A Descriptive Assessment of the Effects of Lehman Brothers' Shock on the External Equilibrium in Some Euro Area Countries

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Abstract: The purpose of this article is the assessment of the way in which the propagation of the Lehman-Brothers shock has been reflected on the developments in the balance of payments of some countries in the euro area and the highlighting of the asymmetries, which have emerged due to the generated effects. The motivation is represented by the importance of the asymmetries manifestation within a monetary area, by the effects they have on the implementation of the common policies, and by their causes: are these asymmetries generated by asymmetric macroeconomic shocks or by the accumulation in time of some vulnerable elements in the economy? The paper is a capitalization of the research project "External equilibrium and asymmetric shocks" elaborated in 2012, at "Victor Slăvescu" Centre for Financial and Monetary Research of "Costin C. Kirițescu" Institute for Economic Research, Romanian Academy.

Keywords: asymmetric shock; balance of payments; economic vulnerability; financial crisis

JEL Classification: F15, F36, F41, G01

1. Introduction

At the level of a currency area, the asymmetric shocks issue is important as far as it can lead to imbalances within this area that can cause disagreements and tensions between member states. In a most general model, a monetary area should be "built" so that the process of unification to potentiate its ability to manage the shocks that propagate inside it and to restore the overall balance after any disturbance caused by a shock or by a complex combination of shocks. On the other hand, a monetary

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area should provide to its component economies the support to develop in social-economic terms and also to become and to remain internationally competitive.

In the authors' view, the macroeconomic shock is that impulse generated by an event (a political, economic, social, etc. decision or conflict) with major impact on the economic system by producing in time and space some disturbances of the economic activity (Milea et al., 2012). The effects involved by such a shock are a matter of perspective varied over time, because there is a time lag between the event and the manifestation of the shock through the generated effects. In addition to the propagation of major events, exogenous to the environment analyzed, there is the possibility of endogenous "breaches", due to the environment dependency on certain vulnerable elements that determine "harmful" accumulations in the environment. For example, the economic and financial crises may be caused by "exogenous" shocks or may be the result of the accumulations over time of factors (anomalies) that have the potential to "burst". Usually, the "burst" is a natural way of correcting imbalances created and accumulated in time.

In the second section of the article, there are briefly presented the main views on the importance of asymmetric shocks in generating macroeconomic imbalances within a monetary area. In the third part, the research methodology is described and in the fourth part, it is made an analysis of the effects produced on the balance of payments of the considered countries, taking as reference the Lehman Brothers shock. The article summarizes, in the conclusions section, the main ideas, which are emerging from the research.

2. Literature Review on the Importance of Asymmetric Shocks in Generating Economic Imbalances

As pointed out in other papers (Criste, 2009; 2012), an asymmetric macroeconomic shock is a shock that propagates differently, being relevant only when there are analyzed comparatively several areas or variables of the same type and between which there are transmission channels created based on the development of economic relations. For a currency area, the domains that are compared in terms of shock asymmetry are the Member States, considering that between them there are already strong and consolidated economic and political relations.

The literature on currency areas points out that the incidence of asymmetric macroeconomic shocks in the member countries is a fundamental criterion for evaluating its operation. There are well-known the works of Mundell (1961; 2002), McKinnon (1963) and Kenen (1969), who founded the theory of optimum currency areas and who have considered that an important cause for producing macroeconomic imbalances within a currency area could be the propagation of asymmetric shocks, which are more difficult to manage under a single monetary policy. Mundell (2002) points out that all shocks are considered asymmetric if they affect countries differently and Mélitz (1991) argues that even in circumstances of common or similar shocks, countries may need different policies' reactions because of the lack of synchronization of the economic cycle or because of structural differences.

On the other hand, Zemanek, Belke, Schnabl (2009) note that, at the euro area level, the imbalances did not emerge suddenly after a shock, but had rather gradually accumulated as a consequence of persistent asymmetric wage policies. Chen, Milesi-Ferretti and Tressel (2012) have another view. They consider that at the basis of the accumulation of imbalances in the euro area there is the production in time of three major macroeconomic shocks that have occurred asymmetrically in the analyzed countries - in Germany on the one hand and in the countries of the periphery, on the other hand.

