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## The Financial Crisis and the Future of the Eurozone

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# The Financial Crisis and the Future of the Eurozone<sup>\*</sup>

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## Abstract

The government debt crisis, erupted in the Eurozone in 2009, nearly led to the collapse of European monetary union. Now that this has been averted, the question is what should be done to make the Eurozone sustainable in the long run. The survival of the Eurozone hinges on the capacity of its leaders to improve the eurozone's governance.

With the exception of Greece, the root cause of the government debt crisis has little to do with the poor performance of the SGP, rather, with unsustainable debt accumulation by private actors. Also, the method of convergence implicit in the SGP has not worked well – macroeconomic divergences have stubbornly remained for nearly a decade and several countries experienced boom and bust dynamics. Although strong declines in real interest rates may explain part of the story (but e.g. Italy did not experience boom & bust), self-fulfilling waves of optimism and pessimism which might be called 'animal spirits' and are of mainly national origin, seem a good candidate for explanation. These national animal spirits endogenously trigger credit expansion and contraction. It follows that (national) movements of credit ought to be under much firmer control and this is up to the monetary authorities, including the ECB. Critical recommendations for better governance of the Eurozone should therefore combine credible measures to maintain fiscal discipline over the medium term with such instruments as minimum reserve requirements to control the growth of bank credit as well as minimum reserve requirements in different national banking systems. Finally, the idea of adding more sanctions to the SGP may be ill-conceived since, in future, it might pre-empt national governments to come to the rescue of banks (under credible threats of contagion) and/or prevent a downward spiral in economic activity.

**Key words:** financial crisis, monetary policy, Eurozone.

**JEL codes:** E 58, F 33, G10.

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## 1. Introduction

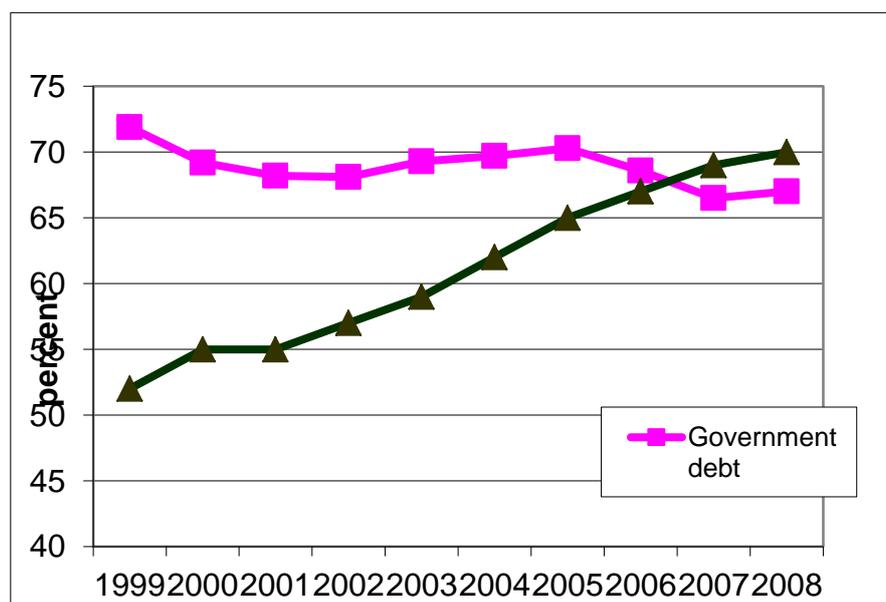
The government debt crisis that erupted in the Eurozone in 2009 led to the near-collapse of European monetary union. For the moment the catastrophe seems to have been averted. The long-run survival of the Eurozone, however, is still at stake. In this paper I ask the question what should be done to make the Eurozone sustainable in the long run.

In very general terms it can be said that the government debt crisis in the eurozone is the result of a failure of economic governance. Thus, the survival of the eurozone hinges on the capacity of its leaders to improve the eurozone's governance. In order to answer the question of how the economic governance of the eurozone should be reformed, we should first make a diagnosis of the crisis in which the eurozone has been thrown since 2009.

