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The Eurozone after Stress Testing

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1. Introduction

When it was created, it was reasonable to think that the architecture of the monetary union was not perfect. The founding fathers could not rely on previous identical experiments, so they had to innovate. Innovations, we all know, are but a blueprint of the object that is being invented, just think of the first electric bulb or the first constitution of a country. The Global Financial Crisis, which started *mezzo voce* in 2007 and erupted in September 2008, directly hit many Eurozone countries through their banks. It also hit all countries indirectly, mostly through traditional trade linkages. Yet, there was nothing specifically European about it. By late 2009, however, that crisis had morphed into the sovereign debt crisis, which selectively affected the Eurozone. Six years later, the crisis is not over.

A large and fast-growing literature examines the Eurozone crisis, its causes and main features. The present paper does not attempt to overview this literature. Anyway, the

crises have differed from one country to another. Greece and Portugal faced a public debt crisis. These are countries that never balanced their government budget at least since the mid 1970s, as did France among others. On the other hand, Ireland and Spain have been fiscally disciplined for several years before the crises, but they allowed a housing price bubble to grow unchecked, as did the Netherlands. Cyprus was largely a collateral victim of the Greek debt relief. In addition, several other things have gone wrong since the creation of the euro. Wages outpaced labor productivity gains in many countries, including Italy. Current account deficits first reached abysmal levels in the crisis countries. They were easily financed until a sudden stop triggered the crisis.

Most interpretations tend to focus on one or two of these pre-crisis imbalances. Given that the imbalances grew over a few years preceding the crisis, formally backing any interpretation is at best fragile because sample sizes are small.¹ Moreover, several of the identified culprits are not obviously exogenous. This includes price and wage developments, as well as trade and capital flows. Identifying truly exogenous shocks, including policy mistakes, is a tall order of requirement.

This paper does not attempt to solve this maze of controversies. Rather, it posits that these dramatic, indeed historical, and long-lasting events, that they were accidents waiting to happen, deeply related to the construction itself. It looks for critical flaws in the architecture of Eurozone that made it possible for shocks either to occur or to be lethal once they occurred. Section 2 revisits the Walters critique, which argues that fixed exchange rate arrangements are inherently unstable. The critique predicted ever-rising inflation differentials, which did not happen. The minimalist model presented here shows how, instead, the critique can be adjusted to explain ever increasing current account imbalances. Of interest is the search for solutions that overcome the critique by stabilizing the economy, exposing flaws in the architecture.

The six following sections each identify a flaw.² Section 3 notes that fiscal discipline, well identified as a key requirement, has not been achieved because the solution adopted in the treaties is flawed. Successive efforts at making the Stability and Growth Pact work have failed because the nature of the flaw is not being recognized. Section 4 looks at the only successful reform adopted in the wake of the crisis, the Banking Union. This reform is incomplete, though. Section 5 argues that the ECB is not a complete central bank. Its famed independence is superficial because the bank faces an array of national constituencies that have different interests in the presence of asymmetric shocks. A seriously aggravating factor is that these constituencies do not share a common understanding of central banking. Section 6 starts from the observation that the Eurozone architecture did not anticipate that some member

¹ Some researchers hunt for degrees of freedom by using high frequency data, for instance monthly data. Macroeconomic evolutions, however, occur slowly. This implies that high frequency observations are not necessarily informative. Most macroeconomic shocks trigger effects that are spread over one to two year, or more. In addition, budgets are set annually, infra-annual public spending data is partly driven by accounting procedures and tax collection is frequently spread discretely over the annual cycle. Alesina et al. (2015) even observe that fiscal policy is best seen as a multi-year plan; they show how to go beyond time series analysis.

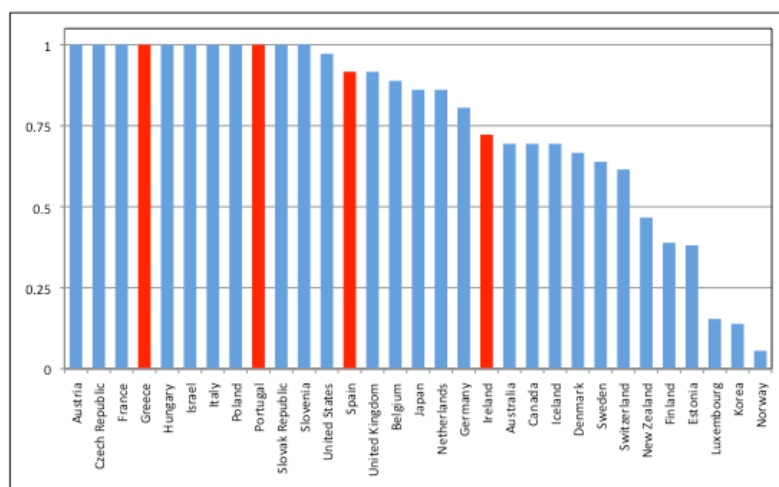
² Many underlying issues are properly tackled using the principle of fiscal federalism. This approach is pursued explicitly in Wyplosz (2015b).

countries may be in a position of needing a sovereign debt relief. When the need arose, this denial was upheld. Instead, it was decided to provide financial assistance with highly intrusive conditionality. Section 7 stresses that intrusiveness cannot be the solution. Section 8 looks that the sixth flaw, the governance of the Eurozone. There are no provisions for crisis management, another denial in the original architecture. The result has been a worrisome deterioration of the democratic deficit. The last section concludes.

2. Fundamental Causes of the Crisis

The crisis was plainly a debt crisis. Yet, a look at Figure 1 suggests that large debts cannot be whole story. Greece and Portugal are among many countries where the budget has never been balanced since 1980 while Ireland is among the better performing countries. Indeed, we know that Spain and Ireland suffered a banking crisis when housing price bubbles burst, following unchecked excessive credit expansions. Other countries also faced a banking crisis, which called for large-scale government interventions (the US and the UK, for instance), but they were spared a sovereign debt crisis. Thus neither fiscal indiscipline nor massive bank rescues are enough to explain the crisis.

Figure 1. Proportion of years with budget deficit – 1980-2015



Note: Data for the former centrally planned economies start in 1995.

Source: *Economic Outlook*, OECD.

This suggests that there was something special about Eurozone membership. Yet, France and Italy have also run deficits every year between 1980 and 2015, and they faced rising spreads (Figure 2), especially Italy, but not a full-blown crisis. Maybe it was just a matter of time, but what stopped the clock? Size may have been a factor in the sense that the markets never believed that France and Italy would tip over the edge, but Spain came very close to a crisis situation. In that case, what prevented contagion to continue? This section suggests two related answers: there is something inherently unstable about a monetary union and adequate economic institutions can undo this instability.

2.1. The euro as a foreign currency

De Grauwe (2011a) observed that the reason why the sovereign debt crisis hit the Eurozone, and only the Eurozone, is that public debts are issued in a foreign currency. Although public debts are as high, in the US, the UK and even much higher in Japan than in the Eurozone crisis countries, these countries never came close to losing market access for one simple reason: investors never had any doubt that their respective central banks would do ‘whatever it takes’ to back treasury bonds. Indeed, the acuity of the Eurozone crisis promptly recoiled once the ECB announced its Open Market Transactions (OMT) program. The program did not fully eliminate bond spreads because it is conditional on the existence of a program. Yet, the mere announcement of the OMT program, with no further action needed, sufficed to bring the crisis to a new, softer stage. Had the OMT program been started in early 2010, the crisis might have been avoided altogether.

This can be easily understood within a multiple equilibrium framework, in the presence of a vulnerability such as a pre-existing large debt or a fast growing debt. If markets believe that debt will be serviced, they keep lending and no crisis occurs. If the markets fear a default, the government loses market access and there is a crisis. The bad equilibrium, which prevailed from 2010 to 2012, was characterized by explicitly finite support from the ECB within its LTRO and SMP programs, as detailed in Section 5. . As is well known, limited commitments create a musical chair problem. Once investors know that the last one to attempt to sell a beleaguered asset will bear losses, a run is unavoidable.³ To restore the good equilibrium, investors must be convinced that no one will ever face a loss. It is the unlimited nature of OMT that provided relief, exactly as the implicit unlimited commitment of central banks has prevented any hint of a sovereign debt crisis in other highly indebted countries. The multiple equilibrium nature of the phenomenon is confirmed by the fact that the ECB did not have to intervene after announcing the OMT program, nor did the Fed, the Bank of England and the Bank of Japan. Expectations are what matters.

A well-known implication of this type is the “original sin” that affects developing countries that issue public debts in foreign currencies, for which they cannot expect any central bank support (Eichengreen et al., 2007). This is why de Grauwe (2011a) correctly argues that Eurozone member countries are like developing countries: they are in an unstable position in the event that financial markets come to expect, rightly or wrongly, that the debt might not be fully serviced.

The implicit support of central banks does not come for free. It creates a moral hazard and opens up the issue of policy dominance, i.e. whether the government can assume that its profligacy will be forgiven through money creation. In a single-country monetary area, the consequences – inflation and possible losses suffered by the central bank – are entirely borne domestically. In the Eurozone, the moral hazard problem is significantly more acute because the costs, including financial losses, are shared among all member countries. It is essential that no incentive be provided for a country to run up its debt in the expectation that it will eventually be taken over by the other member countries.⁴

³ See Jeanne and Wyplosz (2003).

⁴ The same reasoning explains the no-bailout clause enshrined in the European treaties.

Moral hazard is a very important issue for lending in last resort, but it is not the only one. Lending in last resort is an emergency action to be carried out exclusively in a situation of financial distress. The existence of a trade-off between moral hazard and the need for emergency assistance is well understood in the case of lending in last resort to commercial banks. The Bagehot rule is to “lend freely at high rates” to solvent banks, which means to be ready to provide an indefinite amount of cash, to prevent the bad equilibrium from emerging, while imposing punitive costs, designed to mitigate moral hazard. Insolvent banks, on the other hand, must be promptly resolved. Remarkably, the Bagehot rule has survived 150 years of economic research.⁵

Applying the rule to public debts is much more complicated. First, the concept of insolvency does not translate easily from banks to governments. The budget constraint requires that the net present value (NPV) of primary budgets over an infinite horizon exceed the net debt, neither of which can be evaluated with any degree of precision. Second, a government cannot be resolved. It can collapse, which invariably triggers a political crisis with unpredictable consequences. Third, as a non-elected branch of government, a central bank cannot ‘punish’ its government. The best that can be done is to protect the central bank by granting it independence. Finally, within a monetary union the central bank is independent from any member government but accountable to all citizens, which injects political considerations into an otherwise technical issue.

As with the Bagehot rule for banks, the implicit guarantee that governments enjoy from their central banks means that, at crisis time, emergency assistance over-rides moral hazard. Within the Eurozone, the situation is more complex. The no-bailout rule that applies to both governments and the ECB suggests that, as a matter of principle, moral hazard considerations trump the need for emergency assistance.

Indeed the response to the crises has been limited lending by other governments and bond purchases by the ECB (the details are provided in Section 5.1 below), under conditions, and initially at punitive rates. Unsurprisingly, given the priority given to moral hazard concerns over emergency assistance, the financial markets have continued to panic even after Troika programs were put in place. This can be seen from Figure 2, which displays interest rate spreads relative to Germany of long-term bonds. Not only did spreads of the country receiving a program keep rising when the agreement is reached, but so do also the spreads of all countries. This suggests that the programs were perceived as neither solving the relevant country’s problem nor preventing contagion. This is the sense of the assertion that member countries borrow in a foreign currency. The issue is revised in Section 5.