It should however be noted that, in time, through the process of globalization, it has been created a support for the transmission of macroeconomic shocks. Globalization increases the spread of risks in the market, especially if production systems, information networks and social communities (social and economic activity, in general) are vulnerable. Other trends that increase the vulnerability to shocks with global propagation refer to the manifestation of herd behavior, especially in the financial markets; to the increase of income disparity (polarization of society); to the increase of general uncertainty about future political, social and economic developments. Uncertainty hampers and affects the ability to predict, prevent and mitigate the negative effects of shocks.

These findings reinforce the idea that the strengthening of relationships and interdependencies at global level increases the risk of spreading the high amplitude macroeconomic shocks and the regional differences contribute to their asymmetric manifestation.

In our opinion, we believe that macroeconomic imbalances within a currency area, namely the euro area, can accumulate over time, being "encouraged" by the use of a single currency, but also the propagation of asymmetric macroeconomic shocks inside a monetary area maintains and exacerbates political disagreements, while the management tools of such shocks are neither sufficient nor effective.

3. The Research Methodology

The euro area and the European Union countries in general represent an important source of research and of numerous empirical analyses, particularly for the propagation of asymmetric macroeconomic shocks, consisting of countries with economies characterized by a variety of structural, financial and institutional elements (Milea et al., 2012).

In general, a shock propagated asymmetrically in a currency area can be problematic because it creates a risk of a rupture between the member countries, if the national visions regarding the management of the crisis caused by the shock are divergent. Such a phenomenon may represent itself a new shock, that of the dissolution of the currency area or perhaps worse, the deepening of that crisis.

In order to assess the significance of the effects of the macroeconomic shocks propagated in the euro area, we have considered a common macroeconomic shock – the shock of Lehman Brothers's bankruptcy – and we have analyzed comparatively the macroeconomic developments of the balances of payments in some countries of the euro area. In order to reveal asymmetries between countries we have selected countries with different characteristics and different evolutions over time, on the one hand, Germany and on the other hand, Spain, Greece, Portugal.

The comparative analysis is done not only considering the geographical space, between countries, but also in time, before the bankruptcy of Lehman Brothers, in 2008, and after its occurrence.

4. An Assessment of the Lehman Brothers Shock Effects on the External Balance of Some Euro Area Countries

The sovereign debt crisis in the euro area arises from the bankruptcy shock of the Lehman Brothers financial institution, in September 2008, originally propagated through the channel of interbank market, then going toward the financial markets and finally reaching the real economy. The amplification of the distrust of the investors has been sent also in the European Union emerging countries. At this shock, firms and households have responded, among others, by postponing investments and spending. The main features of this period are the increasingly larger concerns of the governments on the recession issue and on the deterioration of global financial stability due to the increase of the risk aversion and the diminishing of the international liquidity.

In general, this shock has led to increased uncertainty causing a qualitative distinction made by investors, by treating differently the debts of the euro area countries, reorienting from the countries with spectacular economic growth (Ireland, Spain and Portugal) toward those who, although they have had slower growth trajectories, have enjoyed a long time macroeconomic stability and an institutional maturity (Germany). Thus, investors have quickly changed preferences regarding risky assets; the demand for low-risk instruments has increased significantly, although the yields on these securities are lower. In search of investment opportunities with low risk in the euro area, the capital migrated to the government securities - considered the safest - especially to the government securities and bank deposits in Germany (Criste, 2012). Such a reaction has deepened the existing differences between countries, and in this respect, the considered macroeconomic shock is an asymmetrical one. Also, investors' behaviour, with consequences in the direction of lowering FDI (foreign direct investments) inflows in the risky countries, has had an impact on adjusting current account deficits (given that FDI is an important source of external deficit coverage). Thus, the countries that have relied on foreign direct investments have suffered a drastic adjustment of the current account deficits as a result of the uncertainty shock.

The vulnerable elements of each country have played an important role in the transmission of macroeconomic shocks and thus in the emergence of the sovereign debt crisis. This results from regional differences, the shocks affecting negatively, in a direct way, those countries that have followed a pattern of unsustainable growth. We refer to those countries which have developed either on speculative bubbles (Ireland, Spain and Portugal) or on excessive government spending, ignoring or "permitting" the unsustainable development of the budgetary balance (Greece).