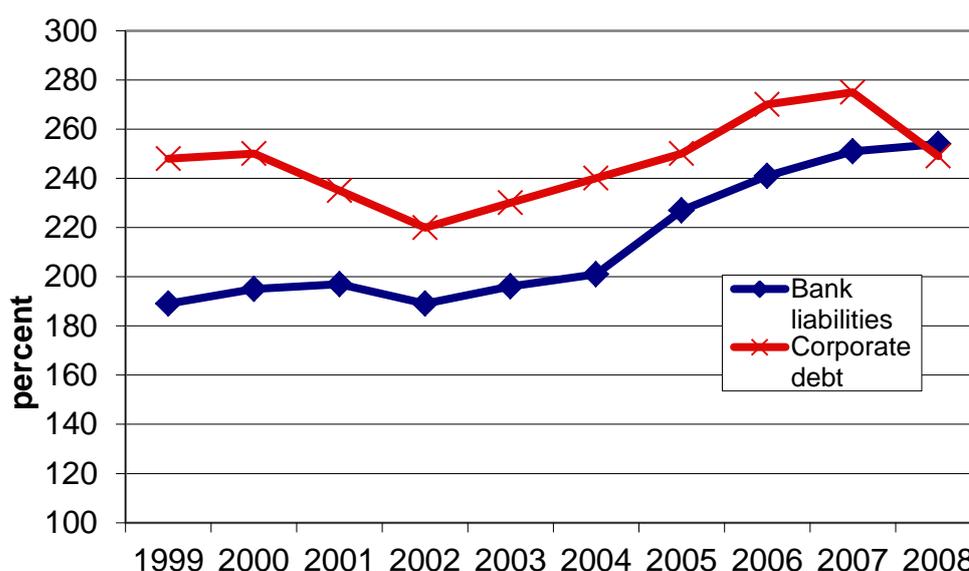
## 2. Diagnosis

A consensus seems to be building up in Europe identifying the failure of the Stability and Growth Pact (SGP) to keep a lid on national budget deficits and debts as the root cause of the government debt crises in the eurozone. I want to argue that, with the exception of Greece, the reason why countries got into a sovereign debt crisis has little to do with the poor performance of the SGP. The root cause of the debt problems in the eurozone is to be found in the unsustainable debt accumulation of the *private* sectors in many eurozone countries. I show the evidence in Figures 1 and 2.

**Figure 1: Household and government liabilities in eurozone (percent GDP)**



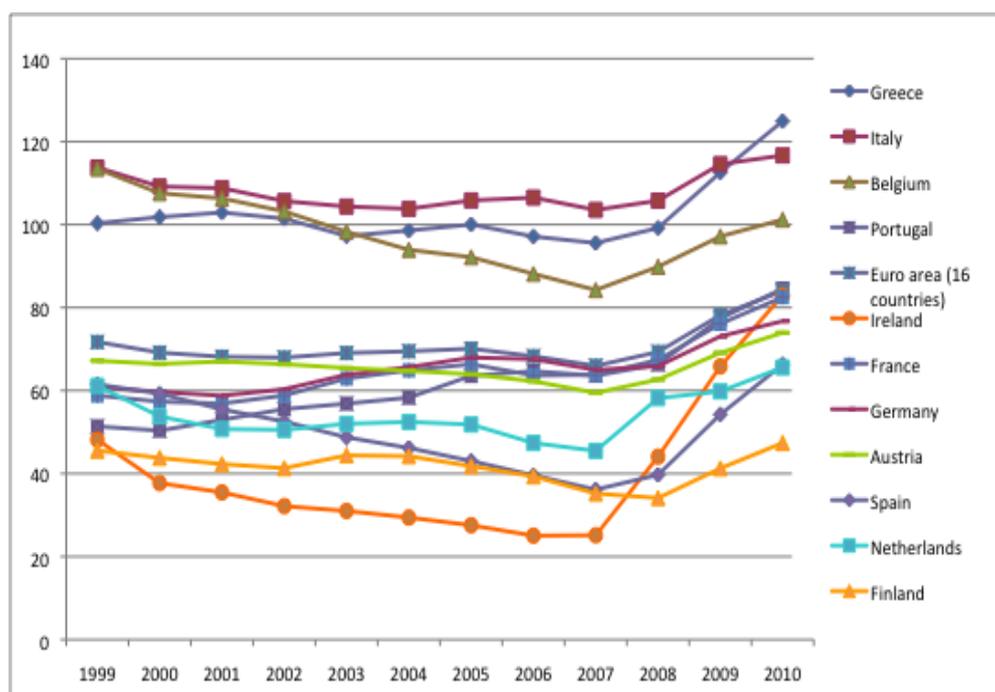
Source: European Commission, AMECO database and CEPS

