

# Why is the Debt Crisis Spreading through the Euro Area?

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## 1. Introduction

The current sovereign debt crisis presents a number of surprising features. It was totally unexpected until the September 2008 meltdown of Wall Street, and event that one would not associate spontaneously with public debts in Europe. It came before the end of the recession, which would have signaled the time to exit from accommodative fiscal policies. So far at least, it has hit only developed countries and, among them, only countries within the euro area. Those affected have varied fiscal discipline records and the sources of their fiscal woes are different.

The only common feature is that they all belong to the euro area. This suggests that the monetary union creates vulnerabilities that have not been widely detected until now. Of course, it may be pure coincidence that those countries with the weakest public debt situation happen to belong to the euro area. This possibility is examined in Section 2, which concludes that the case is not convincing. The next natural potential explanation is that the loss of national monetary policy and the exchange rate may undermine, or could be seen to undermine a country's ability to stabilize its public debt. Section 3 looks at this interpretation and concludes that it may matter indeed, but in an indirect way, as a vulnerability that makes self-fulfilling attacks possible. The third interpretation, presented in Section 4, is that the policy responses may have inadvertently created an additional contagion link.

## 2. Is the euro area the worst offender?

The sovereign debt crisis started in Greece, which has a high debt indeed, but not the highest in the world. It has not affected – for the time being, at least – non-euro area developed countries or the developing countries. Is it because public debts are highest in the euro area? As Table 1 shows, 12 of the 17 euro area countries appear in the list of the 30 largest public debts in a sample of 68 countries observed in 2009.<sup>1</sup>

While all European countries that were led to seek support from the IMF and the European Union figure high in the list, only Greece is in the top five. In addition, many countries high in the list do not seem to be under market pressure. It is often believed that Japan and Italy are protected because a large part of their public debts is

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<sup>1</sup> Some of the non-euro area countries in this top league have faced a crisis in the recent past. The list includes Iceland and Hungary.

held domestically by the public at large. There remains the fact that marginal holders – who are partly the same financial institutions that sold Greek, Irish and Portuguese bonds – could decide to sell Japanese and Italian bonds and trigger a crisis, in which case small bondholders are likely to run on the bulk of the debt.

Another question is whether the presence of so many countries in the top league reflects a tendency for euro area countries to exhibit larger public debts than other countries. After all, all member countries have signed to the Stability and Growth Pact. Even if the pact has not been effective at imposing fiscal discipline – as Table 1 strongly suggests – at the very least it should not be a source of indiscipline. Is the evidence a clear indication that euro area countries have larger debts than others?

One way to answer this question is to check whether the heavy representation of euro area member countries in Table 1 is statistically significant. Using a sample of 67 countries from all over the world for which debt to GDP ratios are available, tests of equal means and medians reject at the 1% confidence level the hypothesis that debts in the euro area and outside are drawn from the same distribution (but not the variance). For instance, in 2009 the average debt to GDP ratio was 80.9% among the euro area countries and 52.6% for the remaining countries in the same sample.

**Table 1. Debt to GDP ratios in 2009: the top 30 countries**

1	Japan	192.8	16	Egypt	79.5
2	Italy	127.7	17	Israel	79.2
3	Greece	120.2	18	Germany	76.5
4	Iceland	119.5	19	Austria	72.7
5	Jamaica	115.8	20	Ireland	72.7
6	Singapore	113.3	21	UK	72.4
7	Belgium	100.4	22	Netherlands	69.3
8	Cyprus	97.3	23	Mongolia	64.8
9	Barbados	92.7	24	Spain	62.4
10	France	87.1	25	Brazil	61.0
11	Portugal	86.3	26	Colombia	59.3
12	Hungary	85.2	27	Poland	58.5
13	USA	84.4	28	Jordan	57.9
14	Canada	83.4	29	Bhutan	56.2
15	Malta	81.1	30	Malaysia	53.3

Sources: Developed countries: Economic Outlook, OECD. Other countries: The World Bank

The evidence that debts tend to be higher in the euro area could be the outcome of another factor that is common to some if not all of the member countries. One way to assess this possibility is to examine why debts are so different across countries and whether euro area matters. A simple approach is to regress the debt level (in 2009) on

a number of presumed determining variables and a euro area dummy.<sup>2</sup> A cross-section analysis is shown in Table 2. It shows that the main determinants of public debts are the size of government (the larger is the government, the higher the debt) and economic growth (fast growth reduces debts), with a marginal impact of GDP per capita (richer countries tend to have lower public debts).<sup>3</sup> The relevant observation is that it is found that being a euro area member country increases the debt/GDP ratio by 23% but this effect is not statistically significant.

