

Europe's Quest for Fiscal Discipline¹

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“The point here is that a refusal to provide such assistance can build upon itself and create a setting where expectations of bailouts no longer have much foundation. History, in short, matters.”
Oates (2006, p. 24)

1. Introduction

The sovereign debt crisis, which is economically and politically undermining the Euro Area, has confirmed a long-held view: a monetary union among independent states is sustainable only if each and every member state strictly enforces fiscal discipline.² Yet, the diagnosis remains somewhat controversial and the solutions adopted so far are confused and patchy. This paper argues that the sovereign debt crisis is the result of a lack of fiscal discipline broadly defined to include adequate banking supervision. Indeed, in a monetary union where the central bank does not assume its role of lender in last resort, governments are forced to borrow the funds needed to bail out banks when they fail. Properly assessing the flaws in the original construction of the Euro Area is essential to the survival of the single currency. This involves accepting that, in spite of all the refinements adopted in 2005 and 2011, the Stability and Growth Pact cannot work because it stands in contradiction with sovereignty in fiscal matters. The paper argues that, in fact, Europe has inadvertently adopted the wrong model of collective discipline, because it is centralized while a decentralized model not only better fits the Euro Area makeup but also has a superior track record. It also notes the need for the ECB to accept its role of lender of last resort, which in turn requires the adoption of a full-blown banking union.

Section 2 looks at the popular view according to which the crisis is the result of the lack of competitiveness in the periphery countries, for example as argued below: “The competitiveness of these countries was severely eroded in the process, since their wages and prices rose excessively over the period. To come out of the crisis, the GIPS now need to depreciate in real terms, i.e. reduce wages and prices relative to their trading partners, a painful process that requires harsh austerity programs,

¹ I thank useful suggestions and advice provided by Nicolas Carnot, Francesca D'Auria, Ines Drumond, Ombeline Gras, Alexandr Hobza, Robert Kuenzel, Phil Lane, Maury Obstfeld, Karl Pichelmann and Eric Ruscher. Sergio Sola provided research assistance.

² The issue was clearly identified in the Delors Report.

straining the social fabric and causing significant political strife.”
Sinn (2011)

The present paper argues that this view is victim of a familiar trap: simultaneity does not imply causality. It is true that the crisis countries have undergone increasingly large current account deficits and that their inflation rates have exceeded those in the rest of the Eurozone. This does not imply, however, that higher inflation coupled with a common currency is the causal factor of the crisis or even of external deficits. The paper shows how unit labor cost measures can be misleading. It tracks down the various components of the real exchange rate, defined as relative unit labor costs. The nominal appreciation of the euro is found to be a key driving force. There is also some evidence that the strength of the euro was partly the consequence of Germany’s successful policy of wage moderation. Arguing that competitiveness is endogenous, Section 2 follows up with the causality question. Given the short period since the creation of the euro, formal causality tests are impossible. The paper therefore looks at indirect evidence to find that unsustainable demand was the causal factor and that demand was driven by fiscal indiscipline, including poor banking supervision.

Section 3 then asks how fiscal discipline can be achieved in a monetary union. It draws on the literature on fiscal federalism to distinguish between two polar models. The first one is the German centralized model, which has inspired the Euro Area Stability and Growth Pact. The second model, adopted is the US, decentralizes responsibility to the states, which remain fully sovereign. The decentralized model is not just more successful; it is also far better adapted to the Euro Area.

In the Maastricht Treaty, fiscal discipline rests on two arrangements. First, the excessive deficit procedure, which has led to the Stability and Growth Pact. In its initial version, the pact required that the budget deficits remain less than 3% of GDP unless justified by a recession. Enforcement is centralized. It rests on graduated warnings and injunctions from the European Commission, with the threat of a fine. Importantly, however, final decisions rests with the Council, which brings together the Finance Ministers. When Germany and France were to be brought into the procedure in 2003, following two years of slow growth, the Council voted to put the pact “in abeyance” under political pressure from the Euro Area’s two largest countries. Early warnings that the 3% nominal limit was too arbitrary and inflexible to be strictly enforced were proven true.³ This led to a first revision of the pact in 2005. The new version strengthened the “preventive arm”, which requires that budgets be significantly improved during boom years, thus leaving enough room for deterioration in slow-growth years not to result in a breach of the 3% limit. The revised pact also specified that the Commission would base its recommendations on cyclically adjusted budget measures.

As in many other developed countries, the Great Financial Crisis of 2008 resulted in an explosion of public debts in most Euro Area countries. Probably because the euro is in many ways a foreign currency for member countries (De Grauwe, 2011), this explosion in turn triggered the sovereign debt crisis when the financial markets became convinced that defaults were likely. Struggling policymakers concluded that

³ For an early criticism of the pact, see Eichengreen and Wyplosz (1998).

one response was to strengthen the Stability and Growth Pact. The new version retains the 3% nominal limit but emphasizes the cyclically adjusted budget and requires overall debt objectives. Both changes are in line with economic logic (Wyplosz, 1995). On the other hand, the new pact aims at reducing the ability of the Council to sidestep the Commission assessments and recommendations by adopting a reverse voting decision process. Thus, the Commission recommendations of sanctions are automatically adopted unless a qualified majority of the Council votes against them. Thus the new pact represents a further centralization of fiscal discipline enforcement.

The second disciplinary device of the Maastricht Treaty is the no-bailout rule that strictly forbids governments, European institutions and the ECB to provide support to ailing governments. The no-bailout rule is a decentralization device since it implies that fiscal discipline is ultimately the responsibility of each government. The May 2010 bailout of Greece by both the other Euro Area countries and the ECB was a clear breach of the rule, a step that was then presented as special and unique. Bailouts of Ireland and Portugal showed that the rule was definitely ignored. The creation of the European Financial Stability Facility (EFSF) in 2010, designed to provide loans to struggling countries, was a further step in institutionalizing the *de facto* elimination of the no-bailout rule. This is probably why the Facility was temporary, due to expire in 2012. But it has been succeeded by the European Stability Mechanism (ESM), which is permanent. This confirms that the no-bailout rule has been set aside definitely.

Section 4 asks whether and how the decentralized model can be applied to the Euro Area. It notes that the Fiscal Compact, seen as yet another way of strengthening the Stability and Growth Pact, introduces a key element of decentralization. Fiscal discipline is now every country's own legal obligation. It involves the adoption of a clever fiscal rule, based on the cyclically adjusted budget.⁴ All that remains to have a US-style decentralized model of fiscal discipline is a credible commitment to the no-bailout rule, which is already part of the treaty. Restoring credibility to a rule that has been *de facto* broken when it was binding for the first time is challenging, however.

A common objection to the adoption of the US model is that the Euro Area does not have a large federal government that conducts countercyclical fiscal policies and provide insurance to states hit by asymmetric shocks. The objection is not convincing, for three main reasons. First, because the national rules requested by the Fiscal Compact allows each country to conduct countercyclical policies, in contrast with the old-fashioned rules of US states, there is no need for a federal government in that respect. Second, the Euro Area can adopt a fiscal capacity that could mimic the insurance system provided by the US federal budget. Finally, once fiscal discipline is achieved, member countries can borrow when hit by adverse shocks. Borrowing in bad years and paying back in good years is equivalent to being part of an insurance system.

Section 4 also looks at two loose ends. The first one is the importance of having in place a banking union as a pre-condition for the ECB to act as lender in last resort to banks and the banking system, thus breaking the link between banks and public debts.

⁴ Cyclical adjustments have also been introduced in the revisions of the Stability and Growth Pact. In this respect, therefore, the Fiscal Compact does not innovate.

The other loose end is the legacy of public debts inherited from decades of fiscal indiscipline and the debt build-up in the wake of the global financial crisis. Working through possible options, the paper concludes that the least bad one is debt restructuring, a clearly undesirable but probably unavoidable option. Section 5 offers some concluding observations.

2. The Debt Crisis: Fiscal Indiscipline, not Competitiveness

It is true that the crisis countries have undergone increasingly large current account deficits and that their inflation rates have exceeded those in the rest of the Eurozone. This does not imply, however, that higher inflation coupled with a common currency is the causal factor of the crisis or even of external deficits. Crucially, the conclusion that the euro area is doomed because labor markets are inflexible and the source of lethal imbalances is not warranted either.

2.1. Competitiveness: Direct Measures

Even if inflation differentials caused the imbalances and the crisis, inflation can hardly be seen as exogenous. We need to identify what caused these differentials. This section therefore brings together domestic demand, real exchange rates and current account imbalances. Establishing causality is essential to distinguish this interpretation from the popular competitiveness view. Unfortunately, formally establishing causality, always a difficult and often desperate undertaking, is impossible in the present case because we have too few observations. Budget figures are only meaningful at the annual frequency and inflation is a low frequency variable. In addition, the sudden jumps in public debts in response to bank bailouts are one-off events. For this reason, the paper builds up its case through circumstantial evidence.

The role of competitiveness and external imbalances in the crisis has been scrutinized, in fact even before the onslaught of the global and European crises. Many scholars (e.g. Obstfeld and Rogoff, 2005; Roubini and Setser, 2005) long forewarned that the observed current account imbalances were unsustainable, that some correction was unavoidable and that this correction could take the form of a crisis hitting the dollar and the US economy. The 2007-8 crisis was not a current account imbalance crisis, there was no financial flow reversal to the US and the US dollar has not faced any significant depreciation. This has led to a reappraisal. In particular, Obstfeld and Rogoff (2010) argue that the real exchange rate and the current accounts are endogenous to economic policies, which is one theme of the present paper as well.

A number of papers focus on the Euro Area and deal with the similar set of questions as here. Like this paper, European Commission (2009) looks at relative prices, current accounts and domestic demand, concluding that demand played an important role. Mongelli and Wyplosz (2009) note that the rising divergence of inflation and current accounts is unsustainable, but they interpret this as a self-equilibrating consequence of the Walters critique; the present paper will argue that the crisis is part of the return to equilibrium. Lebrun and Perez (2011) study the pattern of real unit labor costs and find that fluctuations tend to be reversed, with a five-year half life. They establish a link between rising real unit labor costs and increases in the capital-labor ratio, which leads them to emphasize the role of firms borrowing and investment. Mallariopoulos (2010) looks at various indicators of competitiveness and concludes that real effective

exchange rates overstate the loss of competitiveness of Greece after it adopted the euro, which is also a conclusion of the present paper. Lane and Peels (2012) note that current account deficits can be justified by growth convergence but they also find that excessive enthusiasm about expected growth played a role in boosting domestic demand. Lane and Milesi-Ferretti (2012) study post-crisis current accounts in a broad sample of countries; they find that the reversals have been stronger where pre-crisis deficits were deeper and, most related to the present paper, that exchange rates played no role where they were floating and a perverse role where they were pegged. Finally, Chen et al. (2013) offer a detailed analysis of the evolution of real exchange rates, with results quite similar to those presented here.

2.2. The facts

The popular view that the Euro Area crisis is the consequence of serious competitiveness losses in the affected countries is entirely and uniquely based on one version or another of Figure 1 below.⁵ The figure displays unit labor costs $U = WL/Y$, where W is nominal compensation per employee, L the number of employees and Y is real GDP. It shows a widening gap until 2009, the year when crisis pressure built up (indicated by the vertical line). This figure has led to the popular conclusion that the crisis has been caused by a loss of competitiveness in the Southern Euro Area countries, which remains wide by 2012. Is this diagnosis as compelling as it looks?

Labor costs are directly comparable and offer a clear picture of the evolution of national competitiveness under two assumptions. The first one is that we have a single good market and separate labor markets. The other implicit assumption is that we do not need to be concerned with exchange rates because all wages and GDPs are in euros in these countries.

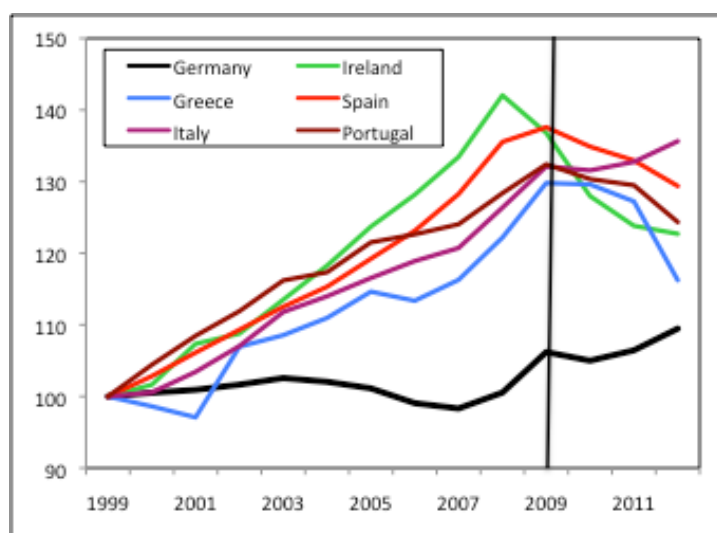
The first assumption is only superficially reasonable. It is true that labor market institutions are deeply national, involving domestic trade unions and wage bargaining processes driven by domestic factors, both economic and political. Yet, wage bargaining is known to be deeply related to economic conditions in general (see, e.g. Mortensen and Pissarides, 1994). This has been shown to imply, among many other things, that goods market integration has effects on labor markets, even if the overall impact depends on a myriad of factors, as surveyed in Bertola (2009), which also looks at the various effects of adopting a common currency. The effects may also change over time as national labor market institutions endogenously respond to changing conditions, see e.g. Calmfors (2001). These considerations suggest that the co-movements apparent in Figure 1 are not necessarily exogenous and need to be explained. I return to this issue below in Section 2.7. They also provide some clues to the rapid reversal observed after 2009.

The second assumption is clearly unacceptable, as argued by Lebrun and Perez (2011) and Mallariopoulos (2010). It implicitly amounts to claiming that the Euro Area countries only compete with each other. While intra-Euro Area trade often represents the largest part of overall trade, individual countries have different specializations and trade with different parts of the world. It also ignores the fact that the evolution of the nontraded good sector, where much of wage slippages have occurred, has little to say about external competitiveness. These two arguments suggest that nominal labor costs

⁵ For a similar presentation, see Buti and Carnot (2012).

tells us very little about external competitiveness. Ideally, we would like to look at each country real effective exchange rate (REER) measured by comparing the domestic traded good price index and an index of average traded good prices in the partners countries converted in domestic currency when these countries are not part of the Euro Area.