**Figure 2: Bank and corporate liabilities in the eurozone (percent of GDP)**

It can be seen that household and bank debt were increasing very fast prior to the debt crisis. Surprisingly, the only sector that did not experience an increase in its debt level (as % of GDP) was the government sector. The private debt accumulation in the eurozone then triggered the well-known debt deflation dynamics (analyzed by Irving Fisher(1932) and later by Minsky(1982)) forcing the governments of the eurozone countries to allow their own debt levels to increase. This was achieved through two channels. The first one consisted in governments actually taking over private debt (mostly bank debt). The second one operated through the automatic stabilizers set in motion by the recession-induced decline in government revenues. As a result, the government debt/GDI ratio started increasing very fast *after* the eruption of the financial crisis.

In Figure 3 we show the government debt to GDP ratios before and after the crisis for the Eurozone countries. The most surprising feature of Figure 3 is that except for Germany and Portugal, the government debt ratios of the other eurozone countries were all declining prior to 2008. Even more striking is to find that in two countries that have experienced severe government debt problems recently, Ireland and Spain, the government debt ratios were declining spectacularly prior to the crisis. These were also the countries where the private debt accumulation has been the strongest.

From this evidence it is clear that it is difficult to maintain that the cause of the government debt crisis in the eurozone is due to government profligacy prior to the crisis.

**Figure 3: Government debt in the eurozone countries (% of GDP)**

Source: European Commission, AMECO database

The only country where this can be said to be true is Greece. It does not apply to the other countries, where the fundamental cause of the crisis is to be found in unsustainable private debt accumulation forcing governments to step in to help out (in some cases to save) large segments of the private sector.

Although the cause of the government debt crisis is not to be found in the poor workings of the SGP, it remains true that the latter does not work well. This was shown dramatically in 2003 when France and Germany decided to waive the SGP-rules unilaterally. It is therefore important to understand why the SGP does not work well, before we decide to tighten its rules and to impose more sanctions, or before we try to apply its method to other areas of national economic policies. The reason why the SGP worked poorly can be described as follows. As long as budgetary policies (spending and taxation) remain vested in the hands of national governments and parliaments, the political responsibility for the decisions about spending and taxation rests with these national governments and parliaments. The latter face the political sanctions by national electorates. Neither the European Commission nor the other members of the Council face the political sanction for the measures they impose on one member country. “No taxation without representation” belongs to the essence of democracies.

The SGP has been an attempt to short-circuit this principle, by giving powers to individuals and institutions that do not face the political responsibility for their actions. Such an attempt had to fail and happily so.

The Commission has proposed to tighten the rules and to apply stiffer sanctions in the SGP. It looks increasingly likely that the Task Force presided by the President of the European Council will propose a similar tightening of the SGP-rules. It is unclear how stiffer rules and sanctions will help to salvage the SGP that is deeply flawed because it disregards elementary principles of political economy.

The previous analysis leads to the following two conclusions. First, the crisis in the eurozone has mostly to do with the divergent developments in private debt. The latter have much to do with macroeconomic divergences in general. So, something must be done about these divergences. The question is what exactly.

Second, the method of convergence implicit in the SGP should not be the model to impose convergence in other areas of national economic policies. This method has not worked well to impose convergence in the budgetary field; it is unlikely to do so in other fields.