**Table 2. Public debts**

Variable	Coefficient	Std. Error	Prob.
constant	3.70	1.09	0.00
GDP per cap.	-0.20	0.13	0.13
Spending/GDP	0.61	0.23	0.01
Growth	-0.16	0.05	0.01
Corruption index	0.08	0.06	0.20
Euro area	0.23	0.21	0.27

Sources: OECD, The World Bank, Transparency International

Notes: Variables in logs: debt/GDP ratio, GDP per capita, spending/GDP ratio. Cross-section of 2009 observations for debt and GDP. Growth is change of GDP measured in US\$ over 1999-2009. Sample of 67 countries for which the debt/GDP ratio is available from the World Bank database.

All in all, looking at Table 1 one is not surprised that some euro area countries have faced a crisis situation but the table does not explain why those particular countries have been affected rather than others, inside and outside the euro area. Why the crisis has been circumscribed so tightly to the euro area remains to be elucidated.

Nor is there formal evidence that belonging to the euro area, in and by itself, leads to higher public debts. Relatively slow growth, a characteristic of the euro area, may explain the situation.<sup>4</sup> Other explanatory characteristics remain to be uncovered. One intriguing observation is that, as shown in Table 3, all the initial euro area member countries show up among the countries where the debt to GDP ratio increased most during the crisis. These increases have diverse causes (the US subprime crisis in some cases, local housing market price bubbles in other cases) but they may have a disquieting effect on financial markets, almost irrespective of the initial debt level. The empirical literature of the determinants of interest rate spreads also report larger effects from the deficits than debt levels. This is surprising since markets should be

<sup>2</sup> While there exist a large literature on fiscal stabilization, there does not seem to exist work attempting to directly explain the size of public debts.

<sup>3</sup> Other specifications have been examined, including variables capturing political fractionalization. The corruption index is not significant but presented for

<sup>4</sup> Over 1999-2009, average annual growth among euro area countries has been 2.2%, statistically lower than the 3.9% achieved elsewhere in the sample of 67 countries. Eliminating growth in the regression shown in Table 2 raises the significance effect of the euro area dummy, but it remains still above the 10% significance level.

concerned with debt sustainability, which depends on the debt level than on annual deficits. These observations are suggestive of a self-fulfilling mechanism whereby financial markets become alarmed when they see large deficits, almost irrespective of the actual debt level.

**Table 3. Change in the debt/GDP ratio from 2006 to 2009**

1	Iceland	62.1	16	Denmark	10.6
2	Ireland	43.3	17	Italy	10.5
3	Singapore	28.5	18	Slovenia	10.3
4	UK	26.4	19	Mongolia	10.0
5	USA	23.5	20	Belgium	8.8
				Czech	
6	Japan	20.6	21	Republic	8.5
7	France	16.3	22	New Zealand	7.8
8	Spain	16.2	23	Germany	7.2
9	Portugal	15.3	24	Finland	7.1
10	Netherlands	14.4	25	Georgia	6.7
11	Canada	13.1	26	Luxembourg	6.4
12	Hungary	13.0	27	Austria	6.1
				Slovak	
13	Greece	11.7	28	Republic	5.7
14	Belarus	11.4	29	Malta	5.4
15	Malaysia	11.1	30	Brazil	5.3

Source: see Table 1.

Source: The recent euro area members are not marked as such.

### 3. Implications of the loss of a national currency

Obviously, the defining characteristic of the euro area is the loss of national monetary and, in particular, of the exchange rate instrument. It may be worthwhile examining why this could matter in present circumstances.

It is commonly observed that debt stabilization is likely to exert a contractionary effect on the economy, which may undermine the stabilization objective through the multiplier mechanism. An expansionary monetary policy – unlikely to raise inflation in the midst of a recession – or, almost equivalently, an exchange rate depreciation can help cushion the contractionary impact. On this view, euro area countries face the very real possibility of entering a vicious circle of fiscal contraction leading to a deep recession, which prevents the budget from improving and requires another round of fiscal contraction. This seems to accurately describe the current Greek predicament.