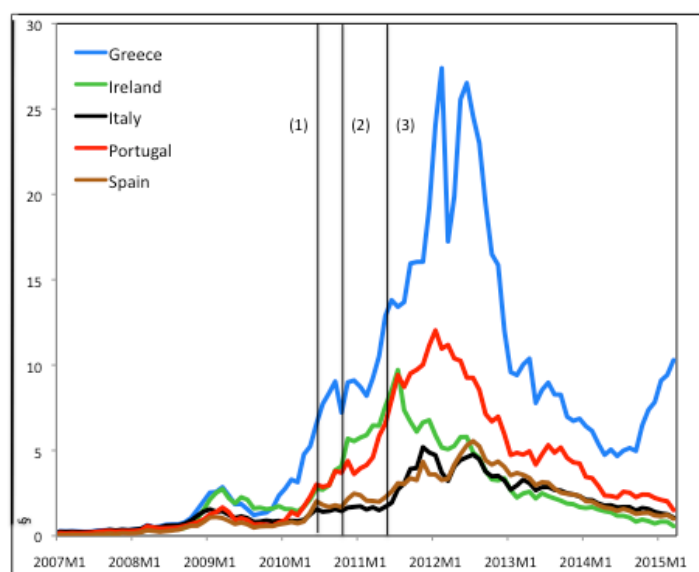
⁵ A limit of the Bagehot principle is that it is often impossible to distinguish illiquid and insolvent banks. In presence of a multiple equilibrium, illiquidity can quickly lead to insolvency, for example if the bank suffers losses through fire sales of assets. This is why illiquid banks should first seek financing on the markets.

2.2. The Walters critique revisited

2.2.1. The critique at work

Another fundamental weakness of the monetary union is implied by the Walters critique of fixed exchange rate arrangements, such as the European Monetary System (EMS), which existed from 1974 to 1998 and acted as a prelude to the single currency. Walters (1986) observed that either the exchange rates are expected to be sporadically adjusted to compensate for inflation differentials or they are to remain constant. In the first case, capital mobility will trigger sporadic currency crises when realignments come to be seen as imminent. In the second case, as explained next, the system will endlessly diverge. In both cases, the system is unstable.

Figure 2. Interest spreads (10 year bonds, relative to Germany)



Notes: (1) Greek program; (2) Irish program; (3) Portuguese program.

Source: *International Financial Statistics*, IMF.

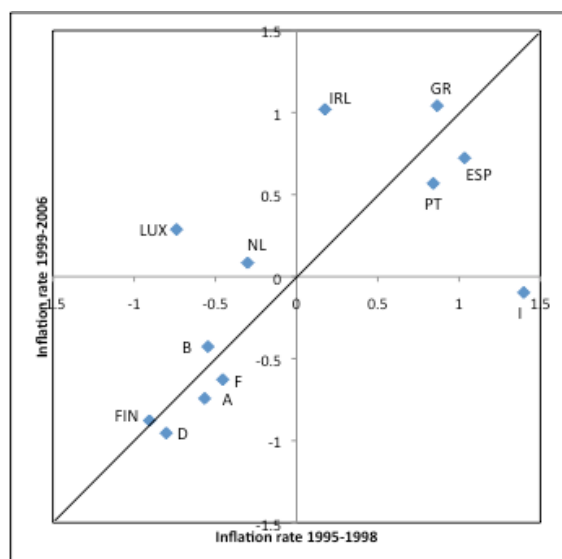
The Walters critique fully applies to the Eurozone where the exchange rates have been fixed irrevocably. In fact, there are no explicit exchange rates anymore, yet price and wage developments remain “domestic things” because of a myriad of institutional arrangements. These arrangements include fundamentally segmented labor markets and wage setting arrangements, regulated prices (electricity, gas, public transportation, etc.), fiscal policies and taxes, nontraded services that make up 50% or more of GDP, etc. This is why it makes sense to think of national real exchange rates within a monetary union such as the Eurozone.

The critique applies even more strongly to the Eurozone since the interest rates are, and were until the crisis, fully equalized. It follows that the real interest rate will be lower in countries where inflation is higher and, conversely, they will be higher where inflation is higher. As a result, monetary policy will be more expansionary in the higher inflation countries, driving inflation further up and real interest rates further

down, and so on. The exact opposite should occur in the initially lower inflation countries, where inflation will keep declining.

Figure 3 shows that the prediction of the Walters' critique is only partially verified. The figure plots the average inflation rates of the twelve initial Eurozone member countries during the pre-crisis period 1999-2006 against the pre-euro period 1995-1998. For each sub-period, the inflation rates shown are the difference from the average of all twelve countries. Only five countries (Ireland and Greece on the up side, Austria, France and Germany on the down side) have diverged from the Eurozone average. Four other countries (Portugal and Spain; Belgium and Finland) have retained their above or below average status. The evolution in the remaining three countries (Italy, Luxembourg and Finland) runs counter to the prediction. Inflation rates in seven countries converged.

Figure 3. Inflation rates
Differences from Eurozone average (%)



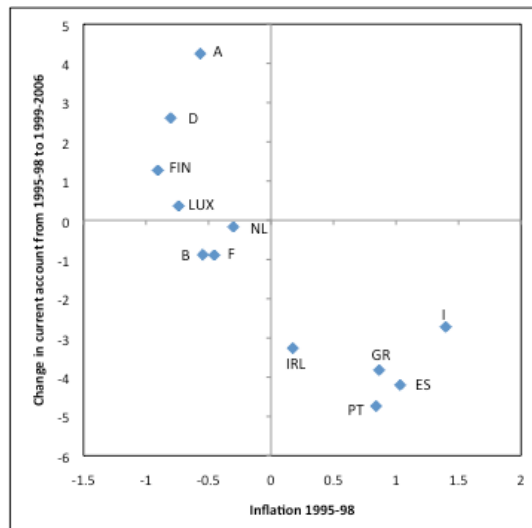
Source: *International Financial Statistics*, IMF.

The Walters critique is based on a simple analysis that shuns many potential complexities. Formalizing Walters's arguments with forward-looking agents, Miller and Sutherland (1990) focus on the credibility of the peg. In their model, when the commitment is fully credible, the regime instantaneously switches to its long-term equilibrium. Instability only emerges when the commitment is not fully credible and, even then, only when there exist different expectations e.g. between the financial and labor markets.

Using a similar but *ad hoc* model, Mongelli and Wyplosz (2009) add the current account. They observe that higher inflation deteriorates external competitiveness and therefore demand for domestic goods. A lower demand should weaken inflation and, therefore, mitigate the divergence. It could possibly promote convergence. Figure 4

reveals a tight link between pre-euro inflation and the current account after the creation of the euro. The current accounts deteriorated after 1999 in all countries that started with above average inflation. With three small exceptions, they improved where inflation had been below average.

Figure 4. Inflation and the current account



Notes: Horizontal axis: average inflation over 1995-98; Vertical axis: change in the average current account balance (% of GDP) between 1995-98 and 1999-2006.

Sources: *International Financial Statistics*, IMF and *Economic Outlook*, OECD.

A different logic relies of trade theory. That theory predicts that trade integration leads to price levels converge (European Commission, 1990) if one ignores nontraded goods and services. Adding nontraded goods in a macroeconomic model, Giavazzi and Spaventa (2010) find that external borrowing can lead to current account instability if external borrowing is invested primarily in the nontraded good sector. In that case, borrowing does not generate the resources needed to honor the external debt.

2.2.2. An interpretation

The Walters' critique is formally studied in Miller and Sutherland (1990), who use a New Keynesian Phillips curve along with an IS curve. The model is saddle-path stable and agents are assumed to select the unique convergence path. This is not surprising given the forward-looking nature of price setting. The paper shows that the Walters' critique is not a property of New Keynesian models. Instability occurs when the financial and labor markets form different, heterogeneous expectations.

In this section I take the opposite route. In order to analyze Walters' own description, I use a very simple one-good model that includes a backward looking Phillips curve.⁶

⁶ Another reason to use this formulation is that the empirical evidence supports the presence of a backward looking component. An intermediate hybrid Phillips *à la* Gali curve would raise the complexity of the model and prevent an analytical resolution.

The purpose is to start with an unstable model and then ask what is needed to make it stable.

The model, borrowed from Mongelli and Wyplosz (2009), ignores uncertainty and assumes perfect foresight. The Phillips curve equation, which assumes a zero inflation target, is complemented with an open-economy IS curve:

$$(1) \quad \dot{\pi} = ay$$

$$(2) \quad y = -b(i - \pi - \bar{r}) + c(\lambda - \bar{\lambda}),$$

where y is the output gap, π is the inflation rate, λ is the real exchange rate and $\bar{\lambda}$ its equilibrium level, i is the nominal interest rate, and \bar{r} is the natural real interest rate. Within the monetary union, the domestic nominal interest rate i is equal to the union-wide interest rate i^* . For simplicity, in line with the zero inflation target assumption and assuming zero inflation abroad, I assume that $\bar{\lambda} = \bar{r} = 0$. Finally, with an irrevocably fixed exchange rate, the real exchange rate is driven by the inflation differential. This is formalized in (4) below.

In (2), the first part captures the usual negative impact effect of the real interest rate on domestic demand for domestic goods while the second part represents the current account, which declines when the real exchange rate appreciates (i.e. when λ declines). The model boils down to two equations:

$$(3) \quad \dot{\pi} = \alpha\pi + \beta\lambda$$

$$(4) \quad \dot{\lambda} = -\pi$$

with $\alpha = ab$ and $\beta = ac$.

The determinant of the corresponding matrix is $\beta > 0$, which means that the product of the eigenvalues is positive, so they have the same sign. The trace is $\alpha > 0$, which means that the sum of the eigenvalues is positive. This implies that they are both positive and the model is unstable. If we start with a positive inflation differential ($\pi > 0$) and/or an overvalued real exchange rate ($\lambda > 0$), inflation rises indefinitely and the real exchange appreciates indefinitely as well, leading to an ever-widening current account deficit. Conversely, if we start with $\pi < 0$ and/or $\lambda < 0$, the outcome is continuous deflation, exchange rate depreciation and current account surpluses. The only stable equilibrium is $\pi = 0$ and $\lambda = 0$. This is the Walters critique.

Note that, in this model, the feedback from rising inflation to real appreciation and a reduction of net foreign demand for domestic goods (a deterioration of the current account) cannot provide enough stabilization to prevent instability. This is not a multiplier story, whereby changes in net foreign demand are a fraction of changes of domestic demand. Indeed the coefficients b and c in (1) and (2), and therefore the

coefficients α and β in (3) and (4), are independent of each other. It is truly a systemic feature.⁷

An immediate objection is that an ever-widening current account deficit violates the budget constraint so that, with proper forward-looking consumers, domestic demand would decline. This is indeed why models with proper forward-looking Phillips curves are (saddle-path) stable, as previously noted. Yet, that is not what was observed. Continuous, often widening, current account deficits in several Eurozone countries over 1999-2006 along with zero spreads, indicate that markets were not concerned with the budget constraint, or assumed that it would be somehow taken of. It suggests that the expected budget constraint can be violated for a long time when foreign financing is abundant.⁸ The zero spreads until late 2008 suggest a form of myopia and the model assumes this myopia.⁹ It describes the prediction of the Walters critique until the budget constraint is enforced. At that stage, something has to give. Ideally, prices become fully flexible and the real exchange instantaneously reach the stable equilibrium $\pi = 0$ and $\lambda = 0$. This is what is assumed implicitly to close the model.