Figure 1. Unit labor costs in Germany and in the crisis countries 1999-2012 (Index: 1999 =100)



Source: AMECO on line, January 2013. European Commission

Note: Variable PLCD is the ratio of the nominal wage bill to real GDP for the total economy, where the wage bill is inclusive of overhead costs.

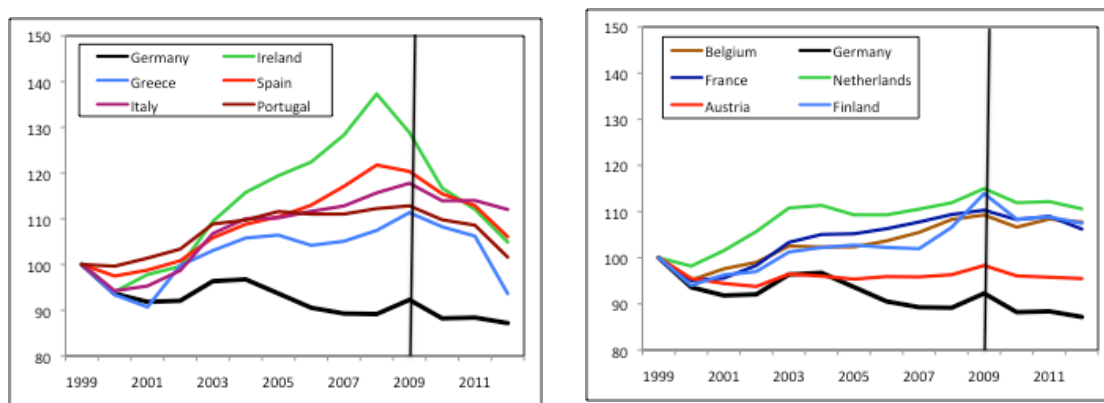
Lack of internationally comparable traded good price data precludes the use of such a REER, unfortunately. This paper therefore sticks with nominal labor costs but relies on a REER that compares each country's costs to average costs in its partner countries, including those outside of the Euro Area. Figure 2 accordingly presents for each country the REER based on nominal unit labor costs EU/U^* where E is the effective exchange rate of a country, U its nominal labor costs (shown in Figure 1) and U^* the average unit labor costs in partner countries, using the same geometric weighting schemes for E and U^* .⁶ The leftmost chart presents REERs of the crisis countries while the rightmost chart presents those from the largest remaining countries using the same scale for comparison purposes.

Figure 2 confirms that sizeable gaps between the crisis countries and Germany open up after 1999. However, except of Ireland, they are much smaller – about half – than suggested by Figure 1. This is not surprising; Chen et al. (2013) show that most Euro Area countries trade in different good categories and that trade outside the Euro Area is far from negligible, especially for the periphery countries. Figure 2 also shows that

⁶ The partner countries are the 35 other industrialized countries in a sample that includes the 27 EU countries, Australia, Canada, Japan, Mexico, New Zealand, Norway, Switzerland, Turkey and the US. Double export weights. (AMECO code: XUNRQ.)

the crisis countries' REERs have depreciated considerably after 2009 and are almost back to where they were in 1999. This is a very important observation since the observed reversals suggest that labor markets are considerably more responsive than hitherto believed. Of course, this newfound flexibility has been achieved under considerable duress as unemployment rates have massively increased. At least, these costs are now sunk so that exit from the Euro Area is hardly warranted any more. The figure also suggests that Germany is an outlier, relative to both crisis and non-crisis countries, perhaps with the exception of Austria.

Figure 2. Relative Unit Labor Costs (Index: 1999 = 100)



Source: AMECO on line. European Commission.

Note: Variable XUNRQ is the ratio of domestic nominal unit labor costs used in Figure 1 relative to those in 35 other developed countries using double export weights and converted in the same currency. Note that the exchange rates are those that prevail in the corresponding years, euros from 1999 onward and national currencies before. The 36 countries in a sample are the 27 EU countries and Australia, Canada, Japan, Mexico, New Zealand, Norway, Switzerland, Turkey and the US.

Yet, this presentation of REERs is potentially misleading too. By normalizing all REERs to be 100 in 1999, the year when the euro was created, it implicitly assumes that all exchange rates were then in equilibrium. Casual evidence is that some countries (Portugal is a case in point, as is Greece when it joined in 2001) adopted undervalued conversion rates while Germany accepted an overvalued exchange rate. If that assessment is correct, we should expect real appreciation for the former countries and a real depreciation in Germany.

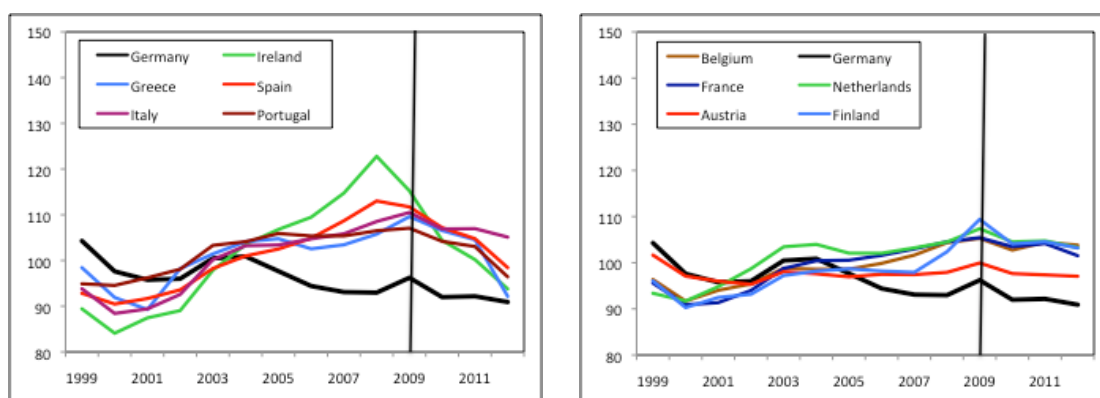
This is exactly what happened as seen in Figure 3, which uses the same data as Figure 2, but normalizes the REERs by setting the index to be 100 on average over the whole period 1995-2012 for which the data is available. Under the purchasing power parity (PPP) assumption, real exchange rates fluctuate around a long-run equilibrium level. The evidence is that real exchange rate deviations from equilibrium are slowly eliminated with a half-life of about 4-5 years (Frankel and Rose, 1996). Under this assumption, the average value of 100 computed over 18 years should be a reasonable

estimate of the equilibrium level.

Note that the scale is the same as in previous figures. Generally, the fluctuations are less pronounced because the average is usually significantly larger than the 1999 level. Indeed, all crisis countries are found to have converted in 1999 their currencies into euros at an undervalued rate, with the opposite situation for Germany, and, to a much smaller extent, Austria. Crucially, the figure shows that by 2012 the REERs of all member countries are well within one standard deviation of the presumed equilibrium level 100.

The assumptions that underlie the interpretation of the data are not necessarily warranted. For instance, some countries may have had overvalued exchange rates during the whole period. For this reason, the impression conveyed by Figure 3 may be misleading but, in this respect, Figure 1 is much more so since it implicitly makes the stronger assumption that all exchange rates were in equilibrium in the year 1999.

Figure 3. Relative Unit Labor Costs (Index: 1995-2012 = 100)



Source: Same data as Figure 2.

Obviously, just looking at data cannot provide firm conclusions. Any attempt at deciding whether a country has an over or undervalued currency inevitably requires estimating the equilibrium exchange rate and testing for PPP. PPP is a controversial concept but massive research efforts have led to the consensus view that, while that, while PPP does not hold in the short run, PPP but cannot be rejected in the long run, at least for countries at similar stages of development (Taylor and Taylor, 2004). If the Southern Euro Area countries have continued to catch-up with the core countries after joining the euro, PPP may not hold and there would be even less of a case for overvaluation, an issue to which I return in Section 4.

The 18 year-long sample period used to normalize the REERs in Figure 3 may be seen as somewhat short. An alternative dataset provides REERs for Euro Area countries dating back to 1960, but they compare each country to a narrower sample of countries, namely the 15 first EU member countries. The longer period potentially offers a more precise estimate of the equilibrium exchange rate under the PPP

assumption, but the narrower definition of partner countries can introduce a serious bias.⁷

Figure 4 displays the difference between the corresponding REER and its average over 1960-2012 under the narrow definition of trading partners and over 1995-2012 for the wider definition. The PPP-implied overvaluation is presented for three years: 1999, when the euro was launched, in 2009 when the crisis built up and in 2012, the latest data available, using the same scale for each chart. The difference between the two measures is striking. In general, misalignments are much larger under the narrow definition, especially in the crisis year 2009 where the narrow definition suggests considerable overvaluation for all the crisis countries. This is in line with the difference between Figure 1, which implicitly encourages comparison with Germany, the narrowest possible list of partner countries, and Figure 2, which uses the wide list of partner countries.

Figure 4 confirms that the conversion rates adopted when the euro was launched implied an overvaluation for Germany and Austria, and sizeable undervaluation for other countries. The 1999 differences between the two REER measures are limited, with the exceptions of Portugal and Spain. On the eve of the crisis, in 2009, all the countries that eventually faced acute market pressure are overvalued under both measures. The wide measures typically indicate lower misalignments, with the exception of Ireland and Italy. Finally, according to the narrow definition, except for Greece and Ireland, all the crisis countries are found to still suffer from overvaluation in 2012, but this is not the case under the wide definition except for Italy (see also Figure 3, which stands behind the wide definition deviations displayed in Figure 4). Greece and Ireland, in fact, are found to be nearly as undervalued as Germany.

It may be that the narrower definition is more acceptable because it relies on 53 years of observation. One reason to be suspicious about the narrow definition is provided by Chen et al. (2013), who show the importance for the Euro Area countries of trade with countries outside Europe in understanding the evolution of current accounts and how trade shocks have had important asymmetric effects in the monetary union.

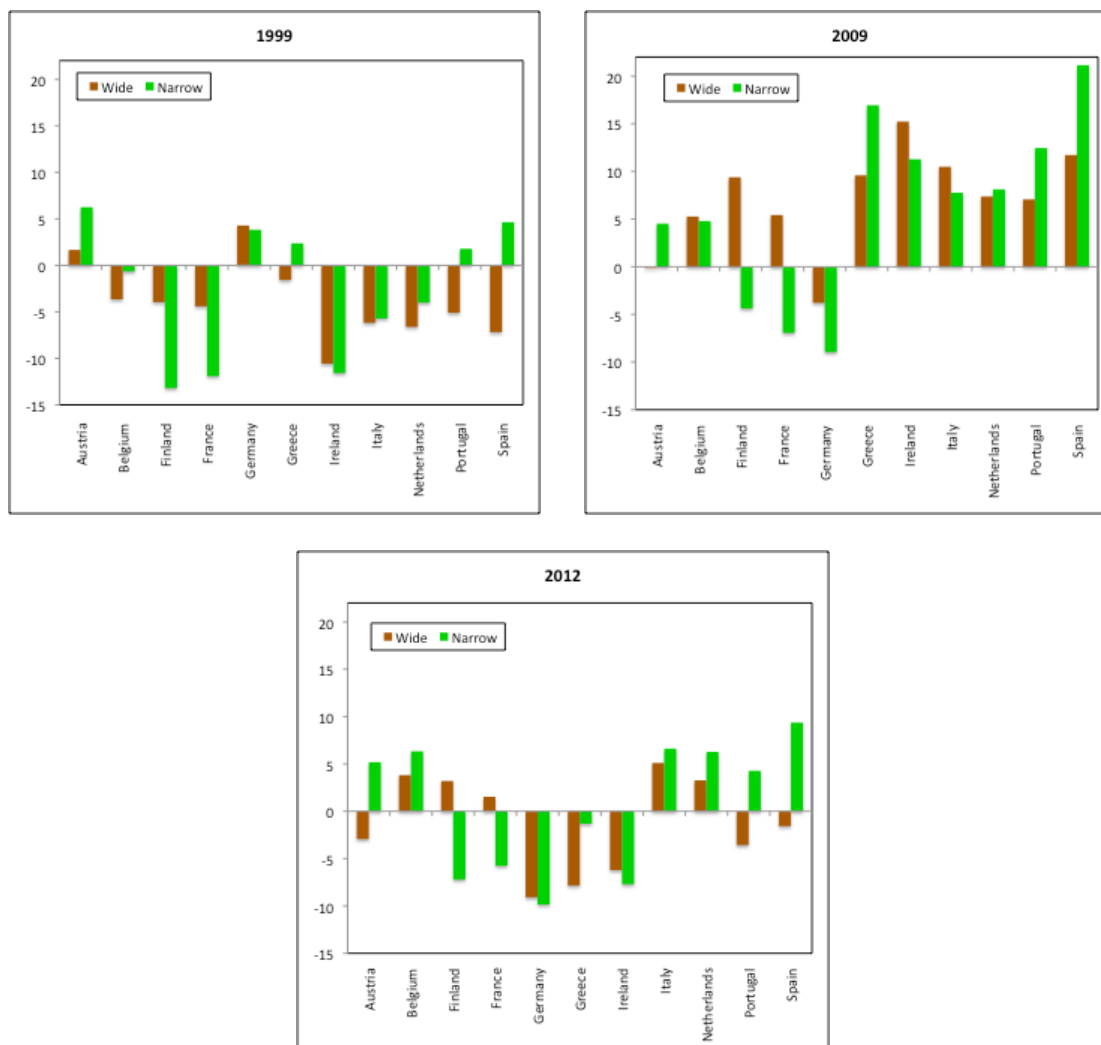
2.3. Sources of misalignments

Even though the view, that massive loss of external competitiveness is characteristic of the crisis countries, does not stand up to a proper treatment of the data, it remains true that these countries have seen their real exchange rate appreciate during the first ten years of the euro. Why? Four explanations are possible: 1) a correction of earlier misalignments; 2) the euro's strength; 3) asymmetric shocks; 4) the Balassa-Samuelson effect.⁸

⁷ For a similar treatment, see European Commission (2009).