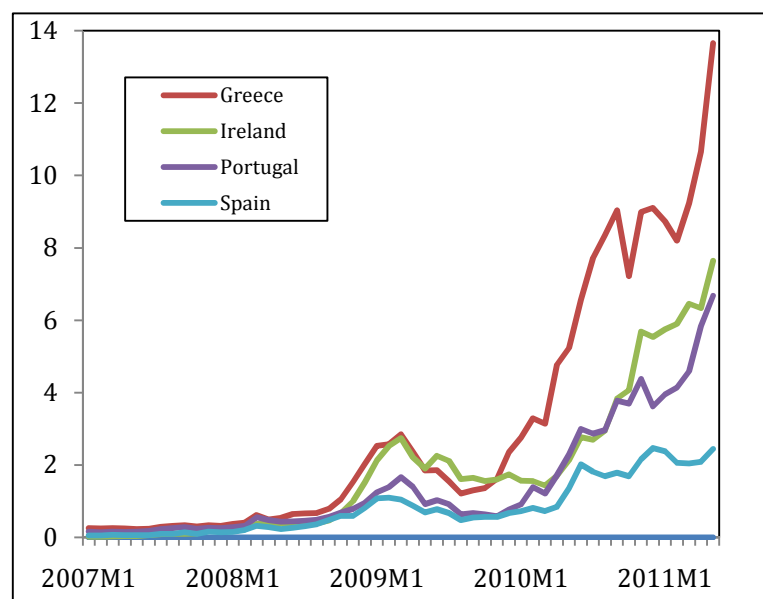
Once markets refuse to lend, or only lend at high and destabilizing rates, a government has no good option. This is the kind of vulnerability that makes self-fulfilling crises possible. Indeed, the Greek debt had been high and rising for quite some time and the debt increase in the wake of the crisis was large, but not the worst one as Table 3 shows. It seems that markets were waiting for some government action

after the elections of late 2009. When the newly elected government failed to indicate that it was prepared to take action, the markets concluded that the debt could become unsustainable. In the absence of an exchange rate to attack, as is often the case, market pressure directly affected lending conditions.

Explaining the Greek case is relatively easy but contagion to other countries is more challenging. One observation is that interest rate spreads over German Bunds started in August 2007, at the very beginning of the financial crisis. Figure 1 shows that the spreads immediately affected the same group of countries (Greece, Portugal, Ireland and Spain) and remained small until September 2008. They then progressively increased until May 2010, at the time of the decision to bail out Greece and create the EFSF (European Financial Stability Fund).

The joint pattern of all four spreads clearly suggests a euro area effect. Markets did discriminate across countries but clearly identified the euro area countries as particularly vulnerable. This happened even before the large debt increases that occurred in the wake of the collapse of Lehman Bros. Once again, the pattern is suggestive of the presence of a self-fulfilling mechanism. As the world entered a troubled period, following the Great Moderation – and therefore the Great Forgiveness – decade, markets identified euro area membership as a vulnerability. Indeed, with tolerance for risk suddenly abating, all member countries saw their public debt interest rates rise *vis à vis* the German benchmark. Some of these increases were small, but all have been persistent. The increases were larger for countries where there existed other debt-related vulnerabilities. A history of shaky public finances (Greece, Portugal) and the existence of a housing price bubbles (Ireland, Spain) could have been the triggering factor.

**Figure 1. Spreads on 10-year bonds**



Source: *International Financial Statistics*, IMF

As noted earlier, the identification of euro area membership as a weakness does not necessarily mean that the vulnerability is the loss of monetary policy and of the exchange rate instrument. Other characteristics may distinguish the euro area countries. They are collectively distinct in terms of growth and the interest rate may be higher. This hypothesis is examined in Table 4 below where the euro-area countries are compared to 20 developed and emerging-market countries available in the OECD database over the first 10 years of existence of the euro. The difference between the interest rate and GDP growth determines where the debt process is *ceteris paribus* stable. Taken together, the euro-area countries are no different from the comparable countries, which means that higher growth indeed comes with higher interest rates.

This might indicate that the combination of interest and growth rates does not provide any generic euro area explanation for the debt crisis. In fact, this is not quite right. Table 4 shows that the four crisis countries are different, with a significantly lower growth-adjusted interest rate, which should *a priori* make the debt process more, not less stable. This means that these countries have had a worse fiscal performance entirely because policy has been undisciplined. The outcome is in line with the Walters critique, according to which in a monetary union countries with higher inflation face a lower real interest rate, which makes them grow faster and could prompt higher inflation. This predicted vicious circle does not have to be accompanied by larger deficits, though. But it may be that a stabilizing interest-growth differential has given these countries a false sense of stability.