2.2.3. How to deal with the Walters critique

Given the systemic nature of the Walters critique, something fundamental must be changed to make the model stable. Either the determinant β must be made negative so that we have two eigenvalues of opposite sign and a saddle path equilibrium, or α must be negative so that we have two negative roots and full stability.

Countercyclical fiscal policy 1

From the start, it was well understood that the countercyclical role of domestic fiscal policies would have to become more important in the face of the loss of the monetary policy instrument. Could it stabilize the model? An easy way to check this presumption is to add to domestic demand (2) a countercyclical term. Let (2) become:

$$(5) \quad y = -br - c\lambda - ky,$$

where ky captures countercyclical fiscal policy. Now $\alpha = ab/(1+k)$ and $\beta = ac/(1+k)$, and the model remains unstable. The reason is the same as the one given in Footnote 7.

Another possibility is that the countercyclical fiscal policy is not driven by the output gap but by inflation or, equivalently by the real interest rate. When inflation rises, the real interest rate declines and boosts domestic demand, fiscal policy is made contractionary. In that case (2) becomes:

⁷ If the current account effect were to dominate in (2) so that the output gap would decline, (1) implies that inflation would decrease and the real exchange rate would depreciate, raising the output gap, which is a contradiction.

⁸ Allowing for two goods, traded and nontraded, Giavazzi and Spaventa (2010) show that the budget constraint is violated when net foreign borrowing is used to mostly finance investment in the nontraded good sector, even if the current account is balanced.

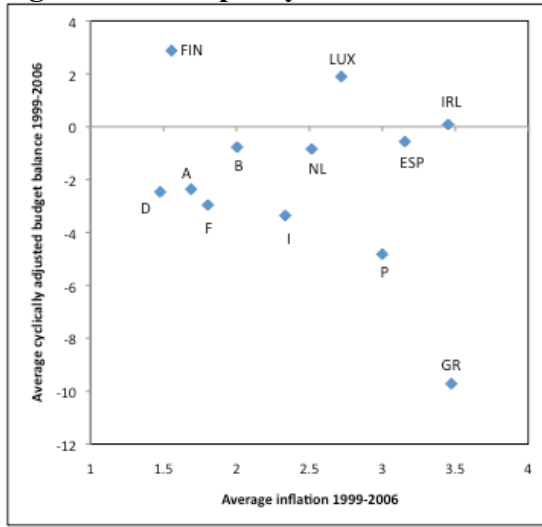
⁹ The equalization of interest rates (Figure 2) suggests that this was case in the run up to the crisis.

$$(6) \quad y = -br - c\lambda + \underline{kr}.$$

We now have $\alpha = a(b - k)$, which is negative if $k > b$. If fiscal policy is sufficiently counter-inflationary, the eigenvalues are both negative and the model is stable. Fiscal policy substitutes for the lost monetary policy instrument.

According to Figure 5, which plots the average cyclically-adjusted balance against the average inflation rate over the pre-crisis years 1999-2006, fiscal policy has tended to be pro-cyclical in the sense that the balance has been lower where inflation was higher. This means that $k < 0$ and therefore the disequilibrium is exacerbated.

Figure 5. Fiscal policy and inflation



Note: Cyclically-adjusted balances in percent of trend GDP.

Sources: *International Financial Statistics*, IMF and *AMECO on line*, European Commission.

Countercyclical fiscal policy 2

Instead of responding to inflation or the interest rate, fiscal policy could aim at stabilizing the real exchange rate around its equilibrium level. This means that domestic demand for domestic goods now declines when the real exchange depreciates as shown in (7):

$$(7) \quad y = -br + c\lambda - k\lambda.$$

In that case $\beta = a(c - k)$ and the two eigenvalues are of the opposite signs if $k > c$. The system is now saddle-path stable. For this solution to be effective, with backward looking, slow-moving inflation, reaching the stable convergence path requires that the price level must decline discretely to achieve a one-off adjustment of the real exchange rate. Put differently, internal devaluations must be swift enough.

Adjusted monetary policy

Another possibility, purely theoretical, is that the ECB sets its interest rate to deal with the high inflation country. Instead of assuming that $i = 0$, I assume a Taylor rule focusing on the home country:

$$(8) \quad i = (1 + u)\pi + v\gamma_2$$

with $u > 0$ and $v > 0$. In that case, $\alpha = -abu/(1 + bv) < 0$ and $\beta = ac/(1 + bv) > 0$, the two eigenvalues are negative and, unsurprisingly, the model is stable. This result merely confirms the Walters critique: it is the absence of domestic monetary policy that creates instability.

Interest rate risk premia

In the years preceding the crisis, it had been noted that nominal interest rates were almost completely equalized within the Eurozone (Figure 2). With hindsight, it now appears that the financial markets failed to anticipate the sovereign debt crisis and that they believed that no country would be allowed to leave the Eurozone, which meant no default and no redenomination risk premia. Would risk premia have prevented instability?

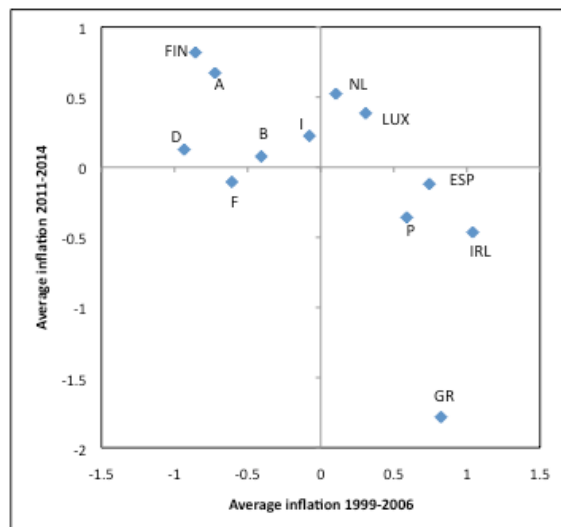
To see this, we now that assume that there exists an interest rate risk premium that is driven by inflation, thus taking into account the Walters critique. In that case we replace the previous assumption that $i = i^*$ with $i = i^* + h\pi$. This means that we now have $\alpha = ab(1 - h)$. If the risk premium is sufficiently responsive to the wage differential, that is if $h > 1$, the model becomes stable and the critique no longer applies. This apparently paradoxical result – the Walters critique fails to apply when markets strongly believe in it – simply occurs because the real interest rate now rises with (expected) inflation.

In fact, this is what happened after 2009. By the end of 2008, the interest rates started to rise in the crisis countries, with risk premia that massively exceeded the inflation differentials. As a result, inflation declined where it was higher than the Eurozone average, as can be seen in Figure 6. Taken literally, this means that the Eurozone was on its way to correct the Walters critique when the crisis erupted. A possible interpretation, in line with the view developed in Section 2.1, is that an early OMT program, focused on the redenomination risk but not on the debt default risk, might have prevented the crisis.

Wrap-up

These examples show that there may be ways for stabilizing a monetary union subject to the Walters critique. The most natural one is the active use of adequately defined countercyclical fiscal policies. An alternative is market-driven discipline in the form of risk premia. Risk premia exist in federal countries for subcentral governments debts. A necessary condition is that subcentral governments are never bailed-out by either the federal government or by the other subcentral governments, as discussed in Section 3. For this channel to work, the risk premia must be highly responsive to macroeconomic divergences.

Figure 6. Inflation differential before and after the crisis
Differences from Eurozone average (%)



Source: *International Financial Statistics*, IMF.

3. Systemic Flaw No.1: Fiscal Discipline

3.1. The Eurozone Approach

An implication of Section 2. is that fiscal policy is likely to be a key ingredient of monetary union stability. Missing from the model is the dynamics of public debt, which is another source of instability unless bounded by the transversality condition.¹⁰ Indeed, the European treaties identify fiscal discipline as an absolute requirement. The question has always been: how do we establish fiscal discipline in sovereign states?

The solution has to face two different difficulties. The first one is the familiar rule vs. discretion problem. No rule can be fully state-contingent, so it is necessary to allow for some escape clauses that, unless cleverly crafted, may well undermine the rule. The second one is that the monetary union involves the abandonment of monetary policy sovereignty, with no provision for giving up fiscal policy sovereignty.

The answer has been the Stability and Growth Pact, which failed to deal with both issues. Its shortcomings have long been analyzed. It was intended to combine a rule for deficit and debt levels with an escape clause. The rule – the 3% deficit limit – was incorrect as it did not deal with the transversality condition.¹¹ It was also arbitrary, which meant that it would be hard to enforce against predictably powerful resistance. The escape clause was unrealistic; Eichengreen and Wyplosz (1998) suggest that the kind of recession required was far too restrictive. The result was too much of a rule, too little of discretion. Indeed, in 2004, the pact had to be put “in abeyance” to meet the wishes of the two largest countries, France and Germany. This led to a first

¹⁰ This is another equation with a positive root.

¹¹ An operational approximation of the transversality condition is a debt path. The recent changes have started to consider debt paths but with a short horizon that bears no relationship with the infinite – a.k.a. long run – nature of the transversality condition.

revision of the pact to introduce some flexibility (mainly shifting to cyclically adjusted figures), opening the way to too much discretion. When the sovereign debt crisis erupted, predictably-miffed policymakers reacted by wanting to strengthen the rule.

This led to a second revision in 2012, which grew in complexity. The idea was to strengthen the rule and to allow for judgment in allowing for exceptions, as well as to introduce a trade-off between budget improvements and structural reforms. One way to summarize the undertaking is that it gave some discretionary powers to the European Commission to decide how to adjust the rule. In an optimal world, the Commission would become an optimizing benevolent dictator broadly evaluating the quality of economic policies and using the strictures of the Stability and Growth Pact to provide incentives to carry out structural reforms. Since both budgets and structural reforms are intensely political in any country, the Commission is now immersed in political considerations that undermine its ability to act as a benevolent dictator. Linking fiscal discipline and structural reforms may make political sense, but it makes it impossible for the Commission to reliably practice discretion within the revamped Stability and Growth Pact. Box 1 provides a telling example.

Box 1. The evaluation of fiscal discipline in France in 2014-15

France was declared in breach of the Stability and Growth Pact and put in the Excessive Deficit Procedure (EDP) in 2009. It was then asked to bring its deficit back to 3% of GDP by 2013. By early 2013, it became clear that the objective would not be reached. France was given two more years to reach the 3% deficit objective, with year-by-year targets, as shown in Table 1.

Table 1. France in the EDP: Deficit targets and outcome

Date of review	2010	2011	2012	2013	2014	2015	2016	2017
Outcome	6.8	5.1	4.8	4.1	4.0	(3.8)	(3.5)	
Dec. 2009				3.0				
June 2013				3.9	3.6	2.8		
March 2015						4.0	3.4	2.8

Note: The outcomes for 2015 and 2016 are Commission forecasts at mid-2015.

