the debt sustainability constraint.³¹ This is considerably less than some panic-generating papers have postulated.³² Furthermore, if we assume conservatively a steady state nominal growth rate of 3% (i.e. 1% economic growth plus 2% inflation), the long run debt ratio of Greece would converge to below 100% given the rules of the Stability and Growth Pact. More realistically, if we take the growth potential of 3%, which is Greece's historic record and assume inflation of 2%, the steady state would tend below the 60% debt ratio. These results are obtained by ignoring policies that respond to the debt criteria of 60% and only focus on the deficit ratio. The new rules of the Stability and Growth Pact proposed by the Commission³³ envisage a stronger role for debt criteria. They suggest an adjustment rule of 5% of the excess of the debt ratio over the 60%, which may be written as: $\Delta s =$

²⁹ For an overview see: Luis Focerrada, 2005. Public debt sustainability. Notes on debt sustainability, development of a domestic government securities market and financial risks; *Analisis Economico*, N^o m. 44, vol. XX.

³⁰ Mendoya and Ostry 2007, p 4.

³¹ This result is obtained by applying the sustainability condition $\alpha \geq (r - g)$ to the policy rule $\Delta s = \alpha(\text{def} - 3\%)$. If we take Greece's present growth-adjusted interest rate as $(r-g)=15\%$ and the 10.5% budget deficit for 2010, we get: $15\% \cdot (10.5\% - 3\%) = 1.125\%$ of GDP.

³² See for example Zsolt Darvas, Jean Pisani-Ferry and Andre Sapir, 2011 (A Comprehensive Approach to the Euro-Area Debt Crisis; *Bruegel policy brief*, Issue 2011/02 February 2011) consider that Greece needs a primary budget adjustment in the order of 8-18%. Not surprisingly they conclude that the Hellenic Republic is insolvent.

³³ "A debt-to-GDP ratio above 60% is to be considered sufficiently diminishing if its distance with respect to the 60% of GDP reference value has reduced over the previous three years at a rate of the order of one-twentieth per year. European Commission, 2010. *Economic governance package (1): Strengthening the Stability and Growth Pact*

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/455&format=HTML&aged=0&language=EN>

$\beta(\text{debt ratio} - 60\%)$, where $\beta=5\%$. It can be shown that this rule alone would also guarantee debt sustainability.³⁴

These models for assessing the sustainability of public debt give a clear indication that Greece is not insolvent. It suffers from a liquidity crisis. The most urgent political task must therefore be to reduce interest rates and improve economic growth. However, the extremely severe adjustment program imposed in 2010 as a condition for accessing support from the EFSF clearly has made things worse. A new approach is needed.

3.3. Dealing with the liquidity crisis

The dominant view on Europe's debt crisis is that it is a consequence of excessive deficits and fiscal laxity due to the insufficient implementation of the Stability and Growth Pact.³⁵ The policy response is to strengthen fiscal discipline and to impose harsh consolidation programs. While the European philosophy of balancing budgets over the medium term is sound on economic and social justice grounds, it is causing a disaster when it is forced upon an economy hit by severe economic shocks. Reinhart and Rogoff (2010)³⁶ have shown that historically sovereign defaults often follow financial crises and Kindleberger and Aliber (2005:108) observed that "authorities may precipitate a panic by brusque action in the early stage of distress".

There is growing evidence that the agreement between the Council and the government of the Hellenic Republic, which amount to permanent fiscal consolidation measures of at least 8 % of GDP,³⁷ may be "a case of medicine doing more harm than good"³⁸. According to the European Commission's Spring Forecast 2011, GDP in Greece has fallen over the three year period 2009-2011 by -10%, private consumption by -13.2%, and investment by -44.8%. Exports have fallen by -20.1% in 2009 and are expected to increase by the end of 2011 by 14.5%. On the other hand, public consumption increased in 2009 by 10.3% and is now down by 9.1%. One does not have to be a Keynesian economist to understand that a contraction of all demand components will shrink income and tax revenue and thereby push Europe into the abyss of a debt crisis. "Structural reforms", the buzz word used by European authorities that often masks their lack of action, may identify right policies for the long run, but in the immediate crisis they are the wrong instrument. Financial markets are correct when they do not believe that this story could end well. And while the European Council ponders about further consolidation measures, the people in the streets of Athens and elsewhere signal clearly that their "willingness to pay" has come to an end, when the willingness to help does not exist in other Member States. Similar developments can be observed in other Southern European countries (including Ireland).