**Table 4. Debt stability: long-term interest adjusted for growth (1999-2009)**

	Euro area (all)	Euro area (crisis)	Not euro area OECD
Interest rate less GDP growth	0.068	-1.033	0.066

Source: Economic Outlook, OECD

#### 4. Is solidarity the culprit?

Another possible explanation of the euro area effect is the common pool effect identified in the literature as a source of bias toward budget deficits. At the national level, this effect takes the form of competing claims on the public budget by interest groups that fail to internalize the associated costs and tax burden. At the international level, a common pool problem arises when one country may expect that some of its spending will be paid for ultimately by other countries.<sup>5</sup>

<sup>5</sup> The domestic budgetary common pool is presented in von Hagen and Harden (1994). The international pool problem is presented in Krogstrup and Wyplosz (2010).

The Founding Fathers of the euro were well aware of both the national and international common pool problem and, in particular, that the international effect could aggravate the domestic one.

“To some extent market forces can exert a disciplinary influence. [...] However, experience suggests that market perceptions do not necessarily provide strong and compelling signals and that access to a large capital market may for some time even facilitate the financing of economic imbalances. Rather than leading to a gradual adaptation of borrowing costs, market views about the creditworthiness of official borrowers tend to change abruptly and result in the closure of access to market financing. The constraints imposed by market forces might either be too slow and weak or too sudden and disruptive. Hence countries would have to accept that sharing a common market and a single currency area imposed policy constraints.”

Delors Report, p.24.

One response was the Excessive deficit procedure, which led to the Stability and Growth Pact. The pact addressed directly the deficit bias implication of the domestic common pool problem, leaving out the international part. The poor fiscal discipline performance of euro area countries since 1999, documented above, shows that the pact did not achieve its aims. The domestic common pool problem remains to be dealt with in the many countries that have not established fiscal discipline through their own domestic arrangements.

The other response from the Founding Fathers was the no-bailout clause, which addressed directly the international common pool problem. The no-bailout clause was in effect set aside by the May 2010 decision to have governments, the Commission and the ECB to provide support to Greece and, therefore, any other country that faces the market wrath.

This is the sense in which the solidarity principle, which was invoked to justify the abandonment of the no-bailout rule, may have made the sovereign debt crisis a distinguishing feature of the euro area. The abandonment of the no-bailout clause strengthened the international common pool problem. Coming on top of the failure of the Stability and Growth Pact, which meant that the domestic common pool problem had not been successfully dealt with, the decisions of May 2010 have opened a collective vulnerability.

This risk has not been unnoticed, of course. The response has been the imposition of tough, some would even say harsh, conditions in return for the bailouts. The intention was to reduce and possibly eliminate the deficit bias created by common pool effects: a tougher Stability and Growth Pact to deal with the domestic common pool, and strong conditionality to deal with the international common pool. The problem is that the conditions imposed by the IMF and the European Commission may well be excessive given the economic conditions on these countries. Debt stabilization in the midst of a recession is nearly mission impossible, especially when the exchange rate cannot be depreciated.

## 5. Conclusion: the institutional implication of debt restructuring

The likely failure of the programs will result in debt restructuring, which may be a new source of contagion beyond the current group of countries under IMF programs. The economic implications could be huge.<sup>6</sup> In this concluding section, however, I briefly focus on the institutional implications.

A debt restructuring will seal the failure of the strategy adopted in the Maastricht Treaty. It will require new thinking. The most likely solution will be moving toward a “transfer union” with the ESM and, as a counterweight, further toughening of the pact. For this to work, we will need explicit limits to national sovereignty over fiscal policies, namely over the budget balance and the debt path. This is indeed what the Delors Report envisioned. What has not been achieved in normal times may happen at crisis time. This would constitute the silver lining of an otherwise destructive crisis.

As always in the history of European integration, the question is whether such a step is politically feasible. One year into the debt crisis, public opinions in some countries (Germany, Finland and the Netherlands) are asking for more constraints and less transfers. Other countries (France, Italy) seem to support more transfers and less constraints. The room for agreement is very narrow.

An alternative is to get back to the Maastricht Treaty and to reinvent the no-bailout clause and thus eliminate the international common pool effect. As creditor countries and the ECB count the losses suffered in the debt restructuring, this could become an attractive outcome. It would force the fiscal discipline obligation back to the national level. All that would be needed to alleviate, and possibly eliminate, the remaining deficit bias would be the national adoptions of institutions that deal effectively with the domestic common pool problem. Recent experiments with fiscal rules and institutions provide many interesting leads (see e.g. IMF, 2009 and Wyplosz, 2011).

## References

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<sup>6</sup> I do not examine the “unthinkable”, but not impossible anymore, breakup of the euro area.