Source: European Commission

By end 2014, the Commission observed that France was not on its way to achieve a deficit of 3% by 2015 and asked for remedial action. Faced by strong political opposition, even in the ranks of its own majority, the French government refused to tighten fiscal policy further and asked instead for a one-year extension. This was a rare occasion when a country in the EDP openly rejects Commission's instructions. Anxious to avoid a confrontation with the Union's second largest country, the Commission agreed to delay the process, asking for reforms. The French government

proposed some limited reforms and token budget improvements. In return, even though it observed that “the quantification of [the reforms’] impact by the authorities seems overestimated”, the Commission proposed to approve a two-year extension for the deficit. The Council approved this proposal in March 2015.

3.2. The challenge

The other reason why the Stability and Growth Pact failed is that it is incompatible with budgetary sovereignty. Advocates of the pact argue that member states have given up *de facto* some sovereignty. If that is so, member states face two incompatible obligations: one obligation to their citizens who entrust their parliaments with the undivided authority to vote budget laws, and another obligation to their Eurozone partners, who have the right to issue binding recommendations. Even if the rules *cum* discretion issue were ideally dealt with, this contradiction would stand. A widely held view is that any government forced to choose between external obligations and its voters always chooses the latter. If that is so, the pact is unlikely to deliver fiscal discipline everywhere and always. It suffices that a few countries flout their obligations to undermine fiscal discipline and, sooner or later, to provoke a crisis.

It is not surprising that the Stability and Growth Pact is flawed. The chosen methodology is an old vintage, inspired by the German experience, which has failed repeatedly (Seitz, 1999; Wyplosz, 2012). Since then, Germany has written in its constitution a different, modern rule, the so-called debt brake (Federal Ministry of Finance, 2009), which cleverly combines rule and discretion. This major methodological improvement has been adopted in 2012 in the Eurozone as part of the Treaty on Stability, Coordination and Governance (TSCG), but as a complement to the Stability and Growth Pact, not its replacement. Piling up different budget rules on top of each other undermines both the older and newer rules by creating complexity and quite possibly confusion. In addition, the TSCG only partially implements the debt brake rule so that a number of governments have adopted different rules and did not write them into their constitutions.

The continued existence of the Stability and Growth Pact preserves the conflict faced by member states between their obligations and national sovereignty. This crucial contradiction would be immaterial if the TSCG were to make the pact redundant in practice. Unfortunately, the policymakers’ minds are captured by the immense bureaucratic machinery of the pact, brought to new heights by the Six Pack-Two Pack legislation.

Achieving effective fiscal discipline is known to be a most difficult task in federal states (Wildasin, 1999; Rodden et al., 2003; Oates, 2006). The challenge is compounded by the fact that Europe is not a federation. With a common currency, the Eurozone has some features of a federation, but it is definitely not there yet. This is precisely what led many observers to doubt that the monetary union could work (Feldstein, 1997). This is also what drives a growing number of proposals to go to the next step, whether it is the issuance of jointly guaranteed Eurobonds, a fiscal union or even a political union. It is undeniable that going in this direction would make things considerably easier, even though fiscal discipline would still not be guaranteed, more below. At least, there would be mechanisms and resources readily available, including a true lender in last resort.

The appeal of this ‘solution’ is that it has been tested over and over again, so that we know reasonably well how to do it. However, this is not just unrealistic at a time when anti-Europe political parties are on the ascent in every member country, it is also intellectually lazy. The euro is an original experiment, not an off-the shelf project. The real intellectual challenge is how to make it work without some truly federal arrangement, instead of running a well-trodden experiment. The answer is not to assume away the difficulty but to deal with the flaws.

3.3. The solution

The treaties include two prescriptions to achieve fiscal discipline. The first one is the EDP, which has led to the Stability and Growth Pact, which has failed repeatedly. The second one is the no-bailout clause, which has been over-run, amazingly without any legal challenge. Both actually have precedents from federal countries. The Stability and Growth Pact is inspired by the rather unsuccessful German arrangement, as explained above. The no-bailout clause exists in the US, among others. Following a seemingly unending string of state defaults, the US Congress established a precedent in the 1840s when it refused yet another bailout. Since then, except for a couple of cases in the wake of the Civil War, there has been no state default in the US (Inman, 2003; Henning and Kessler, 2012).

It would seem logical to learn from these experiments. The natural objection is that they are irrelevant because Europe is not a federal arrangement and its lacks a federal budget that plays an important stabilizing role in the face of cyclical swings.¹² This is indeed a key justification for establishing a fiscal union. This is a weak objection, however. First, as is well known, the degree of cyclical stabilization via the federal budget is quite small in the US. A recent update by Poghosyan *et al.* (2015) puts it at 5-10%. Second, borrowing and lending can replace risk sharing. If fiscal discipline is established and debts are low enough, governments can borrow much more than what is achieved through automatic transfers.¹³ Third, countercyclical transfers are likely to be politicized. Over a period of several years, some countries would emerge as net beneficiaries while other would be net contributors. Countercyclical transfers are hard to design because they only balance on the very long run, which far exceeds the political horizon. A transfer union is not the way out for the Eurozone.

Another criticism is that it would be wrong to encourage inherently fiscally undisciplined countries to borrow, in bad times as in good times. The evidence quoted above is that a strictly enforced no-bailout delivers adequate incentives for fiscal discipline to be established. This means paying back in good years what has been borrowed in bad years. A fiscal rule that aims at stabilizing or reducing the public debt in the long run is the natural complement to the no-bailout requirement.¹⁴

¹² This section looks at cyclical fluctuations. The case of financial, especially banking crises, is very different. It is the object of Section 4. .

¹³ In the US, the combination of the no-bailout and balanced budget rules at the state level (and below) results in procyclical fiscal policies. Replacing the decades old balance budget rules with modern debt brake rules would allow the states to run countercyclical policies.

¹⁴ This is indeed what is directly implied by the transversality condition, see footnote 11.

Viewed from today's perspective, when many countries currently hold excessive debts, makes it difficult for these countries to borrow their way out of a recession. Indeed, and this is an additional reason to consider a collective debt restructuring, as discussed in Section 6. In fact, debt restructuring is a preliminary condition to achieve fiscal discipline, contrary to the view that it would only encourage more debt accumulation again. This moral hazard stands to be eliminated by the restoration of the Treaty's no-bailout rule.

A very serious objection is that the no-bailout rule has lost any credibility since it was trampled upon on the first occasion when it became binding. Restoring its credibility requires a formal re-commitment. One possibility is to rewrite more precisely the treaties to rule out any easy loophole. If this is deemed impossible or unlikely to be successful, some other, very solemn action is required. As it stands, the European Stability Mechanism (ESM) established in 2012 represents a violation of the no-bailout clause, yet another inconsistency of the Eurozone architecture. Indeed, the ESM provides for a European institution to lend to a government in financial difficulty. Its closing down, or its transformation, would be a powerful signal. As explained in Section 4. , the ESM could usefully be transformed into a fund to be used exclusively for directly resolving banks, bypassing the current transfer to member states.

The holy grail of fiscal discipline is to rely on financial markets. Since Bayoumi et al. (1995) we know that markets do impose risk premia on sub-central government debts, that these premia increase with the size of the debt and that the relationship is non-linear and time-varying.¹⁵ They tend to be too small for too long and then to become excessive, which conforms to the Eurozone experience, as seen from Figure 2. One reason for the disappearance of risk premia in the Eurozone from its inception to the crisis is that the ECB was accepting at face value all member country sovereign debts.¹⁶ Once the crisis started, the ECB found itself in the highly uncomfortable position of deciding to impose haircuts on some of its members. This has to be avoided.

The natural conclusion is that the ECB should be forbidden to deal in member country sovereign debt instruments and, more generally, in any bond issued by national institutions and corporations. This is the case in the US, where the Fed is strictly prohibited from holding subcentral (state and municipalities) debt instruments. Two solutions are possible. The first one is that the ECB issues its own debt instruments, the second is that it deals exclusively in Eurobonds. Comparing these two solutions is beyond the scope of the present paper.

¹⁵ For evidence in Europe see Bernoth *et al.* (2004).

¹⁶ Another often mentioned reason is that markets never believed in the no-bailout clause. This explanation is hard to reconcile with the post-bailout evolution of risk premia, unless we assume that the bailouts themselves alarmed the markets.

4. Systemic Flaw No.2: The Banking System¹⁷

The single currency was never expected to eliminate banking crises. When a crisis arises, the authorities must instantaneously decide whether they consider the bank(s) as solvent and intervene accordingly, see Section 2.1. If needed, an intervention requires sizeable resources, measured in several percents of GDP. Since these resources must be available in a matter of hours, the central bank is the only one able to provide them. Usually, the central bank and the government agree on a sharing rule regarding potentially large losses. Since the central bank and the treasury are both state institutions, the sharing rule matters little for the taxpayer who will foot the bill no matter what. Even so, there are serious implications concerning income redistribution, which is why elected governments must take responsibility.¹⁸ In the end, dealing with a domestic bank crisis requires a lender of last resort, a bank resolution authority and clear rules of engagement.

The situation is considerably more difficult within a monetary union for the obvious reason that dealing with a bank crisis can be enormously costly. The question of who bears the costs is no longer about domestic income redistribution but about burden sharing among countries. In the absence of an elected European authority that can take responsibility, burden sharing becomes politically contentious. Two polar cases can be envisioned:

- The first one is centralized. A single European authority regulates banks, another one supervises them and resolution is carried out by yet another European authority. The logic, then, is to design burden sharing rules. This makes it possible for the ECB to intervene as lender of last resort, with a guarantee that possible losses will be taken over by member governments under the agreed upon burden sharing.
- The decentralized case leaves the authority for regulation, supervision and resolution at the national level. Then the ECB can only intervene if protected by an unambiguous and binding burden sharing rule. Alternatively, lending in last resort is carried out by national central banks so that the costs are borne locally. The central bank independence requires a national sharing rule.

The advantage of the second case is that it reproduces the standard solution and, if well crafted, eliminates painful debates about burden sharing. In fact, it simply keeps in place the pre-monetary union situation. It has disadvantages though. It precludes the emergence of an integrated banking market, in violation of the Single Market. It forces the ECB to deal with banks with limited, and possibly distorted, information on bank solvency. If the national central bank acts as lender of last resort, it has the ability to create money in violation of the healthy principle that money creation can

¹⁷ The proposal to add a Capital Market Union alongside the Banking Union is not examined here. Two remarks, however. First, it is an implication of the Single Act, which has been put aside for too long. As such, it is a must. Second, it is useful to develop other channels for saving and borrowing in Europe where banks assume a proportionately larger role than in the US. The case that capital based funding dominates bank based funding is weak at best, throwing doubts on the expected windfalls of the Capital Market Union. As such, it is not a major issue.

¹⁸ Of course, there is an issue of policy dominance, which not pursued here.

only be decided by the ECB. In addition, it ignores the existence of several externalities: contagion among banks in different countries as a consequence of open positions *vis à vis* each other, transmission of potentially severe shocks, protectionist tendencies to promote national champions, and possibly more. Finally, it precludes the existence of a European-wide interbank market where the ECB conducts its refinancing operations, which is a requirement of the common currency.

This makes the centralized case more attractive, but it is not devoid of disadvantages either. The logic of collective regulation, supervision and resolution is that the costs are borne collectively. This means a double loss of sovereignty. Banking is no longer a national responsibility and substantial costs may be incurred by member countries, possibly without adequate democratic control and oversight. In addition, the loss-sharing rule is unlikely to be fully contingent, which may lead to a grey area that is bound to become controversial.