⁸ Another interpretation considers that exogenous capital flows triggered domestic borrowing and spending, hence excessive demand (Sinn, 2012). This is again a causality issue: is it not domestic demand that has attracted foreign financing? Why, for example, would capital have flowed *exogenously* to Spain and not to Germany? Capital flows are most unlikely to be exogenous.

Figure 4. Deviations of REER from average



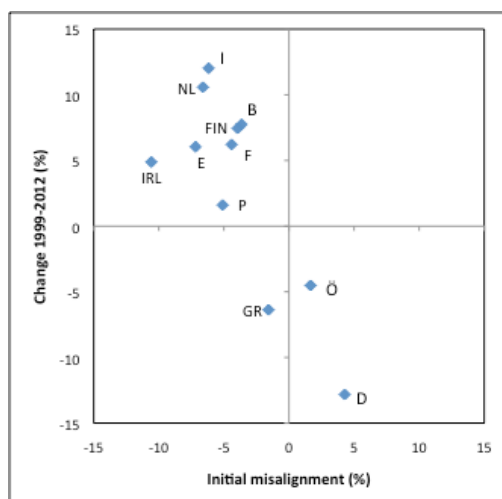
Note: The wide REER is the same as in Figure 2 and the average is computed over 1995-2012; the narrow REER compares a country's nominal unit labor costs to those in the other 15 EU member countries before enlargement to Central and Eastern Europe, the average being computed over 1960-2012.

Source: AMECO on line. European Commission

The previous section already looked at the first interpretation. Using the wide definition of real exchange rates, the evidence is summarized in Figure 5. The figure shows a strong correlation (-0.79) between the initial misalignment, as shown in Figure 4, and the subsequent change in the real exchange rate, as displayed in Figure 3.⁹ The question is then: is there anything more to it? The answer will be largely negative but the next question will be to ask how this correction came about.

⁹ Looking at a large sample of developed and emerging market countries, Lane and Milesi-Ferretti (2012) show that, in the post global crisis period, the current account adjustment is proportional to the size of the initial imbalance.

Figure 5. Real exchange rates: initial deviation and change over 1999-2012



Note: Wide definition
Source: Figures 3 and 4.

2.4. Exchange rate decomposition

The REER combines the effective nominal exchange rate and nominal labor costs, which in turn are related to inflation and labor productivity. This section briefly looks at a decomposition of the change in REERs between 1999 and 2009.¹⁰ The REER used so far is EU/U^* the ratio of domestic nominal unit labor costs U to the average of foreign labor costs U^* converted into the same currency via the nominal effective exchange rate E . Using the GDP deflator to measure the price level and denoting $u = U/P$ and $u^* = U^*/P^*$, respectively, the real domestic and foreign real labor costs, the REER can be written as:

$$\frac{EU}{U^*} = \frac{u}{u^*} \frac{EP}{P^*}.$$

Table 1 provides the corresponding decomposition of the change in the REER (Column 1) into changes of u/u^* (Column 2) and of EP/P^* (Column 3) during the first ten years of the euro. Then the change of relative prices EP/P^* – another popular REER measure – is decomposed into changes in the effective nominal exchange rate E (Column 4) and in the cumulated inflation differential P/P^* (Column 5). Domestic cumulated inflation is shown in the last column. With the exception of Ireland and Finland, and in a smaller way Italy, relative *real* unit labor costs – or equivalently the labor share of income – have not drifted very significantly and do not explain much of the REER appreciation where it has occurred. Still nominal labor cost increases may have led to high prices, thus leaving real labor costs little affected. This possibility is

¹⁰ Chan et al. (2013) perform a similar decomposition, but with a different angle. They too conclude the euro's nominal strength has played an important role, but they focus on a different asymmetry: national specialization in trade at a time of fast growth in the emerging market countries.

examined next. At this stage, the data do not bear out that increases in the labor share of income has been allowed to mushroom after adoption of the euro in countries like Greece or Portugal. Wherever competitiveness has been hurt, the main cause of increase in the REER is an appreciation of the GDP deflator based real effective exchange rate EP/P^* ; Ireland stands apart but even there, real labor costs play second fiddle to the real effective exchange rate.

Table 1. Decomposition of increases in REER, 1999-2009 (percent)

	Total REER = EU/U*	u/u*	EP/P*	E	P/P*	P
	(1)	(2)	(3)	(4)	(5)	(6)
Crisis countries						
Greece	14.4	2.6	11.5	11.7	-0.1	38.6
Ireland	34.1	13.0	18.6	15.6	2.6	26.4
Italy	17.7	5.6	11.5	12.3	-0.8	26.8
Portugal	13.0	1.9	10.8	6.9	3.7	30.1
Spain	19.0	-2.7	22.3	10.3	10.9	40.1
Non-crisis countries						
Austria	-1.9	-2.2	0.3	7.1	-6.3	16.7
Belgium	8.8	0.6	8.2	9.1	-0.9	22.5
Finland	13.5	9.6	3.5	11.9	-7.5	16.3
France	9.5	2.9	6.4	10.7	-3.9	20.8
Germany	-8.0	-2.5	-5.7	11.4	-15.3	8.9
Netherlands	14.8	2.4	12.0	8.8	3.0	26.3

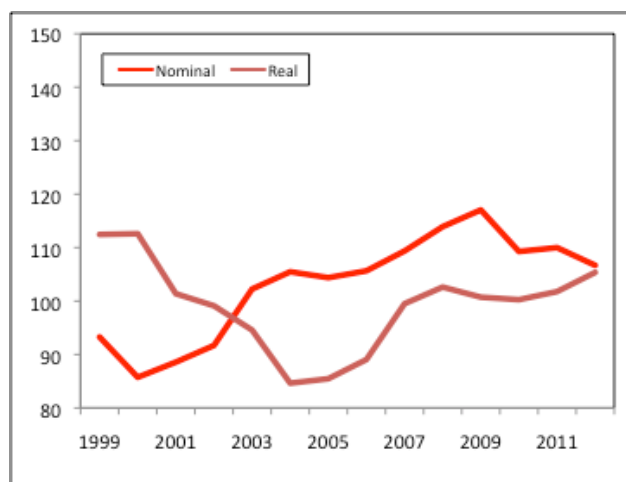
Notes: u/u^* is the ratio of domestic and foreign real unit labor costs WL/PY (code QLCDQ); E is the nominal effective exchange rate (code XUNNQ); P/P^* is the ratio of domestic and foreign GDP deflators (code: PVGDQ); P is the domestic GDP deflator (code PVGD).

Source: AMECO on line. European Commission

Decomposing further EP/P^* , it appears that nominal euro appreciation is the main cause of the observed real appreciation, not inflation differentials. Since its creation, after an early depreciation, the euro has appreciated, peaking in 2009 as shown in Figure 6, which use the same scale as in the previous figures.¹¹ The evolution of national nominal effective exchange rates varies from one country to another because of different geographical trade patterns. This explains that some countries, chiefly Ireland that trades heavily with the UK, underwent stronger appreciation than others like Portugal, which is more deeply integrated into the EU. Among the crisis countries, inflation differentials have been negligible except for Spain. Yet inflation differentials set apart the non-crisis from the crisis countries, which may seem inconsistent. A plausible interpretation is that the trade partners of the crisis countries on average displayed higher inflation than those of the non-crisis countries. The last column shows that the crisis countries generally exhibit significantly higher rates than the non-crisis countries, especially Spain and Greece.

¹¹ The 25.5% euro's effective appreciation between 1999 and 2009 exceeds that of the countries shown in Table 1 because national effective rates use trade weights that include the other Euro Area countries while the Euro Area as a whole only trades with the rest of the world.

Figure 6. Nominal and real effective exchange rates of the euro (index: average 1995-2012 = 100)



Note: The exchange rate is computed as a trade-weighted index relative to 35 industrialized countries (code XUNNQ). The real exchange rate corresponds to the wide definition (code XUNRQ).

Source: AMECO on line. European Commission

Note also that, according to Figure 6, the euro's effective real exchange rate depreciated much longer than the nominal rate, in fact it kept depreciating until 2004 while the nominal rate was appreciating. This is likely to correspond to the Euro Area's largest country, Germany, which along with Austria and Finland managed to control labor costs. The acceleration of labor costs in other countries explains the reversal of the area's effective real exchange rate. This divergent path is further discussed in the next section. It is interesting to note that by 2012, the real exchange rate stands 5% above the sample average, suggesting a slight overvaluation.

More generally, Table 1 shows that Germany – and Austria to a smaller extent – is a clear outlier on every single dimension of this decomposition. This is one additional reason behind the popular view that the crisis countries have suffered massive competitiveness loss. The fact is that Germany achieved large competitiveness gains since the euro creation. Its GDP deflator has risen by 15% less than among its trading partner. That its real unit labor costs also declined in relative terms implies that relative nominal labor costs declined much more.¹² With a common monetary policy, the source of this performance most probably lies with an active policy of wage moderation that led to low inflation.

2.5. A Digression: Asymmetry in the Euro Area

According to PPP, Germany's nominal exchange rate should be appreciating. Given the size of its economy, Germany's performance probably played an important role in the euro appreciation, which in turn was a key contributing factor to the real

¹² Using Columns (1) and (4) or Columns (2) and (5), relative nominal unit labor costs (U/U^*) declined by 18 to 19%.

appreciation of the crisis countries. Does it mean that the Euro Area has a “German problem”? One benefit of economic integration is that it enhances competition, not just in the goods and financial markets but more broadly, including wage and price setting institutions.¹³ In that sense, it is reassuring that the largest economy is virtuous. It puts pressure on all other countries to follow suite, contain their own costs and raise productivity.

At the same time, the situation is asymmetric in the short run, and the short run can be unstable. Consider a two-country monetary union with similarly sized economies, where one country is reducing its labor costs, but not the other one. This is a classic asymmetric shock as discussed in the Optimum Currency Area literature. If each country had its currency, the virtuous country would see its exchange rate appreciate, so that its efforts would accrue in the form of improved terms of trade (and other domestic effects like low real interest rates and higher employment), with no effect on the other country, at least to a first degree of approximation. If they share the same currency, the common exchange rate appreciates, but less. This means that the non-virtuous country’s external competitiveness is eroded while the virtuous country enjoys a competitiveness advantage. Strong demand for the virtuous country production translates into a current account surplus and eventually inflation. Over time inflation will produce the same real exchange appreciation as in the absence of the common currency. If this country is willing to tolerate a higher inflation rate, it has nothing to do, just wait and rip the benefits from its virtuous behavior. The other country sees its current account worsen and faces low demand, hence a contractionary effect. If the situation lasts, i.e. if inflation rises slowly in the virtuous country, the other country’s external debt keep rising and its public finances deteriorate as growth slows down. This can become a crisis. The asymmetry means that the onus of action is on the country that has not reduced its production costs. This country has not done anything wrong, simply it shares its currency with a highly virtuous country. This non-cooperative outcome is undesirable for both countries: inflation in the virtuous country, a risk of crisis in the other country.

The asymmetry problem has been well known for a long time. During the Bretton Woods conference, Keynes famously wanted the fixed exchange rate system’s rules to be symmetric. He lost. The IMF developed assistance programs that impose restrictive conditions on the non-virtuous countries, none on the virtuous countries. At least, the Bretton Woods agreement allowed the non-virtuous countries to depreciate. The current situation in the Euro Area bears more than a resemblance to the Bretton Woods agreements, including conditional loans from the European Financial Stability Facility (EFSF) and its successor the European Stability Mechanism (ESM), but with important differences. One obvious difference is that depreciations are not possible within the Euro Area, so the non-virtuous countries face a much steeper hurdle. Another difference is that the link between private and public debts is now much tighter than in Keynes’ times, and both debts have grown considerably. This makes the situation considerably more crisis-prone and the costs of the asymmetry much larger. The third major difference is that Euro Area countries do not have access to a lender of last resort. Even though the ECB will be drawn eventually into playing this role, the delay is costly. Finally, most Euro Area countries have no room left for fiscal

¹³ Bertola (2008) shows the deep link between direct goods market competition and indirect labor market competition.

policy actions.

The upshot is that competitiveness losses occur when the euro appreciation is not offset by a reduction in labor costs. Put differently, countries that did not cut relative labor costs in the face of a strong appreciation of the euro – or in the case of Spain, did not cut enough labor costs in the face of a very strong effective appreciation – are those that suffered competitiveness losses. Since 2009, the combination of relative labor cost reductions and a weaker euro explain why competitiveness is nearly reestablished. The adjustment process, however, has been highly asymmetric, involving large increases in unemployment in the crisis countries while Germany enjoys some of its best years.

2.6. The Balassa-Samuelson effect

The reasoning so far rests heavily on the assumption that PPP is valid in the long run. The most common reason why long run PPP fails is the Balassa-Samuelson effect, which predicts that the real exchange rate appreciates when an economy catches up. The phenomenon involves large productivity gains in the traded good sector, which allows for higher real wages in that sector while keeping labor costs and competitiveness intact. In the nontraded sector real wages grow too for various reasons,¹⁴ so labor costs increase in that sector and hence in the aggregate.

The Balassa-Samuelson hypothesis might explain why labor cost increases have occurred in Southern Europe, which is often seen as economically lagging Northern Europe. An important implication of the hypothesis is that rising aggregate labor cost increases represent an equilibrium phenomenon, not a loss of international competitiveness. It must also be noted that the Balassa-Samuelson hypothesis has nothing to say about current account imbalances. Indeed, as a microeconomic phenomenon, it cannot help understand current account balances, the difference between domestic production of and spending on traded goods.

The Balassa-Samuelson hypothesis could provide an interpretation for labor cost increases until the start of the crisis, see Figure 3. Under this interpretation, however, the post-crisis decline in labor costs would not be seen as a return to equilibrium but as a temporary phenomenon – the impact of a growing recession – that will be reversed once the crisis is over.