### **3. How to deal with macroeconomic divergences?**

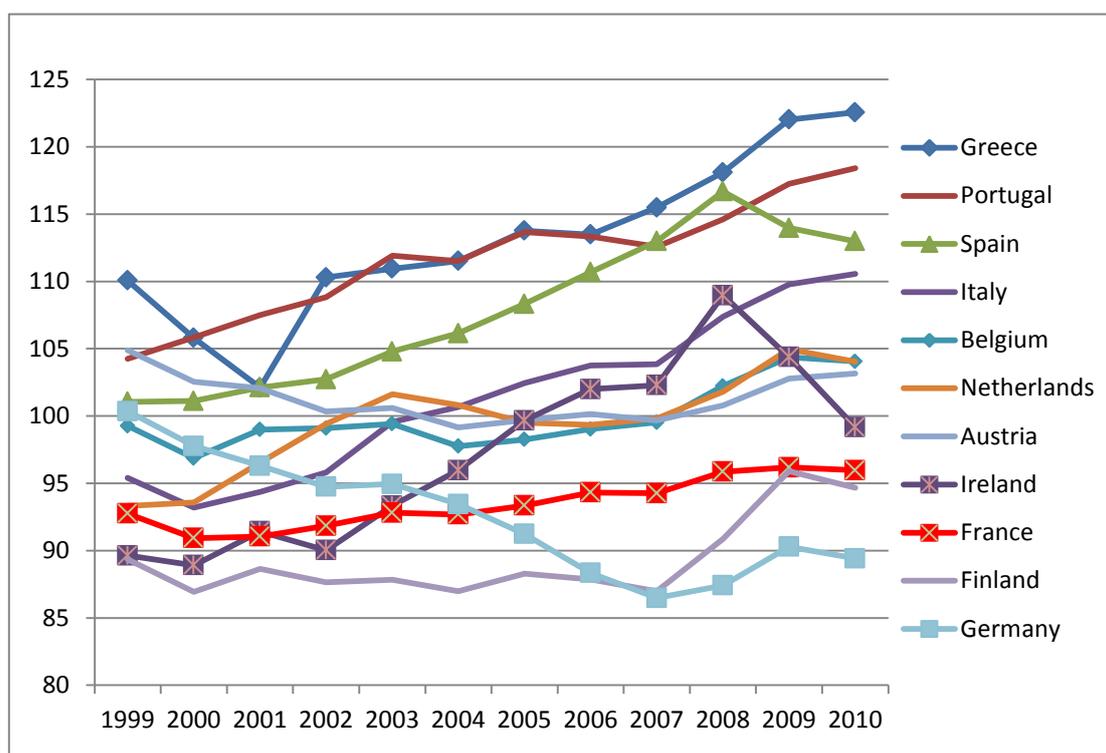
Here also we need the right diagnosis. Where do these macroeconomic divergences come from? I think we do not have a very good answer today. We do not understand very well how these macroeconomic divergences in the eurozone come about.

It is often said that the source of the boom and bust dynamics in countries like Spain, Greece and Ireland is due to the fact that thanks to the entry into the eurozone these countries enjoyed a strong decline in their real interest rate. This decline in the real interest rates then triggered a boom in consumption and a bubble in the housing markets. Fair enough, but this does not explain everything. Italy similarly enjoyed an unprecedented decline in its real interest rate when it entered the eurozone, yet it did not experience a boom and a bubble.

This leads me to bring in another explanatory variable: animal spirits, i.e. waves of optimism and pessimism that in a self-fulfilling way drive economic activity (see Akerlof and Shiller(2009), Leijonhufvud(1973), Minsky(1986)).

My hypothesis is that as far as animal spirits are concerned, the eurozone is far from being integrated. Remember just a few years ago when “angst” prevailed in Germany while bursts of optimism exploded in Spain and Ireland. Today optimism drives the German recovery and pessimism prevails in the once booming countries. Thus, member states of the eurozone are still very much independent nations creating their own animal spirits.

**Figure 4: Relative unit labor costs in Eurozone (average 1970-2010 = 100)**



Source: European Commission, AMECO database

Note: I take the average of the relative unit labour costs over the period 1970-2010 to be a close approximation of the equilibrium values and set this average equal to 100. The divergent movements in unit labour costs are less pronounced than when 1999 is selected. Nevertheless there is upward divergence in Greece, Portugal, Spain, Italy and until 2008 also Ireland.

The existence of idiosyncratic animal spirits is at the core of the divergences in competitiveness observed during the last decade. The optimism prevailing in peripheral countries led to booms in economic activities which in turn triggered wage and price increases in these countries. A few years of such booming activity was enough to bring prices and wage costs out of line with the rest of the eurozone, as is shown in Figure 4, where I present the evolution of the relative unit labour costs in the eurozone since 1999.