³⁴ The sustainability condition is $\beta \geq (r - g)^2$, which implies: $\beta = 0.05 > 0.0225$

³⁵ See for example: Matthias Kullas & Dr. Jessica Koch, 2010. Reform des Stabilitäts- und Wachstumspakts – Schneller, Schärfer, Konsequenter? Analyse der Vorschläge der Kommission und der Van-Rompuy-Gruppe cepStudie; http://www.cep.eu/fileadmin/user_upload/Kurzanalysen/Studie_Reform_SWP/CEP-Studie_SWP_und_makroökonomische_Ueberwachung.pdf

³⁶ Reinhart, C., and Rogoff, K., (2009), *This Time is Different: Eight Centuries of Financial Folly*, Princeton University Press

³⁷ Council Decision of 7 March 2011 amending Decision 2010/320/EU addressed to Greece with a view to reinforcing and deepening the fiscal surveillance and giving notice to Greece to take measures for the deficit reduction judged necessary to remedy the situation of excessive deficit (2011/257/EU)

http://ec.europa.eu/economy_finance/sgp/pdf/30_edps/104-09_council/2011-03-07_el_126-9_council_en.pdf

³⁸ Curiously, this has been the assessment by Michael D. Bordo and Anna J. Schwartz, (2000. Measuring real economic effects of bailouts: historical perspectives on how countries in financial distress have fared with and without bailouts. Carnegie-Rochester Conference Series on Public Policy, 53:81-167) of the effects of IMF involvement in sovereign debt crises in emerging countries.

What can be done? Priority must be to restore growth by stimulating demand. Our analysis of Greece's debt dynamic has shown that smoothing the fiscal adjustment over a much longer period is perfectly compatible with the sustainability of debt. Hence a moderate fiscal stimulus is a sign of responsibility in the present situation. Of course, this goes hand in hand with structural reforms of the tax system and a crack down on tax evasion. Secondly, the return on the capital stock of Greece is higher than in the euro area,³⁹ so that wages in the private sector could be marginally increased. This would stimulate private consumption. Thirdly, investment must be increased. This requires lower interest rates and a credible financial support package that reassures financial markets.

Given the high price of sovereign defaults and debt restructuring, rolling over existing debt for as long as it takes is the most cost effective solution to the sovereign debt crisis. If financial markets are too worried and disturbed to supply the necessary finance, the European Union must understand that providing liquidity to Greece and other Member States is in the interest of each Member State and each European citizen. The vehicle for making such support payments is presently the EFSF and in 2013 the ESM; the ECB is not the right instrument for this purpose.

Chauvinistic populists blame lazy Southerners for the problems and ask why should "we" pay for "them"?⁴⁰ Europe must not become a Transfer Union. In this context, the notion of transfer implies a payment for which no return is obtained. This would typically be the case of debt forgiveness. However, liquidity support in the form of credit receives compensation in the form of interest. Taxpayers in the lending Member States do not pay for expenses of the borrowers; In fact, they earn income. If Germany is the largest lender under the EFSF, it simply means it is becoming richer than any other lender in the Union. However, over and above the financial gain, the payoff from stabilizing the Euro and its financial system is substantial, as it guarantees the survival of the Single Market. If one added these two components, a roll-over of debt is not only the least costly, but it yields actually net benefits for everyone. Providing liquidity support is the recognition that the euro really has created a "community of destiny".

However, providing credit may not be the only solution to Europe's liquidity crisis. Credit could be complemented by building up capital. As part of the negotiation on the Greek liquidity bailout, the privatisation of public assets has received increasing attention. The Greek finance minister has announced a plan to create a sovereign wealth fund, a sort of Greek Treuhandanstalt that would implement an ambitious privatisation programme agreed with the EU and the IMF that should raise approximately €50 billion by 2015. About €15 billion, within 2013, should come from the concession of the port of Piraeus and the privatisation of a luxury resort on the Athenian coast; the remaining €35 billion should come from airports, ports, the sale of the government share of the OTE telephone company (30%), the privatisation of public utilities, tourism, and a restructuring of the state-owned Greek Agricultural Bank. This is an ambitious agenda that would reduce Greece's outstanding debt €300 billion by approximately 17%.⁴¹ However, in order to ensure that the sale of assets improves the government's net indebtedness, it is crucial that the net present value of these assets is higher than presently, in other words privatisation must raise the expectation of a significant improvement of the assets' profitability. Unfortunately,