In practice, the policy response has followed a predictable path. Initially, the Eurozone has adopted the decentralized model, with a few mixed centralized/decentralized features. This included common bank regulation while supervision and resolution were kept at the national level. It also included the Emergency Lending Assistance (ELA) whereby the national central banks could act as lender of last resort to their banks but only within an explicit ceiling set by the Governing Council of the Eurosystem. Under ELA, all potential losses are kept at the national level.

The disadvantages of the decentralized model were long ignored¹⁹ until they became all too obvious during the crisis. This is one of the few lessons learned so far, which has led to the Banking Union. At this stage, the Banking Union is a partial move to the centralized solution.²⁰ It includes a Single Rule Book, a Single Supervisory Mechanism (SSM), a Single Resolution Mechanism (SRM) and a Bank Recovery and Resolution Directive (BRRD). The Single Rule Book establishes common rules and requirements. The SSM creates a Single Supervisor, part of the ECB, hopefully less prone to capture by banks. Yet, it only supervises the banks deemed to be systemic, currently 134 banks. The remaining banks are supervised locally, under the oversight of the Single Supervisor.

The SRM establishes that resolutions are to be carried out at the national level under the oversight of the Single Resolution Board. The mechanism appears to split authority between the Board and national institutions, a complex arrangement for carrying tasks under emergency conditions. Resources will be provided by the Single Resolution Fund, to be gradually built up from bank contributions to reach 1% of all bank deposits, i.e. some € 5.5 billion. This is unlikely to be sufficient in case of a crisis affecting simultaneously several large banks. For instance, the US Troubled Asset Relief Program (TARP) set up in 2008 spent some \$ 400 billion, of which 370 billion was used for capital injections. This means that, in the event of a major crisis, the SRM will have to rely on other sources. In emergency, that means lending in last

¹⁹ They are spelled out e.g. in Begg *et al.* (1998) and Goodhart and Schoenmaker (2006). A rebuttal is Padoa-Schioppa (1999).

²⁰ For a detailed review and analysis, see Institute of International and European Affairs (2014).

resort by the ECB. However, the ECB is bound to require a guaranty for potential losses. It is unclear who would provide the guarantees.

The BRDD establishes clear lines for resolution, with an emphasis on bailing in shareholders and large creditors, a feature clearly designed to protect taxpayers. Depositors are protected up to € 100,000 by national resources, complemented by a Deposit Guarantee Scheme. This Scheme, however, is not funded, In case of need, it will have to collect funds from banks and borrowing on the markets, which resembles the US FDIC. However, the FDIC is directly backed by the US Treasury. Arranging for a collective backing of the Deposit Guarantee Scheme is necessary.

The current intermediate solution is incomparably better than the previous one. Yet, it shares the disadvantages of both polar cases and, as such, cannot be the final step in the construction of institutions required to deal with a widespread banking crisis. Some of the limits of the Banking Union have already been visible in 2015 during the latest surge of the Greek crisis. The ELA arrangement has been effective in keeping the banking system afloat but the sudden freezing of fresh lending has led to a three-week closure of banks along with a Argentinean-style *corralito* system, which is known to be destructive (Wyplosz, 2015a).²¹ During this time, the SSM has remained stubbornly silent, presumably because it did not see how to resolve banks. The result is that the recapitalization costs of Greek banks will have to be borne through Greek government borrowing. It is difficult to comprehend why the “Irish solution”, which directly triggered the country’s debt crisis, is adopted again now that we have a SSM and a SRM.

The Banking Union must be completed. A strong case can be made for full centralization, provided that the limits of this solution are simultaneously taken care of. The logic of the SSM – to be extended to all banks – is that bank resolution must be centralized because bank failures will be the result of imperfect central oversight, which is unavoidable. This means that the Single Resolution Board must be given exclusive authority and must have access to required resources. As noted above, the Single Resolution Fund is unlikely to be sufficient to deal with every possible crisis. One possibility is that the ECB be given the authority and the guarantees required to act as a lender of last resort to banks, as explained in Gros and Schoenmaker (2014) and further developed on in the following section. Another possibility is revamp the ESM which, as argued in Section 3.3, should not be maintained in its present form. The ERM could fulfill the aims of the Single Resolution Fund (which still remains to be funded). Instead of lending to governments to rescue or resolve banks, the ESM could directly lend to banks under instruction from the Single Resolution Board. This would break the diabolic loop between banks and governments.²² The resources of the

²¹ In addition, ELA has been identified as *the* tool to force Greece out of the Eurozone. Politicians have taken note, which has pushed the ECB into the position of taking a decision that lies completely outside its mission, possibly compromising its *de facto* independence.

²² Such a procedure would probably have avoided the Irish and Cypriot debt crises. Gros and Schoenmaker (2014) provide an interesting comparison between Ireland and Nevada in the aftermath of the 2008 crises. These are two “countries” of similar size, many of whose banks were fatally wounded. The Irish bank rescue directly led to the debt crisis, a stark illustration of the diabolic loop between banks and their governments. Banks in Nevada were resolved by the FDIC without affecting the state finances.

ESM are probably large enough to deal with most crises. If they were to be exhausted, then the ECB might be called upon to act as lender in last resort.

Another way of breaking the diabolic loop is under discussion. It would limit the exposures of banks to their national public debts. Additionally, it would increase market-based discipline, as foreign investors are less likely to be swayed to acquire public debts. Such a measure would need to be accompanied by a debt resolution mechanism, in order to avoid the conflicts of interest that have been prominent during the sovereign debt crisis, see Section 6.3.

5. Systemic Flaw No.3: An Incomplete Central Bank

The ECB is traditionally considered as the world's most independent central bank because an impossible-to-change treaty guarantees its statutes. In addition, its officials enjoy long appointments of eight years with no possibility of renewal and its mandate is relatively straightforward. Similarly, on paper, monetary dominance is pretty much guaranteed. The ECB is not allowed to buy bonds directly from governments and governments are strictly prohibited to give – or even suggest – instructions to the central bank. Yet, in practice, the matter is less clear-cut than it seems.

Central bankers are fond to observe that independence must be associated with communication in order to achieve the necessary popular support needed to stand up to pressure (Issing, 2005). In the Eurozone, the situation is complicated because it is an international institution with (currently) 19 constituencies that have different views of what a central bank should do, not to mention interests that rarely coincide and that often clash with one another. Beyond language barriers, this means that it is impossible for the ECB to produce a script that fits all.²³

A key implication of the optimum currency area (OCA) theory is that the single monetary policy cannot be adequate for all member countries in the presence of asymmetric shocks. Section 2.2 also shows that the absence of national monetary policy may make the Eurozone unstable. The literature has focused on the implications for individual member countries, not for the common central bank. The crisis has shown that asymmetric shocks also challenge the central bank independence. Anticipating the difficulty, the ECB officially disregards the economic situation in individual countries, focusing instead of Eurozone-wide aggregates. This wise principle faces two related hurdles.

First, a monetary policy that does not address substantial concerns in every single country cannot but be controversial. Given that independence depends on popular support, this undermines independence. Second, the ECB does not make decisions, the Eurosystem does. The system's monetary policy committee is the Governing Council that includes 25 members, including the six members of the ECB Board and 19 central bank governors, who share 15 voting rights on a rotating basis. While the central bank governors are explicitly required to also focus on Eurozone aggregates, quite naturally they have a special sensitivity to economic conditions in their home countries.

²³ Guiso et al. (2015) show how national Taylor rules have diverged from the ECB actual policy rates.

Obviously, National Central Bank (NCB) governors also need domestic popular support to buttress their own independence. To that effect, they must reflect the dominant thinking at home. Thus, even if they do not ignore their ‘Eurozone-wide aggregates only’ mandates, their analyses and statements cannot depart from the views that dominate the domestic policy debate. This can be a *plus*, as it reduces the risk of group think that has occasionally blinded MPCs. It can be a *minus* if it injects conflicts based on national concerns within, and outside, the Governing Council.²⁴ The *minus* case has been revealed as pretty crippling during the crisis, as evidenced by three major examples.²⁵

5.1. Initial bailout

Article 123.1 of the Treaty on the Functioning of the European Union (TFEU) prohibits the Eurosystem from financing governments, without qualification.²⁶ In particular it bans primary market purchases of government debt. This last requirement is somewhat disingenuous since secondary market purchases amount to the same in practice, at least as long as a government has market access and, if not, as long as a market for its debt instruments still exists.

In May 2010, on the same day as the Greek program was set up, the ECB announced its own Securities Market Program (SMP). In the first wave of the program, the ECB acquired Greek, Irish and Portuguese debt instruments for a total amount of € 70 bn., most of it front-loaded over the first two months. In the second wave, which started in August 2011, it acquired € 147 bn. of Italian and Spanish debts.²⁷ The striking feature of these interventions is that they failed to stem market panic, as Figure 7 illustrates for the case of Greece. The spreads on Greek over German bonds kept rising.²⁸

The ECB could not have intended to explicitly bail Greece out, and later Ireland and Portugal, as this would have been against its mandate. Central banks normally fear any semblance of fiscal dominance and, yet, they purchase public debt instruments on

²⁴ This is not specific to the Eurozone. Initially, when the Federal Reserve was created, regional Reserve Banks were also chosen locally and represented their region interests, occasionally leading to deep disagreements. It took 22 years to change the system and the Banking Act of 1935 that removed the link between regional Reserve Bank Presidents and their constituency interests.

²⁵ In addition, the size of the Governing Council precludes in-depth analyses of the kind performed in MPCs. Governors of smaller countries seem to carry less weight, independently of the quality of their analyses.

²⁶ Article 123.1 reads as follows: “Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as “national central banks”) in favour of Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments.”

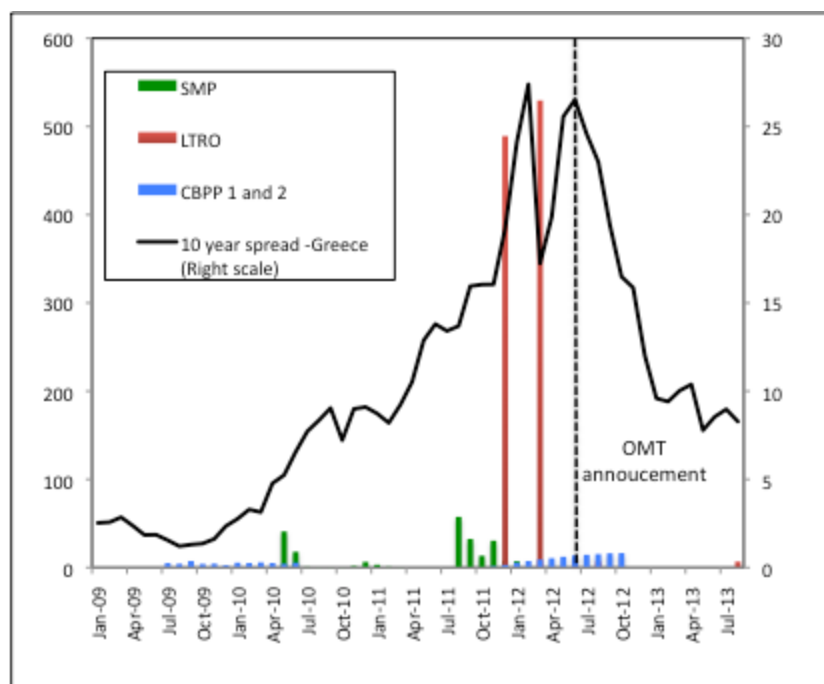
²⁷ There were other “nonstandard” interventions: the Covered Bonds Purchase Programme (CBPP) and the Long-term Refinancing Operations (LTRO).