Many papers have tested the presence of a Balassa-Samuelson effect. The starting point is to build the measure that identifies the Balassa-Samuelson effect. As shown by De Gregorio et al. (1994), this is ratio $\frac{\pi^T / \pi^N}{\pi^T / \pi^N}$ of a country's productivities in the traded (π^T) and nontraded (π^N) good sectors relative to the same ratio in trading partner countries.¹⁵ The foreign productivity measures are built as geometrically weighted averages of individual countries, using trade weights. The data are from the OECD STAN database. Productivity is measured as value added per hour of work.

The changes in the national traded to nontraded sector productivity ratios since the

¹⁴ Labor market equilibrium, trade union pressure and equity considerations.

¹⁵ This model focuses entirely on the supply side, as is appropriate for long-run considerations.

creation of the euro are reported in Table 2. Greece, Ireland and Portugal are indeed among the Euro Area countries where relative productivity has increased fastest. On the other hand, Spain and Italy are among the countries with the lowest changes. This either suggests that the Balassa-Samuelson effect is not relevant for this group of Euro Area countries or that it is only relevant for a subset of countries. In that latter case, it is disquieting that the first group of countries that were affected by the crisis – Greece, Ireland and Portugal – are precisely those where productivity changes have been supportive of a Balassa-Samuelson effect.

An indication is provided by the correlation between the changes in the ratios and their initial levels. Over the long period 1970-2007, among the countries shown in Table 2, the correlation is -0.91, which indicated that changes have been largest where the initial ratios were lowest, precisely what is expected under the Balassa-Samuelson hypothesis. However, over the period 1998-2007, the ratio is only -0.19. This suggests that, in some countries at least, changes in the productivity ratio may be related to other reasons than catch-up in the traded good sector.

Table 2. Change in Relative productivities (π^T/π^N)

	1999-2007
Italy	11.2%
Germany	12.9%
Spain	13.2%
Belgium	15.6%
Netherlands	23.2%
France	24.4%
Austria	25.6%
Greece	28.7%
Finland	37.4%
Portugal	43.0%
Ireland	60.2%

Source: STAN database, OECD.

We test formally for the presence of a Balassa-Samuelson effect, following the approach proposed by Ricci et al. (2008). Available data cover the countries available in Ricci et al. (2008) and cover the period 1980-2004, sometimes over shorter periods when data is not available.¹⁶ The (log of the) real exchange rate, defined as relative labor costs – as shown in Figure 2 – is regressed on the log of the ratio of domestic to foreign relative productivities and a number of control variables proposed by Ricci et al. (2008).¹⁷ The results are presented in Table 3. The Balassa-Samuelson term is shown in the first line. The best fits are reported.

¹⁶ A few countries (Russia, Czech Republic, Taiwan, Thailand) were dropped for lack of sufficient observations.

¹⁷ The relative productivity variable uses GDP weights instead of the trade weights used in Table 2

Table 3. Estimation of the real effective exchange rate

	ALL SAMPLE	OECD VS. NON OECD		EU VS. NON EU		EMU VS. NON EMU	
	(1) ALL	(3) OECD	(5) Non OECD	(7) EU	(9) Non EU	(11) EMU	(13) Non EMU
Relative productivities	0.259*** [0.056]	-0.114* [0.061]	0.502*** [0.069]	-0.242*** [0.077]	0.319*** [0.062]	-0.128 [0.138]	0.276*** [0.058]
Log Terms of Trade	0.472*** [0.093]	0.463*** [0.088]	0.318*** [0.102]	0.591*** [0.141]	0.416*** [0.095]	1.224*** [0.212]	0.480*** [0.092]
Gov Consumption/GDP	2.756*** [0.353]	1.895*** [0.338]	3.896*** [0.544]	0.778** [0.370]	3.426*** [0.447]	1.403* [0.738]	2.656*** [0.370]
Net Foreign Assets/Trade	0.053*** [0.013]	0.018* [0.010]	0.134*** [0.019]	0.029*** [0.009]	0.076*** [0.019]	-0.008 [0.008]	0.064*** [0.015]
Administered Prices Index	-0.133*** [0.017]	-0.123*** [0.014]		-0.121*** [0.013]			-0.134*** [0.018]
Trade Restriction Index	0.142*** [0.042]	-0.112*** [0.037]	0.006 [0.043]		0.097** [0.041]		0.132*** [0.042]
Trend	-0.004*** [0.001]	0.002*** [0.001]	-0.019*** [0.002]	0.003*** [0.001]	-0.009*** [0.002]	0.022*** [0.003]	-0.005*** [0.001]
Number of observations	930	615	315	382	548	60	870
R2	0.540	0.668	0.656	0.654	0.574	0.898	0.543

Standard errors in brackets
 *** p<0.01, ** p<0.05, * p<0.1

Note: Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1

Sample countries:

EMU: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Slovakia, Spain,

EU but not EMU: Denmark, Hungary, Poland, Sweden, UK

OECD but not EU: Australia, Canada, Japan, Korea, New Zealand, Norway, Switzerland, Turkey, US

Not OECD: Argentina, Brazil, Chile, China, Columbia, Hong Kong, Indonesia, India, Morocco, Mexico, Malaysia, Pakistan, Peru, Philippines, Singapore, Venezuela, South Africa

Source: Ricci et al. (2008)

Taking all the countries together in Column (1), there is strong evidence of a Balassa-Samuelson effect. When we split the sample into OECD and non-OECD countries, the effect disappears in the case of the OECD countries in Column (2) and is stronger in the case of the non-OECD countries in Column (3). This is as expected since the Balassa-Samuelson effect is a catching-up phenomenon unlikely to occur in countries that have reached or are closed to the technology frontier. The next two columns split the sample into EU and non-EU countries, the latter including some OECD and the non-OECD countries. Here again, the Balassa-Samuelson effect is not found in the case of the EU countries. Finally, the last two columns distinguish the EMU countries from the others and, unsurprisingly, the relative productivity term is insignificant for the EU countries.

These results confirm that the Balassa-Samuelson effect has not been a statistically significant driver of real exchange rates. This implies that the real appreciations that preceded the Eurozone crisis were not, in general, equilibrium changes. Under this

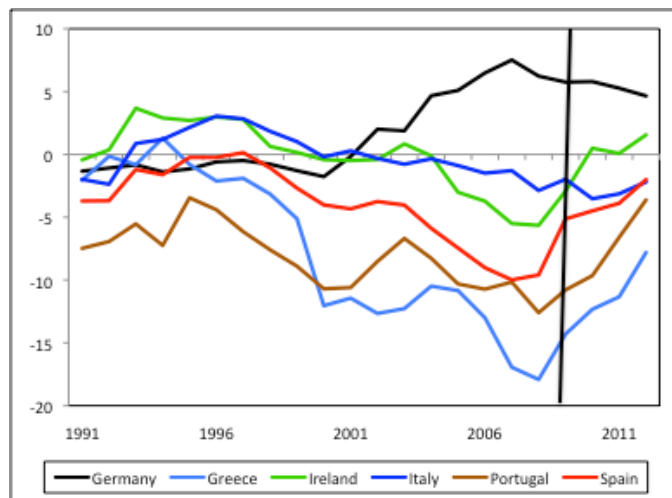
view, the rapid post-crisis depreciations are not temporary. Importantly, it means that labor adjustments are possible within the Eurozone, at least under crisis conditions.

In summary, of the four possible interpretations of the paths of national real exchange rates since the launch of the euro, the Balassa-Samuelson effect is unlikely. The correction of initial misalignments is strongly supported by the data. However, this only explains the relative paths of real exchange rates within the Euro Area, not their absolute levels. To a large degree, the latter is explained by the nominal appreciation of the euro. This appreciation, in turn, can be partly related to the powerful wage moderation policy successfully pursued by Germany. Other factors, including from outside the Euro Area and diverging demand paths, no doubt also played a role.

2.7. Simultaneity and causality

The analysis so far has looked at competitiveness from the viewpoint of relative unit labor costs. Proponents of the overvaluation view bring to bear some additional evidence, however. They note the simultaneity of REER appreciation and deepening current account deficits in the years leading to the crisis, which is visible from Figure 2 and Figure 7. The partial correlation between these two variables is highly significantly negative.¹⁸

Figure 7. Current accounts (% OF GDP)



Source: AMECO on line. European Commission

The simultaneity of current account imbalances and changes in competitiveness in Euro Area countries cannot be declared causal, as is well known. Both developments could be caused a common third factor or could be occurring simultaneously for unrelated reasons. The issue must be treated explicitly. Unfortunately, causality tests

¹⁸ Although highly significant, in a panel estimate over 1995-2012 for the eleven Euro Area countries displayed in previous figures the partial $\partial(CA/GDP)/(\partial REER/REER) = -3.62$ is small; it implies that a 10% real appreciation is associated with a deterioration of the ratio of current account to GDP of less than 0.4 percentage points.

are generally weak and, in the case at hand, the horizon – the first eight years of the euro – is far too short. We simply cannot hope to be able to formally study the causal link between current accounts and competitiveness since the creation of the euro. The only possible approach must be indirect, testing implications of possible causality assumptions.

The deterioration of current account positions in the crisis countries is undeniable. The issue is whether this is the outcome of an exogenous competitiveness loss or whether other exogenous disturbances have both hurt competitiveness and worsened the current account. A roundabout approach to causality is to bring in more information to bear. In particular, the evolution of output may help to identify the nature of the shock. Large general equilibrium models may provide indications of how shocks are transmitted to output, the current account and the real exchange rate. An intuitive shortcut is to use the elegant graphical analysis from Dornbush (1980). It emphasizes the two-way link between the current account and output and their joint determination as shown in Figure 8.

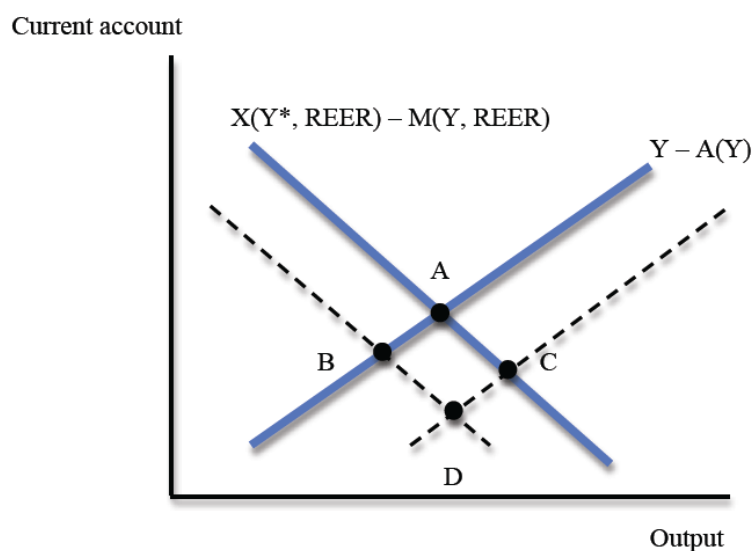
The upward schedule shows a first relationship between aggregate income Y and total national spending $A(Y)$. Under the assumption that the propensity to spend is less than unity, an increase in income leads to higher national net saving, i.e. the current account. The identifying assumption is that net saving is independent of the real exchange rate. The downward sloping schedule also represents the current account, now defined as net exports, the difference between exports X and imports M broadly defined. An increase in income raises spending and therefore imports, hence the negative slope of the schedule. Importantly, both exports and imports depend on the real exchange rate; under generally accepted assumptions – for example, the Marshall-Lerner condition – a real appreciation reduces exports and increases imports.

Start from point A , representing the situation before adoption of the euro, the question is what could have provoked the subsequent divergence in current accounts. This framework suggests three possible exogenous shocks. The first one is that labor costs have been allowed to rise, for instance through generous pay increases in the public sector. The identifying assumption implies that the Net Export schedule is the only one to move down. An adverse competitiveness shock takes the economy to point B .

The second shock of interest is an exogenous increase in domestic demand $A(Y)$, for instance because cheap credit becomes abundant and demand for credit is next fueled by an asset bubble. If competitiveness is unchanged, the net export schedule remains unchanged and it is the Net Saving schedule that shifts downward; the economy moves from point A to point C . Assuming a Phillips curve mechanism can enrich the analysis, so that the positive output gap produced by the exogenous demand shock results into rising labor costs and a competitiveness loss. In that case the Net Export schedule shifts downward, bringing the economy from A to D .

The third shock is an exogenous decline in foreign demand. This is captured by a downward shift in the Net Export schedule and the economy moves to point B . Graphically this resembles the first case, that of a competitiveness loss. A Phillips curve effect would result in an improvement in competitiveness, with a partially offsetting upward shift of the Net Export schedule.

Figure 8 .The Dornbusch model



This analysis provides a way to (informally) test which shock occurred. The test consists in checking which correlation occurs, if any:

Competitiveness shock: $cov(CA, REER) < 0$, $cov(CA, Y) > 0$, $cov(REER, Y) < 0$.

Domestic demand shock: $cov(CA, REER) < 0$, $cov(CA, Y) \leq 0$, $cov(REER, Y) \geq 0$.

Foreign demand shock: $cov(CA, REER) > 0$, $cov(CA, Y) > 0$, $cov(REER, Y) > 0$.

Table 4 shows how these variables have changed over the period 1999-2009, from the creation of the euro to the dawn of the crisis. For each country, the table displays the average current account balance, the average output gap (deviation from trend GDP) and the total change in relative unit labor costs as displayed in Figure 2. The countries are listed in order of declining average output gap. The last row shows sample correlations among the three variables.¹⁹ Overall, the Dornbusch “test” suggests that exogenous demand shocks prevailed.

Focusing on the crisis countries, the case of a domestic demand shock is strong: we observe large current deficits, sizeable positive output gaps and REER appreciation. The exception is Italy where the average output gap is positive but small and the current account deficit is small as well while competitiveness has been seriously eroded; this can be the result of various combinations of shocks, for example an adverse competitiveness shock and a positive foreign demand shock.

¹⁹ A longer sample period would have allowed a VAR investigation.