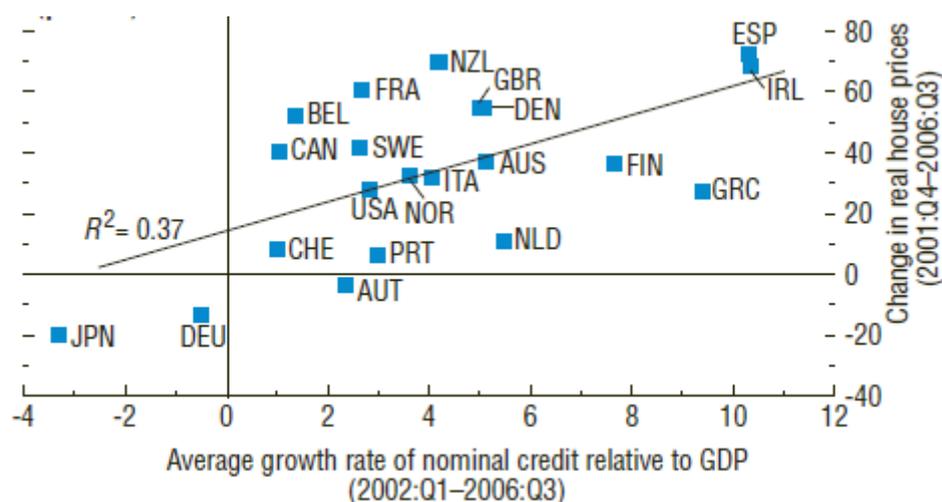
[Note that, contrary to what is usually done, I do not take 1999 as the base year. This tends to exaggerate the degree of divergence because it assumes that 1999 was a year in which relative competitiveness was in equilibrium (see Gros and Alcidi (2010) on this). Instead I selected the average over the period 1970-2010 to better represent the equilibrium values].

If booms and busts and the ensuing movements in prices and wages are the results of animal spirits that continue to have a national, not European origin, what can one do about it? Put differently, do national governments have the tools to deal with this? And what are the responsibilities of central banks?

#### **4. Responsibilities of governments and central banks**

The fundamental reason of the debt crisis in the eurozone is to be found in an unsustainable increase in debt levels of the private sector during the decade preceding the crisis. As argued earlier, these private debt levels were very much driven by moves of optimism and pessimism (animal spirits), that had a strong national component. Thus, while in the early 2000s, a wave of optimism (helped by a strong decline in real interest rates) gripped countries like Spain and Ireland, pessimism prevailed in Germany. These animal spirits have a self-fulfilling property and lead to bubbles and booms in the countries gripped by optimism, and the reverse in the others.

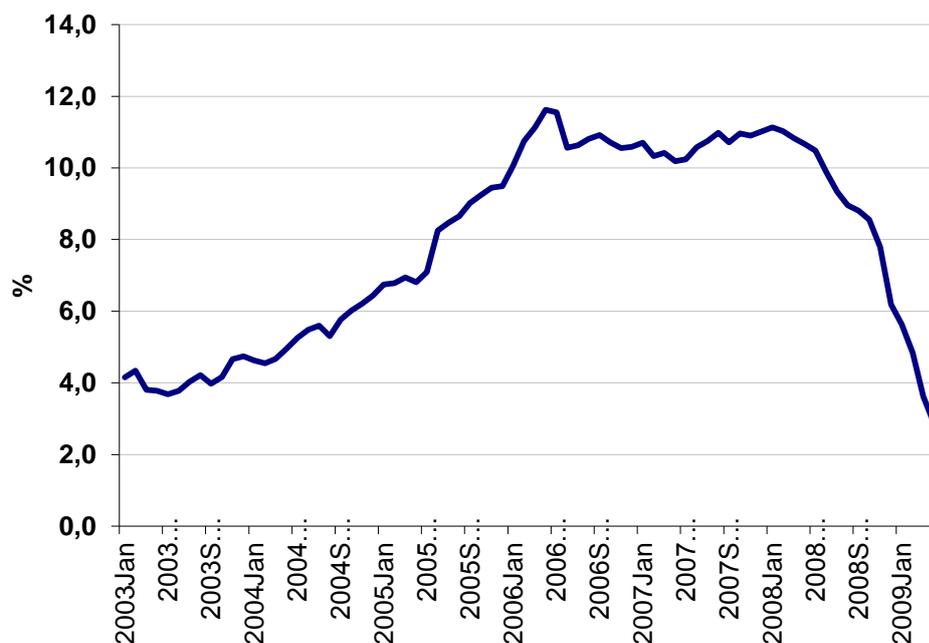
The severity of these booms and bubbles ultimately depends on how they are financed. In particular, these bubbles and booms become intense when they are made possible by bank credit. In fact there is a two-way interaction between bubbles and booms on the one hand and bank credit. When a bubble and boom starts, bank credit tends to increase automatically, mainly because the boom-and-bubble increases the value of assets, in particular of real estate, thereby increasing the value of collateral presented to banks in order to obtain a loan. Conversely the increase in bank credit intensifies the boom and the bubble. This feature has been analyzed in great detail by Borio(2003), White(2006), Brunnermeyer, et al. (2009). It is also illustrated in Figure 5, which presents the correlation between real house prices and bank credit, using a study of the IMF. It is the combination of bubbles (mainly in the housing markets) and bank credit that makes these bubbles so lethal.