²⁸ Krishnamurthy *et al.* (2014) find some short-term effect on various assets, mostly reductions of default risks. Trebesch and Zettelmeyer (2013) also find significant localized effects, especially on short maturities, but admit that they did not last long.

secondary markets when needed to stabilize the markets. To that effect, they must be ready to conduct interventions of indefinite size. Any finite, or small intervention is promptly absorbed by the markets whose pockets are deep, but less deep than those of the central bank (Jeanne and Wyplosz, 2003).

When announcing the SMP, the ECB did not specify any amount. It then proceeded to carry out its interventions under a shroud of secrecy.²⁹ The amounts involved were far too small to impress the markets and the relentless rise of spreads. Evidently, the ECB was concerned by strong German opposition to such interventions. This is probably why the ECB indicated that the purchasing would be fully sterilized. As a result, the half-hearted program failed to stunt market panic.

Figure 7. ECB interventions and interest rate spreads on the Greek debt



Notes: ECB interventions, €bn, left scale; spreads in percent, right scale.
Sources: ECB, IMF and Trebesch and Zettelmeyer (2013).

5.2. The long road to Open Market Transactions

As can be seen from Figure 7, by late 2011, the spreads on Greek (and Irish and Portuguese) bonds dwarfed their May 2010 levels, and significant spreads were building up on Italian and Spanish bonds. Furthermore, the European bond market – and therefore the interbank market – had become segmented country by country as national public debt instruments had migrated to the books of the respective national banks. The euro was losing its common currency status. This led the ECB to

²⁹ The ECB published total SMP acquisitions by country only *ex post* in 2013, and then not the monthly intakes. The data used in Figure 7 have been visually copied from Trebesch and Zettelmeyer (2013) who use data ‘guessed’ by banking sources.

announce Long Term Refinancing Operations (LTRO), providing three-year loans at full allotment.

“Full allotment” means that the central bank is ready to provide unlimited liquidity, a pre-condition for controlling markets, as note above. Indeed, the amounts (€ 1 tr.) of liquidity injections turned out to be of a different order of magnitude from those of the previous interventions. The markets were impressed, but only for a while. By mid 2012, the crisis was back and still spreading. Why did LTRO at full allotments fail to durably quiet the markets down? A first reason is that unlimited interventions by central banks can only achieve the stated intentions. The ECB indicated that LTRO were aimed at supporting bank lending. Because it carefully avoided referring to public bond turmoil, the ECB interventions could not see the debt crisis away. A second reason is that, in contrast to the Quantitative Easing (QE) operations conducted in the US and the UK, the amounts injected were determined by commercial bank demand, not by ECB supply. Was it a technical mistake? An alternative interpretation is that the ECB was concerned by the implied (temporary) large-scale acquisition of government bonds, which was frowned upon by a number of non-crisis member countries. If so, it would be an instance of curtailed independence.

In July 2012, Mario Draghi, the President of the ECB, finally made his historical ‘whatever it takes’ speech. This was code word for unlimited interventions in support of public debts. Even before the Outright Monetary Transactions (OMT) program was formalized in September 2012, spreads started to decline (Altavilla *et al.* 2014), and they have continued to decline until the change of government in Athens in early 2015.

The OMT program had four key characteristics. First, it was explicitly unlimited. Second, the stated intention was to buy government bonds, and only government bonds. Third, it was not a program of asset purchases but a promise to intervene if the spreads remained unreasonable, this being defined as implying a redenomination risk, i.e. the possibility that a country could leave the Eurozone. Fourth, the program only concerned bonds issued by countries receiving support from the EFSF or ESM, i.e. subject to conditionality.

The first two characteristics amount to a guarantee of public debt instruments, precisely what the markets needed to stop panicking. The last two conditions somehow undermine the first two as they ignore default risk, the main market concern, and inject conditionality. Even so, that was enough to bring the sovereign debt crisis to a long-lasting respite. Still, the two restrictive aspects are important because they reveal the limits of the ECB’s willingness to act fully independently.

From the beginning of the crisis, it was clear that the willingness of the ECB to act as lender of last resort to besieged governments was a necessary condition to quiet markets down (De Grauwe, 2011b; Wyplosz, 2011). It took a long time for the ECB to take an incomplete step in that direction, during which the markets malfunctioned, the economic situation deteriorated and contagion occurred. Surely, the reason for this costly delay must have been fear of opposition from governments and public opinions in some not affected countries. These national concerns may have been voiced within the Governing Council. The fear turned out to be justified since some German

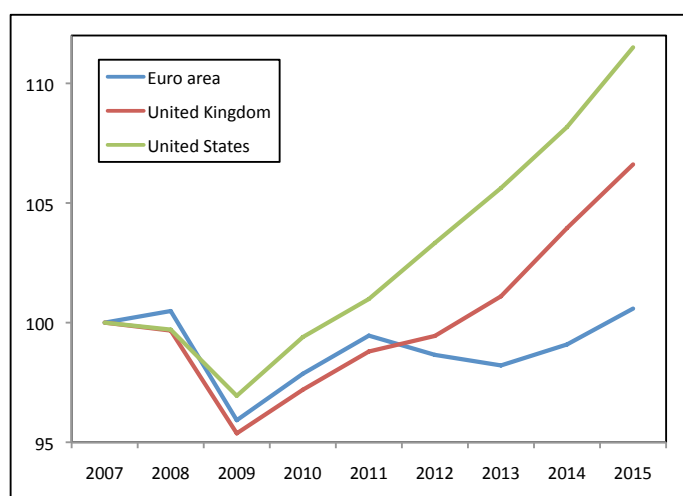
scholars took the ECB to their Constitutional Court. After two years of deliberations, the Court issued a mixed verdict, which banned the notion of unlimited interventions.³⁰

Whether because of self-censorship or the threat of legal action, the ECB has emerged from the crisis as a central bank with surprisingly limited independence. At best, its ability to act as lender of last resort to governments is not established. This means that, in the future, the ECB will again have to display considerable caution and, quite possibly, again wait until the situation deteriorates enough to take the risk of another legal challenge, which is arguably a limit to its independence.

5.3. Quantitative easing

Faced with dire forecasts and the interest rate at the zero lower bound (ZLB), the Federal Reserve started its QE operations at the end of 2008. The Bank of England did the same in early 2009. The ECB started five years later. Figure 8 shows that the situation was not any better in 2008-09 in the Eurozone than in the US or the UK. This raises the question of why the ECB took much longer to reach the ZLB, as can be seen in Figure 9, and even more time to start its version of QE. This has led many critics to assert that the ECB has been ‘behind the curve’. Figure 8 also shows that the Eurozone GDP suffered from a double dip, starting in mid 2011.

Figure 8. Real GDP (2007 = 100)



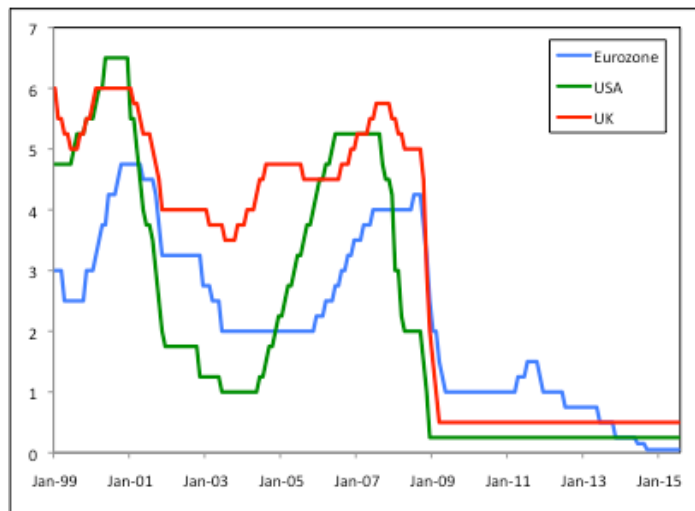
Source: *AMECO on line*, European Commission.

Of course, monetary policy alone cannot explain the divergence between the Eurozone and the two other countries, if only because the latter did not suffer from a sovereign debt crisis. On the other hand, the previous section suggests that the severity, and possibly even the occurrence of the sovereign crisis is related to a much delayed action by the ECB. At any rate, the dismal growth performance of the

³⁰ The German Constitutional Court sent the case to the European Court of Justice, which declared OMT compatible with European laws. Yet, the German Court has not closed the case as regard compatibility with the German constitution.

Eurozone could have elicited more determined action by the ECB, both with the interest rate and QE. Also at stake was forward guidance that the ECB has long shunned.

Figure 9. Policy interest rates



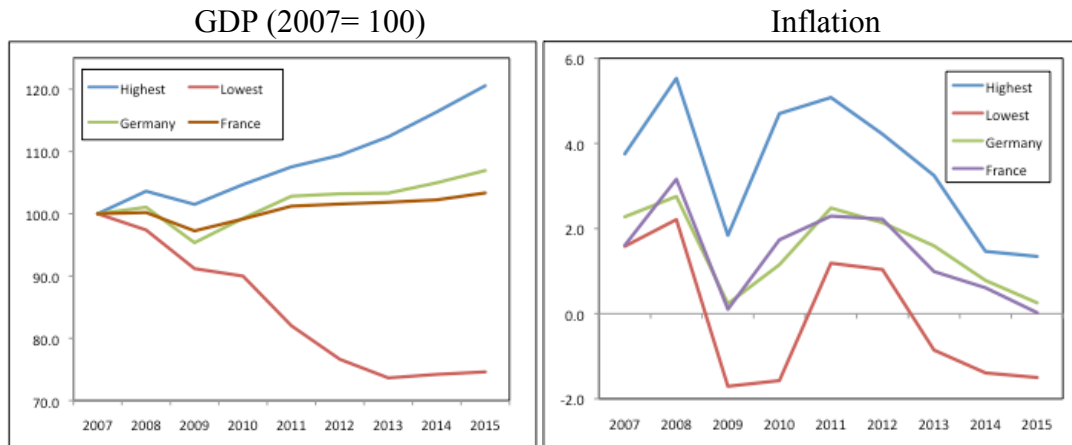
Sources: ECB, Bank of England, Federal Reserve

Responding to the critics, the ECB has often considered that its LTRO program is a form of QE, which is incorrect. As already noted in Section 5.2, QE involves a sustained commitment to keep purchasing large quantities of assets, along an explicit purchase schedule. LTRO was a one off program that was explicitly not aiming at economic recovery. The QE program was finally launched in March 2015. It commits the ECB to monthly money supply increases of € 60 bn. until September 2016 or until inflation rises up to close to 2%.

As before, the most likely explanation for the ECB's delayed action seems to be related to its concern for the extreme reluctance expressed by some governments. With some countries in a deep recession and others growing at a satisfactory pace, the single monetary policy could not fit all needs, as noted earlier. The left panel in Figure 10 readily confirms that the evolution of GDP has differed quite dramatically since the onset of the crisis. The right panel shows that inflation rates, and therefore real interest rates and the impact of the single monetary policy, have also differed across member countries.