Table 4. The Dornbusch test (1999-2009)

	Average current account (% of GDP)	Average output gap (%)	Total REER change (%)
Ireland	-1.9	3.3	34.1
Greece	-12.5	2.1	14.4
Finland	5.5	1.6	13.5
Spain	-6.0	1.5	19.0
Portugal	-9.8	1.0	13.0
Netherlands	6.3	0.9	14.8
France	0.0	0.7	9.5
Italy	-0.8	0.7	17.7
Austria	1.9	0.5	-1.9
Belgium	3.8	0.5	8.8
Germany	3.3	0.1	-8.0

Correlation	CA and output	CA and REER	REER and output
	-0.4	-0.3	0.8

Source: AMECO on line. European Commission

As for the non-crisis countries, the situation is varied. Germany's sharp competitiveness gains are associated with large current surpluses but GDP has been mostly on trend. One possible interpretation is that Germany faced a combination of favorable competitiveness (the effect of labor market reforms and of explicit wage moderation in the early 2000s) and adverse demand shocks (e.g. fiscal retrenchment). Austria displays a similar pattern. The pattern observed in Belgium, Finland and the Netherlands corresponds to a positive external demand shock.

2.8. Fiscal Indiscipline: An Extended Definition

This section has argued that the popular view about the Euro Area crisis is a myth unsubstantiated by available evidence. The crisis was driven by excessive domestic demand, not by exogenous losses in competitiveness and current account deficits. Limited competitiveness losses and current account deficits did occur but they were the consequence of excessive demand. Demand, in turn, was supported by a variety of factors. This implies that bringing demand down will eliminate most of the factors associated with the crisis. In fact, demand has been brought down and competitiveness has been about restored (Figure 1) and the current deficits are fast disappearing (Figure 7).

Having established the role of demand, there remains the task of explaining why domestic demand shocks occurred in some countries and not in others. They may have different causes but, it will be argued, the common feature is fiscal discipline. In Greece and Portugal fiscal policy has been mostly easy during this period, but this does not apply to Ireland and Spain. In all these countries, private demand has also been strong. Is there a common interpretation or are these episodes unrelated?

Mongelli and Wyplosz (2009) argue that, indeed, a modified version of the Walters critique can explain the growing divergence in current account balances. Walters (1990) argued that all countries would not join the monetary union with the same

inflation rate but that nominal interest rates would converge. This implies that in countries where inflation is initially higher, the real interest rate is lower than in countries with initially low inflation rates. The demand effects of these different real interest rates would push inflation higher, respectively lower, where it was initially high, respectively low. Walters envisaged an increasingly unstable process of growing inflation divergence.

The revised version of the Walters critique notes that, indeed, inflation inertia implied initially different inflation and real interest rates, but inflation rates did not go on diverging further, probably because of competition pressure within the Single Market. Divergence operated via domestic demand, including housing booms in Ireland and Spain, and the current account, as shown in Table 4. The process was indeed unsustainable.

However, the Walters critique is not the only possible interpretation of demand divergences within the Euro Area. As already noted, Chen et al. (2013) document trade asymmetries. Lane and Pels (2012) provide evidence that excessive optimism in the periphery countries has a measurable impact on demand and the current account. Obstfeld (2012) reviews these and other interpretations, including large public and private deficits easily financed at low interest rates following a deepening of financial integration and the extraordinary period of the Great Moderation. Of these interpretations, some are circumstantial (excessive optimism, the Great Moderation), others are inherent to the monetary union (the Walters critique, financial integration) while trade specialization may remain a recurrent source of shocks.

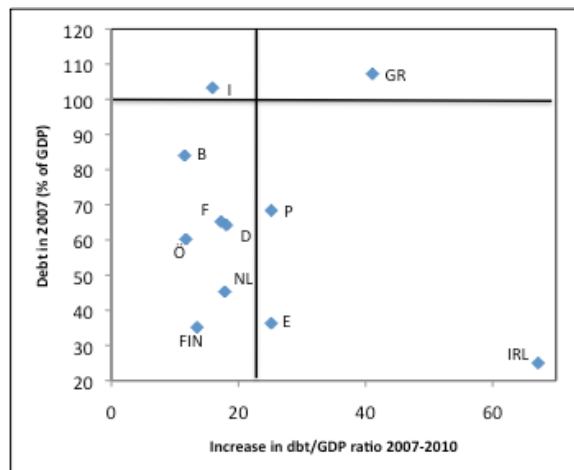
Yet, a common factor that directly led to the Euro Area crisis is the debt situation. Figure 9 displays the debt level in 2007, the year before the financial crisis erupted and the cumulated increase in the debt to GDP ratio over the following three years. All the crisis countries appear outside the lower left quadrant where initial debt was less than 100% of GDP and where the debt ratio increased by less than 25%. It is striking that the crisis has hit countries that started out with debts in excess of 100% of GDP and/or experienced an increase of more than 25% in the debt/GDP ratio.²⁰ Greece underwent both and was the first country affected. Where excessive demand has been supported by budget deficits, as in Greece and Portugal, the link is obvious, and so is the case of Italy that did not manage to significantly reduce its debt ratio for over well a decade. Where demand was supported by credit growth, as in Ireland and Spain, the link is subtler since both countries had been fiscally disciplined in the years leading in the crisis.

This observation calls for extending the definition of fiscal discipline in a monetary union. Ireland and Spain were disciplined until their banks were in need of rescue. The ensuing massive bank bailouts directly increased the public debt and, at that time, there was considerable uncertainty as to whether more would be needed. The point is that the required injection of considerable support to ailing banks instantaneously raises the public debt when the central bank is not intervening as lender in last resort. Indeed, the logic of central bank lending in last resort is that Treasuries do not have

²⁰ Based on a large and long sample of crises, Reinhart and Rogoff (2009) identify the debt ratio above which countries do not grow threshold as 90%. This is fully compatible with the interpretation of Figure 9.

enough resources at hand to promptly intervene in the event of a bank crisis. Over time, either the intervention turns out to be profitable (as in Switzerland in the case of the rescue of UBS in 2008), or the Treasury absorbs the central bank losses through reduced seigniorage or even a transfer of funds to the central bank. In the Euro Area, however, the ECB did not provide the Irish and Spanish authorities with the instantaneous cash that they needed, forcing them to borrow on financial markets.²¹

Figure 9. Public debts: level and increase between 2007 and 2010 (% of GDP)



Source: AMECO on line, European Commission

This conclusion is in line with de Grauwe (2011): what makes Euro Area countries special is that they do have their own central banks to perform the tasks that normally belong to central banks. A banking crisis therefore implies a loss of control of the budget. This is why the notion of fiscal discipline is different in the Euro Area. In a monetary union where the central bank does not act as lender in last resort, fiscal discipline requires either the absence of large bank crises, or the existence of sufficient funds that can be tapped promptly in the case of an emergency.²² In the absence of lending of last resort and of an adequate fund, sharply reducing the odds of a large-scale bank crisis becomes an integral part of fiscal discipline. This calls for tight and independent micro and macro-supervision. The absence of what is now called a “banking union” in the original Maastricht Treaty always was a threat to fiscal discipline.²³

²¹ An interesting question is whether a credit no-bailout rule would have changed pre-crisis incentives. Would the authorities in Ireland and Spain (and other countries) have allowed the housing market bubbles had they know for sure that the eventual costs would be borne entirely by their taxpayers? Of course, this question cannot be answered.

²² The creation of the European Stability Mechanism (ESM) is partly intended to remedy the situation. However, the resources of the ESM may well turn out to be insufficient and their availability is subject to conditions that make rapid response unlikely. In contrast, a central bank can instantaneously mobilize unlimited resources; this is the essence of lending in last resort.

²³ Begg et al. (1998) point out the need for a single banking authority. The currently agreed arrangement falls well short of the requirement, which means that even if the Stability and Growth Pact was strong enough, fiscal discipline is still not achieved.

3. Two Models of Collective Fiscal Discipline

3.1. The centralization issue

The crucial importance of having fiscal discipline firmly established within a monetary union was fully spelled out in the 1989 Delors Report. It was fully recognized in the Maastricht Treaty. Unfortunately, the treaty's Excessive Deficit Procedure, which led to the Stability and Growth Pact, adopted the wrong approach to fiscal discipline. As a result the pact has failed repeatedly. Section 2 argues that the sovereign debt crisis is ultimately a consequence of this design flaw.

The critical need for country-level fiscal discipline is not specific to the Euro Area. Most countries operate as monetary unions and federal countries combine a central government and sub-central authorities like regions and cities. Fiscal discipline at each level of government is meant to avoid the risk that one government attempts to blackmail the others and requests funding. The blackmail can also be directed at the central bank, especially when the accumulated debt is large. Deficit financing and debt monetization are the best predictors of high inflation.

There exist a great variety of fiscal discipline arrangements among federal states described and analyzed by a substantial and growing body of literature.²⁴ Important differences that account for the outcome includes the respective functions of central and sub-central governments in matters of services and taxation, the political system, the existence and extent of vertical and horizontal transfers and, more generally, the relation between governments. As noted above, in the Euro Area fiscal discipline at the national (i.e. sub-central in the relevant literature) level is governed by the Stability and Growth Pact, an original construct that combines horizontal and vertical aspects. Indeed, the Commission enforces the pact but key decisions are taken collectively although the recent Six-Pack legislation, which aims at reducing discretion, strengthens the vertical dimension at the expenses of the horizontal dimension, i.e. it represents a step toward centralization. The question raised in this paper is whether centralization is the best-adapted approach in the Euro Area case: should the responsibility for defining formally and enforcing fiscal discipline lie at the central or sub-central level?

This is a very general issue, on which the theoretical literature is ambiguous. In brief, fiscal indiscipline, the tendency to run deficits year in-year out, is the result of a “commons problem”, the need for democratic governments to spend to cater to pressure groups while avoiding to upset taxpayers.²⁵ Fiscal federal arrangements tend to reinforce this problem as shown in De Mello (2000), Goodspeed (2006), Oates (2006), Krogstrup and Wyplosz (2010) and many others. This presumption is backed by the existing – but limited – empirical literature.²⁶ For instance, in a study of OECD countries, Rodden (2002) draws the map shown in Figure 10, which suggests that

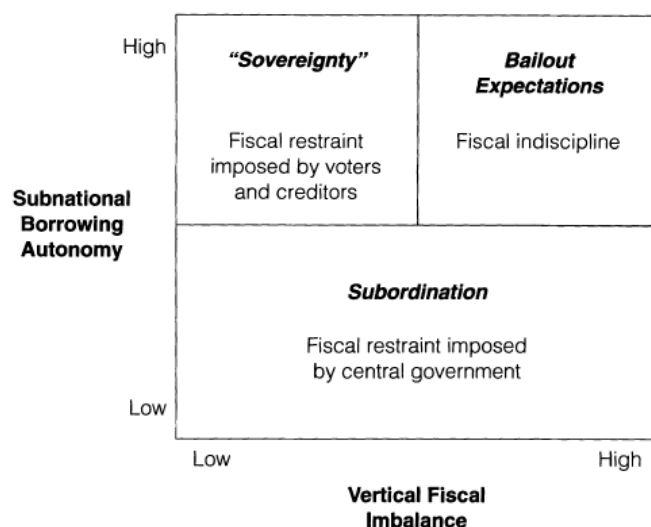
²⁴ Surveys include Wildasin (1999), Oates (2006) and Pisauro (2003).

²⁵ See, e.g. von Hagen and Harden (1995) or Alesina and Perotti (1995).

²⁶ With various data and approaches, Rodden (2002), De Mello (2000), Baskaran (2010), Neyapti (2012) and Asatryan et al. (2012) all reach similar conclusions. The exception is Schaltegger and Feld (2009) but it looks at fiscal consolidation, not deficits or debt levels.

both centralization (the lower part) and decentralization backed by no-bailout rules (the leftmost top quadrant) can deliver fiscal discipline at the sub-central government level while bailouts result in fiscal indiscipline.

Figure 10. The map of fiscal discipline



Source: Rodden (2002)

The formal empirical results, however, argue in favor of the top quadrant: “The data also show that this method of fiscal discipline is rarely in place among constituent units in large federations. It is found primarily among local governments in small, homogeneous unitary systems. [...] In the upper left-hand cell, the central government limits its co-financing obligations, allows local governments to borrow, and leaves the enforcement of hard budget constraints up to self-interested voters and creditors. Indeed there is considerable evidence that this variety of fiscal discipline works well among governments occupying the upper left-hand corner like the U.S. states and Swiss Cantons. One is tempted to conclude that the clearest goal for reform is to move toward this cell.” (Rodden 2002)

The remaining question is why fiscal policy decentralization is more effective at achieving discipline. The literature (Rodden, 2002; Oates, 2006; Goodspeed, 2002) emphasizes the importance of the refusal of by the central government to bail out sub-central governments. When the principle is well established, the incentives of sub-central authorities change. Because fiscal indiscipline is ultimately unsustainable, a credible no-bailout rule implies that the debt burden must be ultimately borne at the sub-central level. However, time-inconsistency remains and may encourage current governments to shift the debt burden to future governments. This suggests that decentralization, even with the promise of no-bailouts, does not guarantee fiscal indiscipline. It is merely a necessary condition, to be backed by strong national institutions aimed at the time inconsistency problem.²⁷

²⁷ This theme is developed in Wyplosz (2011).

3.2. The Cases of the US and Germany

While the evidence from this literature is compelling, the exact nature of what constitutes centralization or decentralization, and what makes centralization more effective, needs to be made precise. Dealing with many countries, as the relevant literature mostly does, provides for robust and convincing results but case studies can be helpful in revealing institutional details that a maze of idiosyncrasies tend to conceal. This section accordingly focuses on two economically comparable polar cases: the German centralized system and the US decentralized system. These are not necessarily the most original or interesting systems but they offer a sharp illustration of the issue of centralization, which has been largely ignored in the Euro Area.

Germany and the US are two strongly federal states with a quite decentralized system of public spending and taxation. Public spending is of the same order of magnitude: 47.5% of GDP in Germany and 42.2% in the US, both in 2009. The breakdown across levels of governments is shown in Table 5. An important difference is the public welfare system. According to the OECD classification, it is non-existent in the US while it represents almost half of public spending in Germany. The German welfare system is administered by independent but state-owned funds under federal supervision. If they are added to the government share of spending, we see that Germany is somewhat more centralized (63.3% of all expenditures) than the US (53.5%) but the orders of magnitude are comparable and justify a comparison.