Following the evolution of the current account balances in the analyzed countries, even prior to the bankruptcy of Lehman Brothers, there was a persistent asymmetry in time, as Chen R., Milesi-Ferretti şi Tressel (2012) remarked. They believe that at the basis of this asymmetry, which may be found also in other countries of the euro area (generally, between the countries of the periphery and the core area of this monetary union), there is the occurrence over time of three major macroeconomic shocks.

Thus, a shock is the "tsunami" of Asian economies, especially of China, which was represented by their economic boom in the '80s and '90s of the twentieth century. Such a shock manifested over time, but very amply, has generated a change in the global trade balance, by the replacement of the goods exported from European countries with Asian goods, much cheaper. However, at the level of the euro area, this shock has manifested asymmetrically by the fact that, on the one hand, it has encouraged the export activity of Germany, specialized on equipment and machineries necessary to the export branches of the Asian economies and on the other hand, it has affected the export activity of the European Union's periphery countries, whose competitiveness has deteriorated.

Another shock that affected asymmetrically the trade balances of the euro area countries is the shock of rising oil prices (in three main stages, from 1973 to 2008) , which has deteriorated the trade balance of the oil-importing countries. However, the countries specialized in the production and export of goods required by oil producers, such as Germany, have continued to benefit from this activity.

The opening of Central and Eastern European countries to the developed countries, especially once it has been accepted the idea of their integration into the European Union structures (the late '90s) represents the third shock. Such an event was manifested by significant FDI flows from Germany and from the exporting capital countries toward these emerging countries. As a result, Germany has enjoyed higher capital efficiency and lower labor costs specific to these economies. In this context, we can say that the shock of Lehman Brothers has occurred onto an already asymmetrical background (see Figure 1).

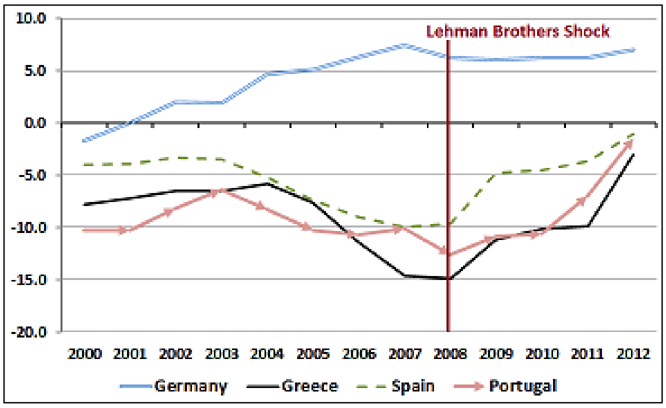

Figure 1. Current Account Developments in Several Euro Area Countries, 2000-2012 (% GDP)

Source: Eurostat Data

The striking asymmetry between the evolution of the current account balance of Germany and of the current account balances of Spain, Portugal or Greece is based on structural factors, but also on functional factors, from the political, economic, social, behavioral and cultural spheres. Thus, in Spain, Portugal or Greece, growth has been based on final consumption and on construction investment projects, which has resulted in a significant increase in imports, which has led to the deterioration of the current account balance. On the opposite side there is Germany, with a trend of stagnation of private consumption and with an export-led growth, as reflected by the surplus in the trade balance, which is a relevant component of the current account of the German balance of payments.

Theoretically, the current account deficit, which is covered by the export-oriented greenfield foreign direct investments, does not create problems in the longer term, while current account deficits that are not accompanied by an increase in investments in the tradable sector would generate a permanent increase in the foreign debt, with undesirable consequences on the medium and long term. Such a phenomenon has occurred in "vulnerable" countries, thus foreign investments mainly being made in the non-tradable sector.

Greece is the only peripheral country in which the investments attracted are close to zero. Hence, the need for capital, unfulfilled by domestic savings, has been covered by external loans. In Greece, the deficit of the incomes account is very large. Spain and Portugal have also large deficits of the incomes accounts, but they have attracted more investments. The deficit of the incomes account of Greece is almost entirely explained by the interest rate payments on the external loans contracted.