In addition, QE means that upward of € 1 tr. worth of public debts, with a ceiling of 33% of existing stocks, will be on the book of the ECB, for the indefinite period until the purchases are reversed. During that time, these debts are effectively erased since interest payments are rebated *pro rata* to member countries. This is a feature of central bank acquisition of public debts, which in effect blurs the distinction between monetary and fiscal policies. The concern is that this can be the back door to fiscal policy dominance (Greenlaw et al., 2013) since bond buying, even in the secondary market, is a form of debt monetization.

Figure 10. GDP and inflation in the Eurozone



Note: Composition of Eurozone changes to reflect new membership.

Source: *AMECO on line*, European Commission.

These fears have been voiced in strong terms, especially in Germany (Weidmann, 2014; Sinn, 2015) but also in other Northern European countries. Since their economic situation did not require QE, it is understandable that these countries had a different perception of the trade-off between continuing recession and the risk of fiscal dominance. Risk perceptions, however, are one thing, the monetary policy mandate is another one. At the aggregate level as well as at national levels, the inflation rate has been below 1.5% since 2013, and declining toward zero ever since. This stands in contrast with the ECB's own definition of price stability, which suggests a target range of 1.5 to 2%. Since it takes at least one year for monetary policy to affect inflation, with hindsight, monetary policy should have eased since at least 2012. Delays in bringing the policy rate to its lower bound and then to adopt QE can therefore be seen as a policy mistake in breach of central bank mandate. The most charitable interpretation, therefore, is that the ECB held off policy actions because it was reluctant to confront criticism, fully aware that the critics were mistaken.

6. Systemic Flaw No.4: Sovereign Debt Relief

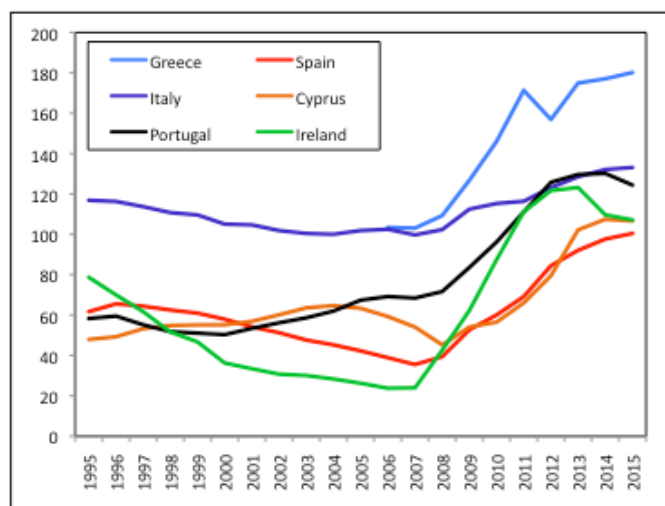
6.1. Debt sustainability: the trend setting Greek case

The question of debt sustainability has been crucial since the very beginning of the crisis. There was no such concern for Cyprus, Ireland and Spain, where debt levels were moderate at the outset and had been declining over the previous decade (Figure 11). The question concerned Greece as well as Italy, which had barely managed to stabilize its debt to GDP ratio over a 'lost decade' of no growth. As the crisis unfolded, Portugal joined the group of countries with uncertain debt service prospects.

As is now understood, debt relief was identified early on as a key strategic issue but the ECB did not want it to be discussed, even privately (Blustein, 2015). In May 2010, the IMF Staff refused to certify that there was a 'high probability' that the

Greek debt would be sustainable within the assistance program (Wyplosz and Sgherri, 2015). The reason given for going ahead was ‘systemic risk’. Greek bonds were almost entirely privately held. Some large French and German banks were exposed to Greek bonds. It was felt that it was not the time to rock the boat, one year after the collapse of Lehman Bros and the subsequent market panic that had prompted large-scale public interventions in support of banking systems. The French and German governments weighed in heavily, as did the US Treasury.³¹

Figure 11. Gross public debts (% of GDP)



Source: AMECO on line, European Commission.

No one will ever know whether a preliminary debt relief would have triggered a renewed banking crisis. No one has explained either why the proper response was not for the French, German and US authorities to face the cost of rescuing banks that had lent excessive amounts, gambling that there would be some form of rescue. The consequence of this policy choice has been to try and make the debts of bailed out countries sustainable by requiring highly ambitious and front-loaded fiscal stabilization measures, which led to deep recessions and ever growing debt to GDP ratios.

What is even more surprising in the case of Greece is that by 2012, the European governments could not deny any more that debt relief was necessary. The result was Private Sector Involvement (PSI), a ‘voluntary’ haircut of 53.5% of the face value imposed on private bondholders. By that time, the non-Greek banks had sold most of their bonds, in part to official creditors, especially to the ECB through the SMP program and to Greek and Cypriot banks. As a result, when PSI was enacted, the bailed-in bondholders were primary Greek and Cypriot banks. This forced Greece to

³¹ Former Bundesbank President Karl-Otto Pöhl explained the first bailout as follows: “It was about protecting German banks, but especially the French banks, from debt write offs. [...] You can see what this was really about – namely, rescuing the banks and the rich Greeks.” *Der Spiegel*, 18 May 2010. <http://www.spiegel.de/international/germany/former-central-bank-head-karl-otto-poehl-bailout-plan-is-all-about-rescuing-banks-and-rich-greeks-a-695245.html>

borrow to recapitalize its banks and it led to the 2013 Cypriot bank crisis.³² As Figure 11 shows, PSI barely made a difference to the ever-rising path of Greek indebtedness since it was combined with more lending by the Troika.

In late 2012, it became clear that the assistance program was not working and that the debt had reached alarming levels. By then, much of the debt was owed to official creditors. While adamantly opposed to any write down of the principal, the creditors agreed to five measures:

- a 100 basis points interest rate reduction of the Greek Lending Facility interest rate,
- a cancellation of the guarantee commitment fee,
- a ten year grace period on interest payments,
- the return of SMP profits by the ECB,³³
- an extension of loan maturities to 30 and 32.5 years.

According to the European Stability Mechanism (ESM), these measures have reduced the NPV of the Greek debt by the equivalent of 49% of GDP.³⁴

6.2. Further needs for debt relief

Debt relief is not just a historical issue with controversial counterfactual assertions. In its debt sustainability analysis, the IMF attempts to develop a rule of thumb to determine when a debt is so high as to be unsustainable. It acknowledges that no single threshold can be inferred from existing studies but mentions a range of 80 to 192% of GDP for the advanced economies and of 35 to 77% for the emerging market countries (IMF, 2011). A different logic is to ask when the debt can be so large as to be crippling for future growth because it requires quasi-permanent large primary budget surpluses and because it creates a vulnerability when interest rates rise. The seminal answer of Reinhart and Rogoff (2009) sets the threshold at 90% of GDP for the developing countries.³⁵

The public debts of several countries have now reached levels that can be considered as unsustainable or threats to growth, see Figure 11. The crisis countries have seen their public indebtedness increase markedly as the result of the assistance programs. This means that any debt relief will have to involve official creditors. It matters greatly who owns the public debts because the procedure is very different. Dealing with private debtholders require negotiations with a great number of stakeholders which is complicated in the absence of an agreed upon mechanism. At least, in the absence of foreign government interference, there is much experience to draw upon. Dealing with official bondholders is by definition a political exercise, which may help (for example the 50% reduction of Poland's debt in 1991) or hurt the process (for example the current discussions about Greece).

6.3. Principles

These thorny issues illustrate the need for the Eurozone to develop a sovereign debt

³² In addition, Gulati *et al.* (2013) make a convincing case that the private bondholders received a sweet deal at Greek taxpayer's expense.

³³ The ECB had bought bonds at a discount on secondary markets and held them to maturity.

³⁴ This result is sensitive to numerous assumptions. De Grauwe (2015) claims that, in present value terms, the debt has been cut by half.

³⁵ This assessment has proved to be quite controversial. For a discussion see Reinhart, Reinhart and Rogoff (2012).

resolution mechanism. In addition to the usual reasons for proceeding with caution – uncertain evaluation, moral hazard – a complicating factor in the Eurozone is that debt relief is not envisaged in the treaties. This probably means that there is no incompatibility between Eurozone membership and debt relief, at least as long as it does not violate any explicit provision. One such provision is the no-bailout clause, even though it has been lightly circumvented already.

In the absence of legal guidance, precedents matter and the 2012 relief of the Greek case, presented in Section 6.1, is a precedent. Explicit debt relief was ruled out and replaced by conditional financial assistance, which further increased indebtedness. European countries provided much of the funding, either bilaterally or via the EFSF/ESM. As a result, the European Commission, under supervision by the Council, drove the process. The IMF, which is not structurally opposed to debt relief, was sidelined, on this issue at least. Once a significant share of the Greek debt had migrated to official books, a clear conflict of interest arose. The creditors had become judge and party. When the issue could be ignored any more, relief took the form of restructuring, reducing the NPV rather than the face value, as explained above.

Why are the creditors willing to reduce debt's NPV and not its face value? This could be a political gimmick aimed at public opinions in the creditor countries.³⁶ It can also be a way of circumventing again the no-bailout clause, upholding the principle that all debts must be repaid. From an economic viewpoint, it does not make any difference. Still, the first aim of assistance programs is to allow a country to recover market access. In principle, markets should see both approaches as equivalent. Yet, NPV reductions cannot be computed with much precision, so that they are uncertain, which does not help with the markets.

Thus, nominal debt reductions are preferable. Core principles have long been developed (IMF, 2013). Within a monetary union, however, special considerations apply, as noted above:

- The politicization and conflicts of interest that marred, and continue to mar, the situation this time around must be eliminated. A solution would be to combine exclusive reliance on the IMF in case of loss of market access with a re-dedication to the no-bailout rule.
- The ECB should not deal in national bonds. Along with the no-bailout condition, this means that public debts would be entirely in private hands.
- The ECB should be prepared to act as lender in last resort to governments. To that effect, the ECB needs a guarantee that potential losses will be guaranteed, either collectively or by the country in question.
- There should be no doubt that a sovereign default does not raise in any way the issue of Eurozone membership.

Pâris and Wyplosz (2014) offer a solution that meets these conditions. It consists in

³⁶ These numbers are quite moderate. The Greek debt owned by European creditors amounts to about 2% of their collective GDP (Sbaihi, 2015). The average maturity is about 17 years, so the undiscounted annual loss is 0.13% of current GDP. The country with the largest exposure in terms of its own GDP is Slovenia, at 3%; over 17 years this amounts to 0.18% of its current GDP per year. A more satisfactory calculation would include discounting and taking into account future nominal GDP growth.

swapping marketable treasury bonds into zero-interest perpetuities. The purchases on the secondary markets are undertaken by the Eurosystem, acting as lender in last resort to governments. The costs remain borne by each country, which formally gives up its share of central bank seigniorage profits until full repayment in NPV terms. Moral hazard is dealt with since there is no inter-country transfer. The Eurosystem is protected from fiscal dominance through a covenant that provides for the automatic reverse swap of perpetuities into marketable bonds; a progressive process is designed to provide adequate incentives for the concerned country to abide by strict fiscal discipline.

Other debt relief proposals have been advanced, e.g. Corsetti et al. (2015). This shows that solutions exist and must be evaluated. Denial of the need for a framework should not remain the main policy line.