Table 5. Distribution of general government expenditures across levels of government in 2009 (% of total)

	Central government	State government	Local government	Social security
Germany	19.2	21.0	15.7	44.1
United States	53.5	46.5	0.0	0.0

Source: Economic, Environmental and Social Statistics, *OECD Factbook* 2011.

3.3. The German Model

Germany is in transition from its “domestic stability pacts” to fiscal rules inscribed in the Constitution (called Basic Law) in 2009 and due to take gradually effect from 2011 to reach full operation in 2016 for the federal government and in 2019 for the *Länder*. A crucial step is to shift from actual to cyclically adjusted measures of budget balance. Under the old system, the “golden rule” stipulated that federal and local authorities could only run deficits to cover gross investment expenditures, a magnitude open to considerable interpretation.²⁸ With the new “debt brake” system, the federal government will not be allowed to run cyclically adjusted deficits in excess of 0.35% of GDP while the *Länder*’s cyclically adjusted budgets will have to

²⁸ The limit could be exceeded in presence of “macroeconomic equilibrium disturbance”, another nebulous concept.

be balanced.

Enforcement has been and will remain notoriously weak because of unavoidable slippages due both to the endogenous nature of actual outcomes and to occasional needs to react to unexpected adverse demand shocks. In the old system, the “golden rule” had to be satisfied *ex ante*, with no *ex post* follow-up. In the new system, *ex post* deviations from the limit will be written down into a control account that will have to be eliminated as soon as the output gap will improve. Since the rules are established in the constitution, violations are open to judicial intervention by the Constitutional Court. So far, the Court has ruled twice on excessive deficits, in 1989 and in 2007. In both instances, it did not invalidate the budgets, which is not surprising as the rulings referred to the budgets of 1981 and 2004, respectively. Enforcement had been left therefore to peer pressure and political credibility. As we will see, enforcement has failed.

An important aspect of the German arrangements, both old and future, is the role played by the federal government. To start with, while the *Länder* collect all taxes, 70% of their resources are redistributed via the federal government. While this is designed to achieve some equalization between rich and poor *Länder*, it also means that the Federal government exercises significantly influence on the *Länder*. Indeed, the federal government decides on most taxes, mandates spending standards and can provide funds in case of need. In addition, the budget rules – the golden rule first, the debt brake next – are federal obligations imposed upon the *Länder*.

The result, as reported by Seitz (1999), is that the main room for maneuver left to the *Länder* is borrowing. In spite of the borrowing limits, through redefinition of public investment and the use of off-budget funds, the *Länder* have used this space to such a degree that two of them, Bremen and Saarland, had to be bailed out in the 1980s. The bailouts were obtained from the Constitutional Court after the Federal Government denied them.

The German model can therefore be characterized as one where the *Länder* officially enjoy full autonomy for fiscal matters subject to deficit rules while, in fact, they are under considerable influence from the centre. With the implicit guarantee that they will be bailed out if needed, they use deficit financing to cover those spending items that are not mandatory, presumably those that are politically expedient. In other words, the German model combines centralization of public discipline and implicit bailouts.²⁹

3.4. The US Model

The US model combines a firm no-bailout rule with state-level constitutional rules. As described by Henning and Kessler (2012), the US initially followed the same pattern as the Euro Area. The states were created as fiscally sovereign, each with a parliament in charge of deciding state spending and state taxes. The new Federal

²⁹ Studying the determinants of interest spreads on *Länder* debts, Heppke-Falk and Wolff (2007) conclude that the markets indeed consider that bailouts are highly likely to prevent defaults. Rodden et al. (2006) draw a similar conclusion from a detailed analysis of German institutions. Feld and Baskaran (2008) consider that “the fiscal constitution in Germany exacerbates common pool problems because of the way the federal and state finances become interrelated ” (p.9).

Government assumed large legacy state debts from the War of Independence. With this precedent in mind, many states carried out unsustainable deficits and were bailed out by the Federal Government. This went on for more than 60 years until the 1840s when Congress rejected new demands by previously bailed out states. This precedent established informally the no-bailout principle.

The states then responded to the new incentive. Over the years, all US states but one have adopted constitution fiscal rules. These rules differ from one state to another. Some states require that their budgets be continuously balanced while others set limits on spending or on the debt. Enforcement is in the hand of the State Supreme Courts. Since the adoption of the no-bailout rule, there has been no state default if one ignores some confederate states in the aftermath of the Civil War. The lesson is that a credible no-bailout rule naturally leads to a situation when sub-central authorities take the necessary steps to avoid being trapped in a situation where they would feel the need for help.

Of course, over the years, the Federal Government has grown in its size and has expanded its functions. Nowadays it redistributes income and plays a significant counter-cyclical role. In fact, as Table 5 shows, the US federal government is relatively larger than the German government. In particular, the counter-cyclical role of the federal government matters greatly because the state-level rules have a procyclical effect. Importantly, however, this move to increasing centralization has not been accompanied by changes in what provides for state-level fiscal discipline: US states remain fully responsible for raising the taxes needed to carry out spending and the no-bailout principle remained unchallenged.

3.5. Performance Evaluation

The differences between the German and US models lead to widespread implications that cannot be compared on a single metric. Yet, the fiscal discipline aspects can be compared. Table 6 leaves no doubt about the outcomes. US state governments actively exploit any possible loophole in their own rules. Yet loopholes severely restrict deficits and debts. As a result, the largest state debt (Massachusetts) is 19.6% of state GDP. Total US state indebtedness (7.7%) is a third of the German ratio (24.2%). Importantly, some German Länder have reached debt levels that are probably unsustainable: this is the case of Berlin (66.9%) and Bremen (66.1%), the last one having already defaulted once as noted above.³⁰

The result that fiscal discipline at sub-central level is stronger in the US than in Germany obviously needs to be further explained. The suggestion that it is related to decentralization backed by a credible no-bailout principle is congruent with the literature and with the empirical evidence, but other explanations can be entertained. In particular, it may be that the US state rules are better structured than in Germany. Up until the constitutional change adopted in 2009, Germany operated at both the federal and state level a golden rule that limited the deficit to financing productive public spending. Even though its theoretical logic is correct, this is a notoriously poor rule because it is impossible to identify in practice public spending that will “pay for itself” through additional growth. As a result, it is open to manipulation through

³⁰ The other previous defaulter, Saarland, has a debt ratio of 38.6%. In contrast, in California, a state sometimes rumored to be on the verge of default, the debt ratio stands at 7.9%.

mislabeled of spending items. In the US, each state has its own rule – and one state has no rule. These rules are ancient and quite unimaginative. Most, but not all are inflexible and do not allow for cyclical correction. It is very hard to claim that these rules are all better than the German golden rule. The new German rule, the debt brake, is due to take effect between 2016 and 2020. It focuses on the cyclically adjusted budget and will not let bygones be bygones. On paper, it is a much better rule than the previous one and than the US state rules. If German state fiscal discipline improves in the 2020s, we will be able to conclude that this was the main difference between the US and German performances so far. If that does not happen, the US no-bailout will remain the most plausible interpretation of its superior performance (Oates, 2006; Henning and Kessler, 2012).

Table 6. Debt to GDP ratios

	Germany (17 Laender)	USA (50 states)
Minimum	6.7%	2.3%
Maximum	66.9%	19.6%
Average	31.7%	8.3%
Total	24.2%	7.7%
Standard Deviation	17.0%	3.9%

Note: Average refers to the individual debt/GDP ratios. Total is the ratio of total stated debts to US GDP.

Sources: Germany: Federal Statistical Office and Statistical Offices of the *Länder*; USA: US Census Bureau, and BEA

4. The Euro Area in Transition to the US Model

4.1. The Failures of the Europe’s Fiscal Discipline Model

Mindful of the need to establish fiscal discipline in the Euro Area, the Maastricht Treaty adopted a two-pronged approach. First, it mandated an Excessive Deficit Procedure, which was implemented as the Stability and Growth Pact. Second, the no-bailout clause prohibited the ECB to provide “overdraft possibilities” to official institutions (member governments, the Commission), and these institutions were not allowed to “assume the commitments” of each other.³¹ The generally accepted interpretation was that bailouts were strictly forbidden. The question, all along, was whether this clause was credible. The official reinterpretation of the clause in the midst of the crisis, followed by the amendment of Article 136 needed to create the ESM, have shown that there were good reasons to doubt the clause credibility. As argued below, the credibility of the clause is now the Euro Area’s main challenge. The arguments developed by Dewatripont and Maskin (1995), who show the importance of time inconsistency in decentralized systems, justifies pessimism. The strength of the informal US no-bailout arrangement justifies optimism.

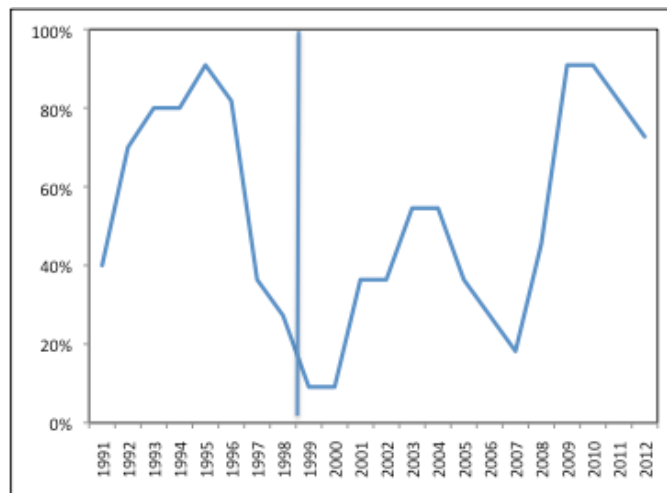
³¹ Articles 123 and 125 of the revised treaties.

The Stability and Growth Pact bears more than a resemblance to the German model. The German golden rule was understood to imply a threshold for deficits of 3% of GDP, the accepted estimate of the size of public investments. In fact, Article 126(3) directly refers to the golden rule. Fearful that other countries might not abide by the pact's requirement, Germany asked for sanctions and for explicit collective oversight. In spirit, the idea was that the center would monitor national governments. The ban on assistance to governments by the ECB was also lifted from the German constitution. The main departure was the ban of government assistance, absent from the German model.

The very existence of a sovereign debt crisis in the Euro Area is just the latest available proof that the European model has failed to establish and enforce fiscal discipline. The first major failure occurred in 2003 when the two largest countries, France and Germany, colluded in imposing that Stability and Growth Pact be put in abeyance just as they were to be facing the threat of fines. Even though the European Commission took the case to the European Court of Justice, the action was only censored on legal technicalities that required a rewording of the decision. The Court did not consider the economic merit – or demerit – of this action. In addition to improvements concerning the economic aspects, subsequent revisions of the pact have aimed at making the Franco-German “coup” less likely to happen again, essentially by changing the decision making process. Yet the fundamental contradiction between fiscal sovereignty and the pact requirements remains.

Because each government retains the exclusive right to decide on fiscal policy, the pact can only have an effect if the threat of sanctions is an effective deterrent. The lifting of any such threat in 2003 and then since the financial crisis started in 2008 is one indication that the pact is not particularly credible. More evidence can be adduced. Wyplosz (2011) shows that the improvements in fiscal deficits achieved in the Euro Area have not been better than elsewhere among the OECD countries. Another piece of evidence is Figure 11, which indicates year after year the proportion of countries where the budget deficit exceeded the 3% threshold set by the Stability and Growth Pact. The spectacular decline before the launch of the euro in 1999 is testimony to the power of incentives: bringing the deficit below 3% was a necessary condition to be admitted in the monetary union (the one country that narrowly (3.1%) missed the target was Greece, which joined in 2001). The rising prevalence of excessive deficits after 1999, when the Stability and Growth Pact was clearly not perceived as enforceable, is another testimony to the importance of incentives.

Figure 11. Percent of countries with deficits above 3% of GDP



Note: The sample includes 11 of the first 12 Euro Area member countries (Luxembourg is excluded because it is a unique case).

Source: AMECO on line, European Commission.

The prevailing view is that the Stability and Growth Pact has failed for three major reasons (Buti and Carnot, 2012). First, the 3% ceiling was wrongly interpreted as a target, not a ceiling. As a result many governments did not adopt countercyclical policies, which would have improved the budget in good years, leaving more room for maneuver in bad years. Second, and as a consequence, the 3% ceiling forced fiscal policy to turn procyclical in downturns. Finally, enforcement power was weak: the sanctions were seen as too weak or politically impractical to exert sufficient pressure on national governments.

Successive revisions of the pact have aimed at remedying these flaws. A preventive arm was added in 2005 with the aim of encouraging governments to bring their budgets in balance or surplus in good years. It was decided that the Commission's criterion in making its recommendations would be based on the cyclically adjusted budget, thus allowing the automatic stabilizers to operate in full. This is indeed an important technical improvement but it does not address the fundamental issue of national sovereignty.

This is why the latest revision, the so-called Six-Pack adopted in 2011, aims at shifting the balance of power from national governments and parliaments to the union as a whole. The European semester intends to influence national authorities early on in their budgetary processes, but the final say remains national.³² The reverse voting rule, which makes Commission recommendations less likely to be rejected, aims at imposing collective decisions on noncompliant countries. Even assuming that this will be the case, it remains to be explained how a government and its parliament could be forced to adopt a fiscal policy that it does not agree with.

³² It is also intended to increase national ownership of the Stability and Growth Pact. It might instead heighten the conflict between national parliaments and the European Commission as the former perceive a constraint on what they see the very embodiment of their existence.

This evolution reflects efforts to make the German centralized model of fiscal discipline effective in the Euro Area, in effect ignoring that the model itself underperforms in Germany and that national sovereignty remains total in budgetary matters. Strengthening the pact is likely to be an illusory effort simply because in democracies governments respond first to their local electoral interests. This explains the widely noted lack of ownership of the pact by member governments but it also suggests that the fundamental weakness of the European model remains unresolved.