Generally, the Lehman Brothers shock has deepened the economic divergences among countries and has exacerbated the vulnerabilities of each country, which has created problems or even imbalances. Thus, Greece, Spain and Portugal have fiscal difficulties, and accumulated current account deficits amplified by the excessive private debts and by the low competitiveness of their economies. Such developments have been stimulated by the protection offered by the euro currency, because the euro project has generated false expectations related to the lower risk of the investments in the monetary area. Investors' expectations were formed on the basis of a period of low macroeconomic volatility (the so-called "Great Moderation"), not taking into account the possibility that an event (a macroeconomic shock) could determine the inability of the Euro Area countries to refinance their own debts. Therefore, they have not made any difference regarding long-term bonds issued by Euro Area governments. This behaviour has generated a specific resource allocation in terms of excessive capital inflows that fuelled strongly the growth based on consumption causing overheating of the economies of Spain, Portugal and Greece. Instead, by the early 2000s, Germany implemented a competitive deflationary policy encouraging export activity.

The relationship, at the economy's level, between the current account of the balance of payments, the government budget balance and the private sector budget balance (aggregated data) shows that the consolidated general budget balance may be an important factor for influencing the current account of the balance of payments. Thus, if the deleveraging of the public sector is not equaled by the net savings (positive) of the private sector, then the difference will be reflected in the current account of the balance of payments as a deficit.

In the period of the transmission of the Lehman Brothers shock (since 2009), the current account deficits adjustments in Spain, Portugal and Greece have been achieved by a quick and visible change in trajectory of the private sector budget, while their public budget deficits have increased significantly during this period, compared with the level before the onset of the financial crisis.

The adjustment of the aggregate private budget does not mean that the private sector savings have increased, but it is rather a reflection of the reduced expenditures and investments in this sector, an idea that is reinforced by the developments of the households' net savings (an important component of the private sector), as a percentage of the disposable income.

The chart below shows that the Lehman Brothers shock spread into the euro area has asymmetrically affected the households' savings. Thus, the net saving for Greece dropped dramatically (as a share of households' disposable income), while in Germany it has remained consistent and positive (see Figure 2).

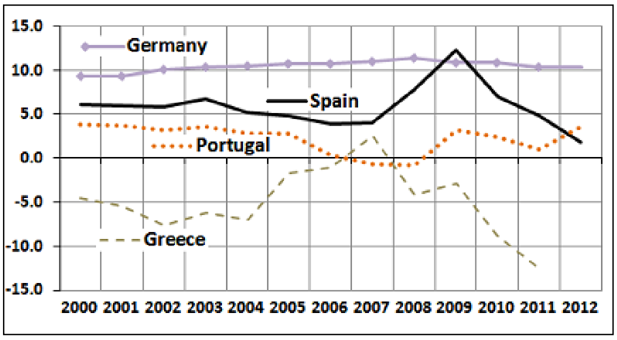

Figure 2. Net Savings of the Households in the Analyzed Countries (% of Disposable Income); Non-Available Data for Greece in 2012

Source: Ameco Data

In Greece, the net savings have been negative, since 2000, with an improvement tendency until 2007. After 2007 (the crisis outbreak) the households net savings have deteriorated even more, with the exception of a short period of time (the second half of 2008, until early 2009) when there was a shortly spurt of this indicator. This evolution can be interpreted as the effect of saving behavior for precautionary purposes. Since 2009, the net savings of households resume more dramatically its decreasing.

The period after 2008 is characterized by a noticeable deterioration of the general government balance, due to the action of the automatic fiscal stabilizers. These developments are a general reflection of the conditions engendered by the global financial and economic crisis, and they are not caused just by a particular shock, that of the Lehman Brothers collapse.

The deterioration of the public finances in Greece has been fuelled both by the excessive government spending and by an insufficient tax collection. In contrast, in Spain, which had a "healthy" fiscal position, recording a significantly budget surplus before the outbreak of the global economic and financial crisis, observing the budget deficit rules could not prevent the economic collapse. This situation is explained by the accumulation of a significant debt by the private sector, debt which has been encouraged by the market conditions created due to the country's accession to the euro area (lower interest rates have stimulated consumption and unproductive investment). The economic crisis has highlighted not only the weaknesses of each economy, but also that an unsustainable economic growth in the long term, based on the strong growth of the real estate and construction, has led to an increase in adverse shock in those countries.