7. Systemic Flaw No.5: Intrusiveness

One lesson that has gradually emerged is that a monetary union requires much more than giving up monetary policy sovereignty. This is also an implication of the modified Walters critique presented in Section 2.2. Fiscal discipline and banking regulation, supervision and resolution have been discussed previously. Crisis prevention and management are taken up in the next section. The adoption of the Macroeconomic Imbalances Procedure (MIB) identifies current accounts as an issue of collective importance. Structural reforms have been discussed at least ever since the Treaty of Lisbon signed in 2007 and have been actively sought during the crisis in the framework of the assistance programs. The *Five-President Report* (2015) reaffirms this evolution. This section argues that these concerns are misplaced and that they lead to economically ineffective and politically dangerous intrusions into national sovereignty.

7.1. Current account imbalances

There is much controversy on whether current account imbalances caused the sovereign debt crisis. Promoters of this view look at real appreciation (Sinn and Valentinyi, 2013), exogenous capital flows (Lane and Milesi-Ferretti, 2007) or ill-used foreign borrowing (Giavazzi and Spaventa, 2010). Yet, the real exchange rates and capital flows are endogenous, which strongly suggest that they are merely symptoms of other developments (European Commission, 2009; Wyplosz, 2013).

The MIB procedure is designed to spot current account imbalances and cost divergences early on. There is nothing wrong with monitoring a wide array of early signals. Indeed, the modified Walters critique presented in Section 2.2 identifies these variables as part of a possible systemic disequilibrium. The problem with the MIB starts when it leads to policy recommendations with a sanction threat.

From an economic viewpoint, it must be recognized that governments do not have instruments directly affecting current accounts and production costs. In general equilibrium, both are determined by a broad array of factors, many of which are not policy instruments. With monetary policy lost as a domestic instrument, the most likely lever is fiscal policy, which is already subject to the Stability and Growth Pact. Logically therefore, member countries cannot be held liable if they fail to control

them as instructed. In addition, in a country with its own currency, macroeconomic imbalances are eventually corrected by changes in the exchange rate while, in a monetary union, the common exchange rate responds to aggregate conditions. What matters inside a monetary union are divergences from other member countries. The MIB procedure must therefore identify divergences from the mean. The long-vexing asymmetry issue means that countries with surpluses and/or production cost moderation are unlikely to take counter-acting measures. Imposing sanctions is irrational, which means that sanctions are unlikely to be ever imposed. This makes the whole exercise rather futile and, yet, politically divisive.

It follows that the piling up of macroeconomic procedures that lead to Council directives, which can be mandatory, is a step in the wrong direction.³⁷ So far, Europe has proven unable to reverse faulty decisions. The tendency instead has been to address flaws in existing procedures by making them ever more complex and bureaucratic.

7.2. Structural reforms

The European Commission delves into structural reforms in two ways. Its *Annual Growth Survey* includes detailed evaluations of member countries. Advice, of course, is useful, especially when it includes successful examples drawn from other member countries. However the Two Pack-Six Pack revision of the Stability and Growth Pact allows the Commission to explicitly trade off fiscal discipline and structural reforms. For instance, a country that fails to achieve its budgetary objectives can win a reprieve from the Commission if it commits to ‘ambitious’ structural reforms, see Section 3. Furthermore, the financial assistance programs during the crisis have increasingly emphasized structural reform obligations chosen by the Troika.

There is no doubt that most European countries suffer from deeply ingrained impediments to growth. Structural reforms stand to provide a much-needed boost. However, they are arguably the most politically delicate undertaking of a government because, even if they are Pareto-improving, they inevitably involve income transfers. They pit narrow but well organized interest groups against the usually amorphous collective interest. To make things worse, payoffs are normally slow to materialize, thus benefitting politically future governments while eating into the political capital of the reforming governments. This is all well known (Thimann, 2015) and explains why structural reforms are continuously delayed.

The idea of using an external agent of change for the public good is not new either. It has long been a mainstay of IMF conditionality, but the Fund has struggled to display success. In the early 2000s, following a fiasco in East Asia, the Fund undertook a “streamlining initiative”. A subsequent review by the Independent Evaluation Office (2007) emphasized “the need to reduce the volume of structural conditionality. As a practical first step, a notional cap could be set, possibly at four or five conditions per year. [...] The use of structural benchmarks should be discontinued and measures with low structural content should not be part of conditionality.”

Obviously, this conclusion was lost on the Troika when it required a very large number of reforms, most of which dig very deep into national sovereignty. It has

³⁷ As should be clear from Section 4. , this observation does not apply to the Banking Union.

asserted that, if exacting budget corrections may be contractionary, the proper response is to impose growth-enhancing reforms. The justification provided by the Troika is troubling. Taking as given the need to frontload fiscal corrections – a consequence of the rejection of debt relief – reforms are presented as counter-cyclical policies. It ignores the fact that demand contractions come quickly while supply-side reforms take much longer to produce their effects. Meanwhile the treated countries suffer a deep recession and face intrusive income redistribution without any possibility to appeal to elected officials. One wrong decision is the pretext for an ill-timed decision.

7.3. The faulty logic of intrusion

Most of the conditions imposed on the crisis countries have economic merit, as already mentioned. Policymakers have long known most of them through countless reports, but failed to implement them for political reasons. The idea of using an external agent of change is tempting, and often accepted by policymakers themselves, more or less confidentially. External pressure is seen as counter-pressure to vested interests. This does not make intrusion a valid strategy. Thimann (2015) argues that it is inevitably counter-productive.

First, using an external agent as a scapegoat is dangerous. The IMF has long endorsed this role and it accepts being resented. The Commission too creates resentment when it acts as enforcer of policies in the national sovereignty domain. However, in contrast to the IMF, which leaves once its mission is accomplished, the Commission is a permanent feature in Europe. In many respects, it is a symbol of Europe. Resentment saps the foundation of European integration.³⁸

Second, foreign-imposed reforms are rarely successful. The experience of the IMF is that governments pretend to accept the reforms but deliver little. They know how to navigate the domestic political landscape and how to defang and delay unpopular reforms. Once the program is over, they stop pretending (IEO 2007). More generally, the strategy suffers from asymmetric information. Politicians who make decisions in the European Council have limited knowledge of the relevance and implications of national structural reforms; their motivations are often driven by purely domestic considerations.

Third, mission creep unavoidably brings about a backlash. There was a time when it was possible to pursue stealth integration. The findings of Hobolt and Wratil (2015) suggest that the political elites are becoming increasingly constrained. As noted by Thimann (2015), the construction of the EU, and of the Eurozone as well, was explicitly based on a promise that “national economic and social identities would be maintained, and diversity was stressed as an essential European characteristic.” Intrusive policies reject this promise and generate a mounting resistance to ‘Europe’.

³⁸ Guiso *et al.* (2015) show that, within the Eurozone, public support for European integration has declined during the crisis while support for the euro has not.

8. Systemic Flaw No.6: Governance

For decades, the democratic deficit in Europe has been a constant leitmotiv. This has led to various treaty changes, for example the co-decision process of the Commission and the European Parliament, the creation of a President of the European Council, or the Spring Semester designed to involve national parliaments in the annual procedure of the Stability and Growth Pact. Calls for an elected President of Commission have resulted in the *de facto* nomination by the party that won most votes in elections to the European Parliament. It remains to be seen whether these institutional changes effectively address the democratic deficit.

At the same time, the sovereign debt crisis has presented the EU with the most powerful challenge ever. It involved the relationship among Eurozone members. It required decision making in a highly divisive situation. It brought to the fore the traditional debate about the relative importance and effectiveness of the community method, whereby the European Commission is in the driving seat, and the intergovernmental method, which relies on decision making by member governments. It challenged the Franco-German leadership long seen as the *sine qua non* of European management. On all of these grounds, Europe failed. The European Commission did not take any initiative, leaving it to the governments of the Eurozone to manage the crisis. The European Parliament did not play any role either. Among governments, Germany took over.³⁹

With hindsight, this is not surprising. There is no provision for crisis management in the Eurozone, so procedures had to be invented on the go. The Commission has significant technical knowledge of European economies, but as a rule-based institution it is not equipped to deal with an unplanned economic and financial crisis. For reasons discussed in Section 5. , the ECB remained behind the curve. Both institutions, which together represent 'Europe', had no crisis management mandate to deal with the unavoidable redistributive consequences that can only be decided by democratically elected politicians. Authority naturally befell on Eurozone ministerial meetings. With eighteen members, these meetings could not make quick and complex decisions. The Franco-German leadership failed – or was superficially presented as functional – because of conflicts of interests and deep analytical differences. In addition, France was weakened by decades of budget deficits and of inability to enact significant reforms.

In the power vacuum that emerged, the most powerful country acted as the natural hegemon. In doing so, it protected its interests and projected its vision; this is what hegemons do. This hegemony was welcome by the Northern countries, which share Germany's interests and, to some extent, economic vision. It was badly perceived in Southern European countries, most of which fell victim of the crisis (Greece, Portugal, Cyprus, Spain) or vacillated on the brink (Italy), as Figure 2 shows. It is an open question whether a different management would have prevented the crisis from spreading. What is undisputable is that the democratic deficit has risen to levels never seen before.

Developing a crisis management framework will be difficult. The intergovernmental method cannot be the answer because conflicts of interest imply highly divisive

³⁹ See Schimmelfennig (2015).

politicization. The Commission has no mandate for rapid decisions. An asymmetric shock is not just the well-foreseen Achilles' heel of the monetary union. It also confirms that it is difficult to operate a monetary union without some form of political union.

A political union, however, requires significant deep transfers of sovereignty. Given that further transfers are probably ruled out in the current political environment of mounting Euroskepticism, steps toward a political union will have to await better times. Meanwhile, crises can happen; the current crisis even remains active in Greece. As argued in Section 3.2, calls for a political union are the intellectually lazy solution, a sure way of preserving the currently unstable *status quo*. The challenge remains to find a solution compatible with the present allocation of tasks. Economists are not the best qualified to imagine solutions.

9. Conclusions

The Eurozone has undergone its first real life stress test. At the time of writing, it is not even clear whether it will survive intact. If it does, it will be tempting to conclude that it passed the stress test. If so, the grade should be just a notch above 'fail'. Undoubtedly, at crisis time at least, personalities matter and different policymakers might have performed better, or worse.⁴⁰ The only way of not depending on personalities is to have robust and well-designed institutions.⁴¹ This paper argues that the Eurozone suffers from six systemic flaws. Some of these flaws were clearly foreseen, others not really. Even when they were foreseen, policymakers studiously ignored them.

It would be a tragedy if denial remains the dominant policy reaction. Yet, it is the most likely outcome. First, because accepting that there are flaws implies recognizing that mistakes were made. Politicians are not known for taking responsibility for past mistakes.⁴² Second, because the solutions, when they exist, lie outside the radar screen of policymakers. Third, because the analytical interpretation of the crisis remains highly controversial. Importantly, the dividing lines largely map national borders. This is, in part, a failure of European economists who have been unwilling or unable to develop a common narrative. We seem to prefer to delve into our disagreements than to get together at a time of clear danger. In this crisis, there has been no innocent bystander, except of course the people who have suffered unbelievable hardship. The most worrisome aspect of it all is that such suffering leaves wounds that will remain open for generations.

⁴⁰ The change of leadership at the ECB has exemplified the importance of personalities.

⁴¹ An important issue, not tackled here, is how crucial appointments (the European Commission, the ECB) are decided. It can be argued that the track record is not impressive.

⁴² They could take a leaf from the IMF, which has (half) admitted to its share of mistakes.

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