³⁹ See Centro Europa Ricerche (CER), 2011. Report on Europe. Competitiveness in the Euro area. Roma

⁴⁰ Cancellor Merkel has made the point again, when she declared on 17 May 2011: „Wir können nicht eine Wahrung haben und der eine kriegt ganz viel Urlaub und der andere ganz wenig. Das geht auf Dauer auch nicht zusammen.“ (We cannot have one currency and one has a lot of holiday and the other very little. In the long run this does not go together.). <http://www.tagesspiegel.de/politik/merkel-fordert-einheitliches-rentenalter-in-europa/4187960.html>

⁴¹ Paolo Manasse, 2011. Why privatisation is not the panacea for Greece; Vox, 30 May. <http://www.voxeu.org/index.php?q=node/6592>

this is unlikely to be the case. Experience from the German Treuhandanstalt has shown that fire sales of public assets distort prices. An excess supply of assets will depress market conditions. The German privatisation programme produced huge losses, which were assumed by the Federal Government.⁴²

A more efficient solution could be the creation of a European Institute of Economic Reconstruction (EIER), which would buy assets from national governments and then improve their profitability over time by integrating them into a pan-European industrial strategy. Member States of the European Union, including those selling the assets, would become the shareholders of the EIER, although the capital should also be opened to private investors. This is the proper way to involve the private sector in a liquidity bailout, which offers risks and rewards. In addition, a substantial part of the funds necessary to purchase the national assets would be financed by issuing euro bonds. In this way, the Europeanization of national assets can generate liquidity for national debt service, while citizens would remain owners, although they would share their assets now with other Europeans who demonstrate their solidarity.

The European Institute for Economic Reconstruction could gradually mutate into an institution for industrial policy that would be able to respond more efficiently to the profound economic and social transformation, which is presently taking place in the Single Market. It could, for example, undertake the big European investment projects for infrastructure improvements, such as fast trains, alternative energy networks, etc. In the United States, President Obama has called for National Infrastructure Bank with similar intentions,⁴³ but in Europe the European Investment Bank (EIB) fulfills this function perfectly. The European Institute for Economic Reconstruction would differ from the EIB insofar as it does not operate as a financial intermediary, but as a European holding company. It would own shares of national companies and would seek to increase the efficiency of these companies by integrating them into a fully integrated strategy in the Single Market. In the past, proposals for European-wide infrastructure have often not been realized because collective action problems have blocked coordinated action between Member States. This is also a handicap of Commission President Barroso's "Europe 2020 Project Bond Initiative". By empowering a European agency to help Southern Europe to regain economic growth and combining this objective with a coherent and full integrated economic-industrial strategy, the gridlock and mutual blockages of national governments could be overcome. This form of economic governance would be far superior to the open method of coordination, which coordinates nothing but civil servants and produces little but mountains of paper. All of Europe would benefit.

On June 5, 1947 the American Secretary of State George Marshall addressed the graduating class of Harvard University, where he described the dysfunction of the European economy and presented a rationale for U.S. aid. He said:⁴⁴

"The modern system of the division of labor upon which the exchange of products is based is in danger of breaking down..... Aside from the demoralizing effect on the world at large and the possibilities of disturbances arising as a result of the desperation of the people concerned, the consequences to the economy of the United States should be apparent to all. It is logical that the United States should do whatever it is able to do to assist in the return of normal economic health to the world, without which there can be no political stability and no assured peace. Our

⁴² Total income between 1990 and 1994 amounted to DM 37bn, expenditure to DM 200bn, hence the loss was DM 163bn or € 83.340 bn. See: Klaus Schroeder, 2000. *Der Preis der Einheit. Eine Bilanz*; Carl Hanser Verlag, München

⁴³ http://thf_media.s3.amazonaws.com/2011/pdf/wm3235.pdf

⁴⁴ Full text at: <http://www.historyguide.org/europe/marshall.html>

policy is not directed against any country, but against hunger, poverty, desperation and chaos. Any government that is willing to assist in recovery will find full co-operation on the part of the U.S.A. Its purpose should be the revival of a working economy in the world so as to permit the emergence of political and social conditions in which free institutions can exist."

Replace the word "United States" by "European Union" and you know what you have to do.

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