**Figure 5: Real house prices and growth rate of nominal credit relative to GDP (percent)**

Source: Kannan (2009)

The previous analysis leads to the conclusion that the appearance of unsustainable private debt levels is the result of a combination of animal spirits and bank credit. This phenomenon has been very pronounced in Ireland and Spain. This also leads to the conclusion that not only national governments bear responsibility for these developments (because they fail to counteract them by anti-cyclical budgetary policies) but also the monetary authorities (because they fail to exert a stronger control on bank credit). Since bank credit is a more proximate cause of the bubbles and booms, and since the monetary authorities can control bank credit, it can be argued that the responsibility of the European monetary authorities in the development of unsustainable private debt levels is stronger than that of the national governments. Thus the failure of the European monetary authorities, and in particular of the ECB, in checking the unsustainable private debt developments and the ensuing public debts is at least as high as the failure of national governments.

Defenders of the European monetary authorities will argue that the ECB is helpless in controlling *national* aggregates, *in casu* national bank credit. It can only affect system-wide variables, in this case bank credit in the eurozone as a whole. Even on that count, there is a large responsibility for the ECB. In Figure 6, I show the growth rates of total bank credit in the eurozone during 1999-2009. It can be seen that during the years of bubbles and booms, total eurozone bank credit increased by more than 10% per year.

**Figure 6: Growth rate of bank loans in Euro area**

Surely the ECB could have affected the growth rates of bank credit. In fact it is probably the only one in town who could have done this.

I am not arguing the ECB should have followed a different interest rate policy than the one it did. It could have used other instruments at its disposal, e.g. minimum reserve requirements to control the growth rate of bank credit. This would have reduced the intensity of the expansion of bank credit in these countries experiencing bubbles in their real estate markets.

In addition, the Eurosystem could have used different minimum reserve requirements in different national banking markets, applying higher minimum reserve requirements in countries experiencing much faster growth rates of bank credit (Ireland and Spain). The retail component of the banking sectors in the eurozone is still very segmented along national lines, making the application of such differential minimum reserve requirements possible.

From the preceding analysis follows that the Eurosystem bears its part of responsibilities in allowing bubbles in national housing markets and the associated increases in private debt to develop. Reforms of the governance in the eurozone should therefore not only focus on the responsibilities of national governments (and these are serious) but also on those of the European monetary authorities, and in particular those of the ECB. Some more hard thinking about how this can be done will be necessary.

An objection to the previous analysis is that it is the responsibility of the financial supervisors to deal with excessive risk taking by banks. When banks extend too much credit and thereby increase the risk of their balance sheets, national supervisors should intervene. This is undoubtedly so. At the same time it does not absolve the Eurosystem from its responsibility in maintaining financial stability. When a credit-fueled boom emerges in some member states, it is also the responsibility of the Eurosystem to act. The Eurosystem also has the most powerful toolkit in controlling the macroeconomic consequences of booms and busts.