Between 2000 and 2008, Germany's public debt has grown relatively modestly, but with a sharp and relatively consistent increase in 2009, reaching 74, 5% of GDP, according to Eurostat data. In the other surveyed countries public debt has also increased dramatically after the emergence of Lehman Brothers shock, but only Greece has experienced a nearly exponential growth of this indicator, between 2009 and 2011, marking an acceleration of indebtedness amid growing difficulties to tackle the general economic situation and the previously accumulated debts.

The “snowball” effect on public gross debt is an indicator that reflects very clear the asymmetry between the two types of countries chosen, as it refers to the phenomenon of government debt accumulation by increasing expenditures with interest payments, costs that are financed by issuing additional debt. The uncertainty shock, propagated in the financial market, affects the financial relationship of government authorities with other countries, by suddenly increases of interest rates of government bonds of the countries considered risky. They are no longer attractive, as they store a higher risk, so that their price decreases, resulting in the manifestation of risk aversion. Therefore, interest rates paid on the public external loans will increase, adversely affecting the external equilibrium. This excessive indebtedness has negative effects on the productive activity, on the economic development and also on the foreign debt burden. Additionally, obtaining foreign loans becomes more difficult in terms of the constraints imposed by creditors. The graphic that describes the “snowball” effect shows a widening of the disparities, particularly between Germany and Greece, after 2008 (see Figure 3).

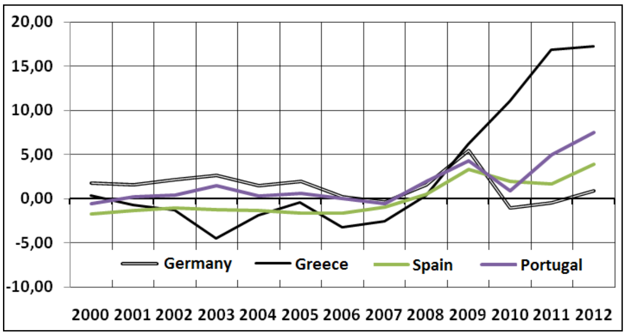

Figure 3. “Snowball” Effect on the Consolidated Gross Public Debt (% GDP at Market Prices)

Source: Ameco Data, according to Excessive Deficit Procedure, Based on ESA 1995

The adjustment of the current account deficit in the surveyed countries depends on the economic structure of each economy. A strongly negative economic situation, as in the Greek case, despite the transient improvement of the current account deficit, cannot support the achievement of an external equilibrium on a sustainable base. Loans from the IMF and the European Commission can contribute to the rebuilding of the Greek economy, and thus to the achievement of the budgetary and external balances of the country, provided that the funds received will be used efficiently, directing them towards productive activities and investments in sectors of tradable goods, and with the purpose of supporting the development of national sectors, those in which Greece has competitive and comparative advantages.

5. Conclusion

In general, an asymmetric shock propagated in a currency area can be problematic since it generates the risk of rupture between countries, if the national visions on the management of the crisis caused by the shock are divergent. Such a phenomenon may represent a new shock itself, that of the currency area dissolution or perhaps worse, that of the crisis worsening and becoming chronic.

At the current account level, the Lehman Brothers shock has developed indirectly through a plurality of chain effects, which initially have caused a significant increase in budget deficits in the context of spectacular indebtedness due to increased state needs to cover “black holes” in the economy, followed by a reduction in budget deficits and net saving in 2011, due to restoring general confidence in the recovery capacity of the economies analyzed. Greece, however, represents a distinct chapter. Thus, despite the current account adjustment following the Lehman Brothers shock effects, the general economic situation reveals a budget deficit still spectacular compared to other euro area countries, an explosive growth of public debt, weak net savings in a continuous deterioration, an uncertain political, social and economic situation. All these vulnerabilities can be a signal for generating of a new asymmetric shock - the shock of the country’s default.

The current account of the balance of payments has the same asymmetry tendency already existing even before 2007, as a result of the external shocks, in terms of financing the deficits in the countries of the periphery by the core of the euro area. This allowed the persistence of imbalances in these countries and the asymmetry between Germany on the one hand and Spain, Portugal and Greece, on the other hand. Due to the uncertainty shock, there was some correction of the current account deficit for the Eurozone periphery countries.

The evolution of the current account balance only highlights the situations of imbalances existing in the economy. This indicator should not prevent us from considering other economic parameters that can point out more accurately the significant problems existing in the economy or those problems between economies, if we realize a global analysis at the Euro Area level or at the European Union level.

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