Given the Treaty prohibitions of bail-outs, one might have inferred that sovereigns threatened with bankruptcy would have to find their way out alone – say, through a combination of adjustment and debt restructuring. However, events have shown that this implicit framework faced a credibility problem. Governments felt that the failure of a sovereign to honor its commitments could have major spillover effects on the national financial systems of all Member States. Concerns over the risk of a full-blown EMU-wide financial crisis have made somewhat ineffectual the no-bailout pledge in its original rendition.

Here again, the German model is at work at the European level. The German constitution stipulates that vertical and horizontal redistribution is needed to equalize living conditions throughout the country. This “solidarity” argument was used by the states of Bremen and Saarland when they successfully asked the Constitutional Court to impose a federal bailout in the late 1980s. In the Euro Area too, solidarity was explicitly mentioned in 2010 to justify the *de facto* violation of the no-bailout rule. Note that Germany does not have a no-bailout rule, if only because of its extensive system of horizontal and vertical transfers.³³

4.2. Relevance of the US Model for the Euro Area

Arguably, the US model is better adapted to the Euro Area. Like US states, Euro Area member countries have retained full sovereignty in fiscal matters and are unlikely to accept significant encroachments. Unlike Germany, the central authority has little power to restrain undisciplined member governments as illustrated by the experience with Stability and Growth Pact, see Section 4.1. In addition, the superior performance of the US model, and much of the international experience reported in Section 3.1, makes it more appealing.

This conclusion is at odds with the frequently held view that monetary unions require fiscal unions. The argument is that, *because* individual member states may need occasionally to be bailed out, some pooling of resources are needed. Proposals include rescue funds and the issuance of commonly guaranteed public debts (Eurobonds). The US model disproves this view. Not only are bailouts unnecessary, but also they are a source of moral hazard. A no-bailout rule is the most potent incentive to promote fiscal discipline.

The European experience is often seen as a case for setting up regional monetary funds that supplement interventions by the IMF. Indeed, the bailouts have been

³³ This does not explain, however, why the ECB was invited to contribute to the effort. In Germany, there is a no-bailout rule for the Bundesbank. It is not surprising that the Bundesbank vehemently opposed, and still opposes the ECB’s interventions.

largely financed by newly set up institutions (the temporary European Financial Stability Facility and its successor the European Stability Mechanism) that are seen as a regional monetary fund whose loans are coordinated with the IMF. This is not quite accurate, though. The IMF provides *foreign* currency support to countries that face a balance of payments problem. The European facilities provide domestic currencies to governments that face budget financing problems. The difference is crucial: there can be no regional shortage of the monetary union's own currency. Governments that have loose market access can always find their own currency in unlimited amounts at their own central banks. Of course, monetary financing of deficits and debts are highly undesirable but lending by the regional monetary fund is a substitute to central bank financing only because it comes with IMF-style conditionality. The question, then, is why the ECB cannot impose conditions as well. The answer involves mostly political issues (risk of politicization and loss of independence), which can be dealt with by appropriate institutional arrangements. The point here is that, from the economic viewpoint, the EFSF/ESM arrangement differs in a crucial way from the IMF.

Another important difference between the US and Europe is the banking system. Many European countries are hosts to one or more bank that is systemically important, at least at the country level. In the US, most systemically important banks are located in a handful of states. In addition, the federal authorities have both resources and authority to bail out and resolve banks. The link between state budgets and banks is therefore of a different nature. The solution is for Europe to adopt adequate institutions, a process under way with the creation in 2010 of the European System of Financial Supervision and its various agencies and with steps taken in 2012 to move to a banking union. An important aspect is whether European-wide financial resources are needed, which would impact fiscal discipline inasmuch as individual governments might have to make sizeable commitments toward events, such as banking crises in other countries, that they have no control on. This aspect has not been dealt with so far. It is very important because bailouts of financial institutions have historically been the main reason why governments lost control of their public debts. It raises deep issues that go beyond the present paper, although the next section highlights the role of central banks in providing emergency support.

4.3. Adopting Decentralized Fiscal Discipline in the Euro Area

The US model relies on two features that are jointly necessary and apparently sufficient: the no-bailout principle and decentralized fiscal discipline institutions. Historically, in the US, the first feature prompted the second one. Recent changes make it possible to imagine that the Euro Area can decentralize fiscal discipline but in the reverse order: first the adoption of decentralized fiscal discipline and next a restoration of the no bailout clause.

Two Interpretations of the Fiscal Compact

The Euro Area is adopting a new arrangement, formally known as the Treaty on Stability, Coordination and Governance (TSCG) or, informally, as the Fiscal Compact. This new treaty requires that every member country adopt a fiscal rule. It states that, "if possible", the rule should be written into the national Constitution. And, "if possible", the rule should require that the cyclically adjusted primary budget be in balance. In other words, the new treaty requires that Euro Area member countries operate their fiscal policies much like the US states do, but in a more

modern way. Fiscal discipline becomes a national imperative, “if possible” a constitutional one, thus mimicking the US model. It is more modern since, instead of involving nominal debt, spending or deficit ceilings as in US states, it focuses on cyclically adjusted figures. This is an important improvement over the US arrangement (which were established at a time when cyclical adjustments had not been invented) and it matters a great deal given the absence of a large “federal” budget, as further discussed in Section 4.4.

The Fiscal Compact is officially presented as a complement, not a substitute to the Stability and Growth Pact. The intention is to further strengthen the original pact. As noted above, successive amendments to the pact aim at making it more difficult for sovereign national authorities to ignore the need for fiscal discipline. Because removing national sovereignty is (rightly) deemed impossible, this new strengthening establishes the pact’s obligations within national legislation. Indeed, as specified by the preventive arm of the Stability and Growth Pact, the definition of the obligation – the cyclically adjusted budget deficit cannot exceed 0.5% of GDP – a government will not be asked anymore to respect outside injunctions, simply to respect its own legal obligations.

This is indeed the intention of the creators of the Fiscal Compact. It fits the German model inasmuch as the “centre”, here a new treaty, imposes the new obligation. A different interpretation is that this is a step in the direction of the US model of decentralized fiscal discipline. It shares with the US model the fact that different countries are adopting different arrangements, both in terms of content and in terms of legal order, constitutional or not. No doubt, loopholes will exist in national legislations, and will be exploited, pretty much as it is the case in US states. The US lesson is that there is a limit as to how much debt can be built up around loopholes and that democracies with a sound legal order do not tolerate for long grievous deviations from the law. In addition, incentives matter, and this is why the no-bailout clause matters so much.

The No-Bailout Clause

The apparently unintended adoption of a decentralized fiscal discipline arrangement through the Fiscal Compact means that one of the two components of the US model will now be part of the Euro Area architecture. The second component, equally necessary, the no-bailout principle is already formally in place but has been *de facto* deactivated. If one views the US no-bailout principle as merely the needed incentive to adopt state-level budget rules, then the Euro Area could stop here. However, Oates (2006) and Wildasin (1999) convincingly argue that the no-bailout rule remains a crucial element of the US model. They view it as a highly effective incentive against unavoidable temptations to create legal ways of undermining the budget rules, possibly even of abolishing them. Indeed, past experience suggests that a number of Euro Area countries are likely to show limited respect for the rules that they regard as imposed on them *via* the TSCG. Under this interpretation, the no-bailout rule is just as necessary in the Euro Area as it is in the US.

This means that the Fiscal Compact is not the last finishing touch in the long process of strengthening the Stability and Growth Pact. The combination of the Stability and Growth Pact and of the Fiscal Compact is in effect a hybrid between the German and the US models, with centralization through the Stability and Growth Pact and

decentralization through the Compact. Hybrid arrangements often create space for politicians to play one rule against the other, and escape both. For this reason, and because a credible no-bailout rule is needed, the adoption of the Fiscal Compact does not yet represent the end point of Europe's quest for fiscal discipline. Two more steps are required.

The first one is technically easy, even though it is bound to be politically contentious. It consists in opting formally for decentralization, abandoning the German model and adopting the US model. This will be achieved when the centre, however defined, no longer assumes any responsibility for fiscal discipline in member states. It could be achieved by a decision to abandon the Stability and Growth Pact. This would clarify responsibilities and put to an end the ultimately unsuccessful efforts of the centre to meddle into member state sovereignty. Such a momentous step, however, is highly unlikely. It requires a treaty change and is bound to be politically contentious. Hopefully, however, if the US model proves to be successful, the Stability and Growth Pact will become irrelevant, simply because fiscal discipline has been achieved.

As argued repeatedly above, the key part of the US model is the no-bailout principle. This is why a restoration of the no-bailout clause is indispensable. Formally, the clause is still in place as the relevant articles remain in the Treaty on the Functioning of the European Union. However, a legal provision that has been officially and repeatedly ignored – or “reinterpreted” – is effectively void. This is especially so for the no-bailout clause for three reasons. First, it has been disregarded the first time it should have come into effect. This means that policymakers regard the clause as useless, or even harmful. Second, there has been no legal challenge to this disregard.³⁴ This stands in contrast with the Stability and Growth Pact; when it was declared in abeyance, the Commission took all member governments to the European Court. Thus a precedent has been created. This is the exact opposite of the situation in the US, where the no-bailout clause is not a legal obligation but a precedent. Finally, the EFSF and the ESM violate the spirit, if not the letter, of the no-bailout clause. Indeed, these facilities are explicitly designed to provide emergency assistance to governments that face funding problems, the very action that is forbidden, in spirit at least, under the clause.

All this means that the no-bailout clause has lost its credibility. Since its main role is to create incentives strong enough that it never be enforced, the restoration of the no-bailout rule is not a legal matter. Re-establishing credibility once it has been destroyed is much more difficult than establishing it. This will require radical action.

One solution would be a mere statement recognizing that the no-bailout clause has indeed been set aside because of the unusual severity of the crisis and will be reinstated henceforth. Most likely, this would not be sufficient. Also required would be a clarification of what the clause authorizes and rules out, since past decisions are based on an interpretation of the relevant articles. This is bound to be complex because of the existence of the ESM and the need for the ECB to act as lender of last

³⁴ The issue was brought up in one country, Germany. But the Constitutional Court only decided that the action was not against the German Constitution. It did not, and probably could not concern itself with the wider European picture.

resort to failing banks.

As noted above, the ESM is logically incompatible with the no-bailout clause *stricto sensu*. Indeed, realizing that it was circumventing the no-bailout clause, policymakers initially decided that the EFSF would be temporary and they even set a deadline for its termination. Under the pressure of events, the temporary violation of the no-bailout clause had to last longer than hoped. Rather than extending the deadline and facing the risk of having to extend it yet again, policymakers went all the way to create the permanent ESM, which now encapsulates a permanent violation of the clause.

Can the ESM be simply eliminated? It is intended to serve two purposes: bailing out governments that lose market access and bailing out banks – at least systemically important banks – when they fail. Ending the government bailouts is precisely what is needed. Bank bailouts, however, are unavoidable. The point is that the ESM is not the appropriate instrument. The size of bank bailouts is impossible to determine *ex ante*. As was clear during the subprime crises, the size and scope of needed official intervention can become huge in a matter of days, if not hours. The size of the ESM, and its conditionality, implies that should a bank crisis erupt in the heart of the Euro Area, it will not be up to the task. Stopping incipient bank runs and quieting down panicky markets require virtually unlimited resources. This is precisely why central banks are understood to be lenders in last resort. Of course, if it could act fast, the EMS could be lender in first resort, but this will generally be inefficient and the ECB will have to at least join forces and quite possibly take over. The usefulness of the ESM is therefore questionable.

On the other hand, like any other central bank, the ECB cannot avoid having to act as lender in last resort. Central banks very much dislike doing this because it involves a serious moral hazard. This is why they have long maintained ambiguity about their willingness to intervene. The 2007-8 financial crisis has dispelled any doubt about the inevitability of this responsibility. Even so, when the crisis hit Europe and the banking system started to fragment in 2010, the ECB has resisted this role. It did so by conducting interventions that were limited, both in size and in maturity, exactly like the ESM would have done if it were in place.³⁵ The banking situation has continued to deteriorate until the ECB offered unlimited support for three-year loans (LTRO). Even though this is not lending in last resort to individual banks, this is lending to the banking system. The ECB has justified its intervention as needed to repair the “transmission channels of monetary policy”. The next step is for the ECB to recognize its responsibility toward financial stability, in addition to its duty of preserving price stability; there always will be circumstances when it needs to intervene promptly and forcefully (i.e. in unlimited fashion). A first step in this direction has been its request for a “banking union”. In order to reduce the moral hazard inherent in any such rescue operation, the central bank needs to be able to shift as much as possible of the costs to bank shareholders and large creditors, so as to protect depositors and taxpayers. Unfortunately, at this stage, the limited banking union and the *de facto* rejection of the Liikanen (2012) proposal leave the ECB in a terrible position: in case of acute banking instability, it will have to intervene even though its interventions will create a severe moral hazard.

³⁵ This is the reason why Target 2 imbalances have increased.

Should the ECB also act as lender to last resort to governments? During the crisis, the ECB initially refused, then was visibly forced to intervene starting in May 2010, but did so reluctantly, with sporadic and temporary actions, again mimicking what the ESM could have done. Three years into the Euro Area sovereign debt crisis, with interest rate spreads reaching stratospheric levels, a mere statement by the President, to the effect that the ECB was prepared to provide unlimited support, provided immediate relief. Here again, a grave moral hazard has been created and indeed the no-bailout clause loses significance if the ECB can act as lender of last resort to governments. The ECB interventions since 2010 were needed because the no-bailout rule has been broken and yet the existing support mechanisms (EFSF and ESM) were too small and conditional to bring the crisis to an end. Once the crisis is over, including dealing with its legacy as discussed below, a successful application of the US model will render ECB lending to governments unnecessary.

The no-bailout clause should apply with zero ambiguity and complete certainty to governments and official institutions like the Commission, the EIB and the ESM. The central bank must be allowed to act as lender in last resort to individual banks and the whole banking system but not to governments. In order to alleviate the considerable moral hazard inherent to such central bank emergency interventions, we need a full banking union, complete with a European bank resolution authority and truly independent micro and macro-supervision. The last requirement does not preclude the risk of a loss of control of deficits in the wake of catastrophic banking crises, which can never be ruled out. Indeed, even if the ECB intervenes as lender in last resort to banks, the ultimate cost, if any, will have to be borne by the governments because of the moral hazard problem.