The recent reforms in the supervisory landscape in the eurozone increase the scope for action by the Eurosystem. As will be remembered, the European Systemic Risk Board (ESRB) was created. Very pointedly, the president of the ECB will also preside over the ESRB. Thus the creators of the ESRB have clearly understood that the ECB is at the center of the monitoring of emerging systemic risks in the eurozone. It would be quite paradoxical that the president of the ESRB (ECB) would emit warning signals about systemic risk and would then not follow-up this warning by action to reduce the risks, leaving it to the national supervisors to act alone.

## **5. Conclusion**

Much of the discussion about how to impose more convergence among member states of the eurozone has focused on what national governments should do to avoid divergent developments in a number of macroeconomic variables (competitiveness, current account imbalances). Without denying that national governments have their part of responsibilities, the role of these governments has been overemphasized. Conversely the role of the monetary authorities, in particular the ECB, has been under-emphasized.

This conclusion is based on the diagnostic of the causes of the present crisis. This is that the divergences between member- states of the eurozone have been driven mainly by what I have called “national animal spirits”, i.e. waves of optimism and pessimism that continue to have a strong national basis in the eurozone. There are as yet no animal spirits gripping the eurozone as a whole. These national animal spirits endogenously trigger credit expansion and contraction, it is this link between credit and animal spirits that make the latter so powerful in shaping movements in output and investment.

It follows that the key to the control of the national divergences in macroeconomic variables lies in the control over the movements of credit at the national level. The key institutions in the eurozone that can influence national credit movements are the monetary authorities, including the ECB.

The official EU-proposals (from the Commission and the Task Force) to deal with national divergences in the eurozone should therefore not concentrate almost exclusively on what governments of the member-states should do, but also on the responsibilities of the Eurozone monetary authorities. Some hard thinking about the role of these monetary authorities will be necessary to come to grips with endemic macroeconomic divergences in the eurozone.

Finally we also stressed that the European Commission's proposals to strengthen the stability and growth pact by adding more sanctions is ill conceived. The fundamental cause of the debt crisis in the eurozone is to be found in the unsustainable expansion of private debt prior to the crisis. The strong expansion of government debt levels in the eurozone started after the financial crisis erupted and was necessary first to save large parts of the private sector and second to prevent a downward spiral in economic activity. The Commission proposals suggest that future governments that intervene to save the private sector should be punished for such wickedness.

## References

- Bauby, P. & Varone, F. (2007): Europeanization of the French electricity policy: four paradoxes, *Journal of European Public Policy*, Vol. 14 Issue 7, pp. 1048-1060.
- Akerlof, G., and Shiller, R. (2009), *Animal Spirits: How Human Psychology Drives the Economy and Why It Matters for Global Capitalism*, Princeton University Press, 264pp.
- Borio C. (2003), Towards a macroprudential framework for financial supervision and regulation?, *CESifo Economic Studies*, vol 49, no 2/2003, pp 181–216.
- Brunnermeier, M., Crockett, A., Goodhart C., Hellwig M., Persaud A. and Shin H. (2009): The fundamental principles of financial regulation, *Geneva Reports on the World Economy 11* (Preliminary Conference Draft).
- Fisher, I. (1933), The Debt-Deflation Theory of Great Depressions, *Econometrica*, 1, October, pp. 337-57.
- Gros, D. and Alcidi, C. (2010), Fiscal Policy Coordination and Competitiveness Surveillance: What solutions to what problems?, 07 September, in *CEPS Policy Briefs*
- Kannan, K., Rabanal, P., and Scott, A. (2009), Macroeconomic Patterns and Monetary Policy in the Run-Up to Asset Price Busts, *IMF Working Paper*, 09, 252
- Leijonhuvud, A. (1973), Effective demand failures. *Swedish Journal of Economics* 75, pp.27-48.
- Minsky, H. (1986), *Stabilizing an Unstable Economy*, McGraw Hill, 395pp.
- White, W. (2006) Procyclicality in the financial system: do we need a new macrofinancial stabilisation framework?, *BIS Working Papers*, no 193, January.
- Wyplosz, C. (2005), Fiscal Policy: Institutions versus Rules, *National Institute Economic Review*, no. 191, January.

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