It bears to emphasize the deep link between restoring the no-bailout rule credibility and allowing the ECB to act as lender in last resort to banks. As previously noted, the crisis has shown how fiscally disciplined countries have lost control over their public debts when they were forced to rescue their banks. Even though governments must eventually be made to bear the burden, if any, of bank rescues, unlimited emergency interventions either belong to the central bank or threaten to bankrupt governments. The credibility of the no-bailout clause can only be re-established if the ECB accepts its responsibility as lender of last resort. But this is not enough, since the ECB is not a fiscal agent so that fiscal authorities must guarantee its interventions. Should it be the national authorities where the failing bank is headquartered or the Euro Area level? The growing importance of cross-border banking and the build-up of a banking union argue in favor of a Euro Area fund. The fact that such a fund would be a backdoor channel for state bailouts argues in favor of leaving fiscal responsibility of ECB lender in last resort interventions at the national level. The question therefore involves a trade-off between complexity and moral hazard.

4.4. The Whole US Model?

Suggesting that fiscal discipline will be achieved if and when it adopts the US decentralized model does not imply that the Euro Area will still operate in the same way. Indeed there are important differences. In the US, the federal government is actively conducting counter-cyclical policies. In addition, the federal budget has a countercyclical effect on individual states as federal taxes decline in bad years while federal transfers increase. In contrast, the European Commission's budget is very small (1% of EU GDP) and quite inflexible. As a result the two countercyclical

functions at work in the US are not available to the Euro Area. It is most unlikely that the Commission will be given more resources and a counter-cyclical mandate, at least in the foreseeable future. Does this invalidate the relevance of the US model? The answer is categorically negative for two reasons: it can be emulated and it is not needed.

Cyclical insurance: easy to emulate

It is often forgotten how outdated the US state budget rules are. In the absence of any cyclical correction, they force states to carry out procyclical fiscal policies. This is why a federal countercyclical fiscal policy is essential for macroeconomic stabilization. Accumulated worldwide experience (from Switzerland to Chile, including Sweden and Canada among many countries)³⁶ shows that “clever” rules are possible, essentially by relying on cyclical adjustment. The revisions of the Stability and Growth Pact already require the Commission to base its evaluation on cyclically adjusted budgets. The decentralized approach of the Fiscal Compact also calls for national rules that are cyclically adjusted.³⁷ If each member country conducts adequate counter-cyclical fiscal action, in contrast to individual US states, “federal” stabilization as carried out in the US is not needed in the Euro Area. The popular view that the decentralized model cannot be applied to the Euro Area is thus incorrect. The Euro Area is perfectly ready for decentralized fiscal policies, as was intended in the Maastricht Treaty.

Still, a “federal” counter-cyclical policy could help with purely idiosyncratic shocks. It can be seen as an insurance mechanism whereby each sub-central government receives support when in need and provides support for the others when they need so. This idea underlies proposals to establish a European “fiscal capacity”.³⁸ It should be noted that estimates of how much the US system transfers to a state hit by an adverse shock point to relatively small amounts: a consensus evaluation indicates that the implicit insurance system cushions 10 to 20% of a state idiosyncratic shock (Kletzer and von Hagen, 2001).

The risk with a collective system is politicization, a feature characteristic of much of Commission spending. The way to avoid this risk of moral hazard is to build an insurance system that is fully automatic, with no discretion whatsoever. Von Hagen and Wyplosz (2008) develop such a proposal. It involves a notional transfer to a collective account of a part of highly cyclical tax receipts, e.g. VAT. The account then notionally pays back to each country an amount equal to the cyclically adjusted tax receipts. In practice, each country pays into, respectively receives from, the system an amount equal to the product of the tax rate and the taxed income cyclical gain,

³⁶ See von Hagen and Harden (1995), Guichard et al. (2007) and Kopits (2007).

³⁷ Cyclical adjustment allows for the working of the automatic stabilizers. The Swiss-type debt brake further permits some discretionary action. Deficits in excess of the rule are registered in a control account that must eventually be emptied so that by-gones are not by-gones. This approach combines short run policy flexibility and long run strict discipline.

³⁸ The capacity can concern the whole European Union or only the Euro Area. Both can be defended. Here the discussion is restricted to the Euro Area because this is where the case for a fiscal is strongest, for two main reasons. First, member countries do not have any monetary policy instrument, which further implies that the exchange rate instrument is lost. Second, member countries borrow in a foreign currency, as discussed above.

respectively shortfall. This type of arrangement can deliver insurance of the same order of magnitude as what is achieved in the US.³⁹ By construction, the central account is balanced over the cycles of member countries, at least if the estimates of output gaps and of cyclical corrections are not systemically biased.

This example is meant to show that robust insurance mechanisms can be designed for the Euro Area to mimic in the US insurance system against cyclical idiosyncratic shocks, those asymmetric shocks at the heart of the Optimum Currency Area literature. Other mechanisms are possible and have been proposed.

Cyclical borrowing: an equivalence principle

The fact that an insurance system can be designed does not mean that it is needed, or even desirable. Begg et al. (1998) propose an equivalence principle: when Euro Area member countries have access to financial markets at “normal” interest rates, borrowing in bad years and paying back in good years provide the same amount of resources. The only difference is that borrowing implies interest costs, but these costs should be of the same order of magnitude as the insurance premium that is likely to, and should, be levied to operate the system. A benefit of borrowing over insurance is that politicization and the related moral hazard are absent.

The equivalence principle, however, explicitly relies on access to financial market at “normal” interest rates. Seen from the current perspective of the sovereign debt crisis, these conditions are evidently not satisfied. One could even argue that access to the financial markets can be lost precisely when borrowing is most needed, during a severe downturn. Similarly, interest rate spreads are likely to increase at this stage. This will not be the case if fiscal discipline, broadly defined as in Section 2.8, is achieved. Put differently, the superiority of an insurance system over borrowing is only found in the absence of fiscal discipline. Since fiscal discipline is an existential requirement for the sustainability of the monetary union, and since it stands to be achieved with the adoption of a decentralized arrangement backed by an unbreakable no-bailout rule, long-run arrangements cannot be adopted on the assumption that it is not achieved. In other words, if fiscal discipline is not achieved, it makes little sense to imagine a Euro Area insurance system.

As noted above, there remains the possibility that member countries will be hit by very large shocks, so large that borrowing may become impossible, as happened with Ireland and Spain. Looking back at history, barring wars, very large shocks are always the consequence of a financial crisis. As noted above, the standard procedure is for the central bank to intervene in last resort. The costs, if any, are eventually borne by the taxpayers, either through an explicit agreement between the central bank and the Treasury, or through reduced seigniorage, or else through inflation. As long as fiscal discipline is guaranteed, such a procedure is perfectly logical and ultimately harmless. In addition, appropriate regulation and supervision within a well-crafted banking union eliminate any remaining moral hazard issue.

³⁹ For instance, if each country its VAT receipts up to a rate of 10%, the net transfer would be approximately equal to 10% of the output gap.

4.5. The Legacy Issue

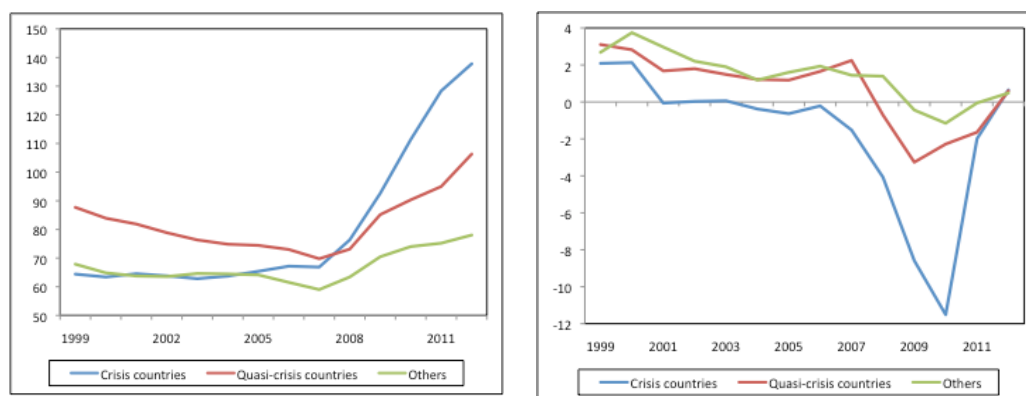
A key conclusion reached in the previous section is that, once fiscal discipline is effectively enforced at the national level, governments can freely borrow to smooth out cyclical fluctuations and cope with asymmetric shocks. This is a steady state property that implicitly assumes that public debts are low enough that fresh borrowing is not likely to be seen as threatening, as is indeed the case of US states. However, it is not the current situation within the Euro Area, where most countries have accumulated large public debts. The question is how to move from the current situation to the steady state. The legacy of decades of rampant fiscal indiscipline must be dealt with.

The left hand-side graph in Figure 12 collects debt to GDP ratios for the Euro Area countries grouped into three groups: the crisis countries (Greece, Ireland and Portugal), the quasi-crisis countries (Italy and Spain) and the others (Austria, Belgium, Finland, France, Germany and the Netherlands). The figure suggests two main observations. First, the crisis and quasi-crisis countries have now reached debt levels in excess of 100% of GDP. Second, the large observed differences between these groups have arisen since the deep recession of 2009. The right hand-side graph shows that the difference occurred in 2009, the year of the deep recession that followed the global financial crisis. The graph shows that the cyclically adjusted deficit increases were quickly corrected, the more so the larger was the 2009 increase, and yet debt ratios kept on diverging.

Figure 12. Average debt ratios in the Euro Area (% of GDP)

Public debts (% of GDP)

Cyclically adjusted primary balances (% of GDP)



Notes: Unweighted averages. Crisis countries: Greece, Ireland and Portugal; Quasi-crisis countries: Italy and Spain; Others: Austria, Belgium, Finland, France, Germany and the Netherlands.

Source: AMECO on line, European Commission.

The explanation of this apparent paradox is not surprising. Contractionary fiscal policies when the economy is in recession make the recession deeper and longer lasting and fail to reduce public indebtedness. This means that the austerity strategy is

failing and the debt keeps rising. The policy implication is less obvious, however. Fiscal policies should not remain contractionary but can they be made expansionary? Clearly the crisis and quasi-crisis countries, which have either lost market access or struggle to keep access, cannot further deepen their current, large budget deficits. This would require official financing, which is not available on a sufficient scale. The situation seems hopeless, and it is hopeless indeed.

In addition, Reinhart and Rogoff (2009) argue that countries with high public debt levels are unable to achieve sustainable growth.⁴⁰ IMF (2012) reminds us that large debts are reduced very slowly and require sustained growth along with supportive monetary policy and lasting changes to fiscal policy institutions. Sustained growth is unlikely. Monetary policy has reached the zero lower bound and is therefore unlikely to be an effective macroeconomic instrument.⁴¹ The possible adoption of the decentralized model of fiscal discipline is the only reassuring element in the current situation.

Taken together, these observations imply that many Euro Area countries are mired in a calamitous situation and that unusual action needs to be taken. Decade-old policy mistakes – fiscal indiscipline and poor bank oversight – have left an impossible legacy. The highly unpalatable solution is public debt restructuring in these countries.

Debt restructuring involves a huge moral hazard. Dealing with this moral hazard requires a “never again” commitment, in this case guaranteed fiscal discipline in the future. It is bound to impose deep losses in national banking systems since now public debts have migrated into national banks. This may lead to systemic banking failures and the need for large-scale rescues. The assumption by the ECB of its lender in last resort responsibility, which requires a full-blown banking union, is therefore part and parcel of dealing with the legacy.

More generally, the way of dealing with the legacy of crippling public debts is intimately linked to Europe’s quest for financial discipline. Bringing indebtedness down is unlikely to be achieved through growth because high debts stunt growth.⁴² Debt restructuring can be the magic bullet that erases the legacy and opens the space needed to bring austerity policies to an end. Debt restructuring, in turn, is bound to be destructive unless financial discipline alleviates the moral hazard problem. Fiscal discipline includes effective bank oversight, which calls for a complete banking union.

5. Conclusion

This paper argues that the Euro Area crisis is not driven or caused by issues such as competitiveness. It is a public debt crisis, the result of two pre-existing flaws: a

⁴⁰ Panizza and Presbitero (2012) question the causality link. They also offer additional references of articles that support the link.

⁴¹ This does not mean that the ECB cannot alleviate the financial crisis. Its LTRO and OMT interventions are powerful and effective, as discussed above.

⁴² Another view is that inflation is the solution. Not only will the ECB refuse to go along, but also the hidden inflation tax is unlikely to erase public debts given how sophisticated today’s financial markets are.

misguided approach to the well-understood need for fiscal discipline in every member country and the absence of effective bank supervision that ultimately led massive debt buildups in otherwise fiscally disciplined governments.

Somewhat inadvertently, the Euro Area adopted the German model of fiscal federalism, which is based on centralized regulation and implementation. To be effective, this model requires that some authority be transferred from member states to the “centre”. In Germany, the centre is the federal government. In the Euro Area, however, there is no centre. Strengthening the Stability and Growth Pact aims at empowering such a center. But, in addition to formidable political opposition to such a transfer of sovereignty, the German model has not performed well in Germany.

This is why a better-adapted model is the one adopted in the US. This model leaves intact sub-central fiscal sovereignty and does not give any authority to the federal government. Instead, it relies on a no-bailout rule, which has historically led US states to spontaneously adopt fiscal rules. This decentralized model of fiscal discipline is not just more in tune with Euro Area institutions, it has also performed well.

Fortunately, inadvertently perhaps, the Fiscal Compact represents an important step toward decentralization. What remains to be done is to complete this step with the re-establishment of the summarily discarded no-bailout rule and the adoption of a full-blown banking union that will reduce the probability of banking crises. This is part and parcel of fiscal discipline because banking crises easily morph into debt crises. The link is particularly strong when governments can only borrow in a foreign currency, that is when the country does not own a central bank. To sever this link, the ECB needs to recognize – formally or informally – its role as lender of last resort to banks and the banking system. The ECB will be able to do so only if a banking union is in place.

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