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THE ROLE OF INSTITUTIONAL AND POLITICAL FACTORS IN THE EUROPEAN DEBT CRISIS

by Carlo Panico and Francesco Purificato[1]

1. Introduction

This paper deals with the causes of the recent sharp increases in the interest rates of the Government securities of some euro countries. These phenomena are disrupting the solvency of some Government sectors, intensifying the distress of financial institutions, enhancing instability, curtailing growth and employment, imposing policies that are undesired by the majority of the population, increasing inequality, triggering social tensions, magnifying conflicts among member States, and undermining the confidence in the European values and institutions. These unfortunate events are referred to as "European debt crisis" and "sovereign or Government debt crisis". Their interpretation is complex because they are affecting economies with different structures and behaviours.[2]

The first country to experience the debt crisis was Greece in April-May 2010. In the subsequent months, Ireland, Portugal, Spain and Italy have been suffering from similar problems, while other euro countries are threatened by these events and the banking system of the whole area, already under stress for the effects of the financial crisis began in 2007, is requiring financial assistance to make up for the fall in the value of securities held in the balance sheets and to avoid a systemic crisis.

Until the end of 2009 the European Monetary Union (EMU) was considered a successful experience and the IMF had been advising the Eastern European countries to look for its protection. Although the literature recognized that the institutional organization required some reforms to improve the cyclical and growth performance of the economies (see Panico and Vazquez, 2008), it judged the

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[2] Some economies (e.g. Ireland) show significant surpluses in the trade and the current account balance, while others (Spain and Portugal) present important deficits in the external accounts. Some (Greece) failed to respect the Stability and Growth Pact, i.e. the fiscal rule adopted by the European Union, while others (Ireland and Spain) have been regarded as virtuous examples of how to deal with fiscal policy. Some (Italy) showed at the beginning of the crisis a high ratio between Government debt and GDP, while for others (Ireland and Spain) the value of this ratio was low. Some (Ireland and Spain) received large capital flows from abroad through the banking system, while others (Italy) didn't.

working of EMU before the financial crisis satisfactory (see European Central Bank, 2008) and considered that it performed efficiently during the financial crisis (see Panico and Purificato, 2010).

A widespread opinion in the news is that the debt crisis has been caused by some previous fallacious behaviour of the Governments of the countries under attack. This view can be found in the media (newspapers, magazines, television debates, blogs, etc.) displaying the rhetoric of economic policy. According to them, the Greek crisis is due to the fallacies of that Government, which allowed public finance to decay, productivity to stagnate and 'wages to soar' (*Economist*, 10-16 July 2010, p. 24).[3]

The scientific literature considers instead that the major cause of the debt crisis is the flawed institutional organisation of the area. The speculative attacks to the Government debts are seen as a consequence of the defective working of the process of coordination between monetary and fiscal policy. This literature focuses on a "moral hazard" problem related to this process, which does not guarantee that the national fiscal authorities do not abuse of the monetary interventions aiming at stabilising the interest rates of the area.

This view is held in different ways, which reflect the positions expressed, before 2007, in the debate on the deficiencies of the process of coordination and on the reforms needed to set it right. With respect to that debate, the debt crisis explicitly introduces the question of the role that the central bank must have to stabilise the interest rates on Government debts in order to preserve the smooth working of the transmission mechanism of monetary policy. The debt crisis, that is, draws attention to the role of "lender of last resort" that the central bank can play in favour of the banking and of the Government sectors.

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[3] For an analysis of these positions, see Panico (2010), which points out that, according to OECD data, labour compensation per hour in Greece grew less than productivity from 1998 to 2007. It rose at an average annual rate of 1.39%, as in France and Mexico, slightly more than in Germany (1.26%), while productivity grew at an average annual rate of 2,21%, higher than that of the OECD countries (1.98%), of France (1.88%) and Germany (1.47%). Moreover, labour compensation per hour in Greece was half that of Germany (52.7%) in 2006. The European Commission's data on public finance provide an argument in favor of the 'faulty management' view. Greece failed to respect the 3% rule of the Stability and Growth Pact (SGP). Yet, owing to the rise in GDP, its ratio Government Debt – GDP decreased from 103.7 of 2001, the year Greece joined the euro area, to 100.3 of 2005, the year of the reform of the SGP. Then, it rose to 105.4 of 2007. These data point out that the Greek authorities are to blame for not respecting the SGP, but that they did not let their finance decay. The major guilt, for which there is no excuse, is that they lied to the other European Governments and authorities by introducing accounting tricks in their balance sheets. Yet, there is no excuse either for the guilt of those who spread through the media untrue news that favor some private groups at the expense of the majority of the citizens.

Some authors claim that the European Central Bank (ECB) must play the role of lender of last resort in favour of the Government sector too. De Grauwe (2009; 2011a; 2011b; 2011c) and Valiante (2011) underline that the absence of these interventions forces the Governments of the euro countries to issue their debt in a currency that they do not control. They are put in the same position as those Latin American countries that were bound to borrow in a foreign currency, the dollar. According to this view, the European debt crisis has the same origin as those that have been severely affecting the Latin American countries since the 1980s and requires for its solution that the ECB act in the same way as the central banks of USA, UK and Japan, which, in the eyes of the markets, are determined to ensure the smooth working of the transmission mechanism of monetary policy by acting as lenders of last resort for both the banking and the Government sectors.

Other economists (Wyplosz, 2010; 2011) appraise this view by arguing that the ECB cannot play the role of lender of last resort in favour of the Government sector unless the process of coordination of monetary and fiscal policy in the area is re-organised in such a way as to guarantee the solution of the "moral hazard" problem related to the behaviour of the national fiscal authorities. This position, which is also held by the ECB (2011, p. 71), has led some authors to propose stabilisation funds for the Government securities markets managed by European entities, different from the central bank.[4]

The relevance of the "moral hazard" problem cannot be denied. Yet, this problem can be solved in different ways, as shown by the debate on the process of coordination between monetary and fiscal policies in the euro area. The content of this debate can contribute to the interpretation of the causes of the debt crisis and to the identification of its solutions.

This is the perspective taken in this paper, whose aim is to highlight how the flaws in the European institutional organization have favoured the crisis. We argue that before 2007 these flaws affected the cyclical and growth performance of the euro countries. After then they have contributed to an intensification of the conflicts among national political bodies and between them and the European authorities. These conflicts have favoured the speculative attacks against some Government debts and exposed the peculiar conditions under which central banking is carried out in the euro area. The conclusion is that the institutional organization of the area must be reformed in such a way as to allow it to effectively pursue the objectives for which it was created, i.e. to protect the economies

[4] See Darvas et al. (2011), Delpla and von Weizsacker (2010), Dubel (2011), Gros (2011), Gros and Mayer (2010; 2011), Hellwig (2011), Kopf (2011), Prodi and Quadrio Curzio (2011), Wihlborg et al. (2010)

and the citizens from the instability of the international financial markets.[5] The reforms must remove, as has been done in monetary policy, the cause of the "moral hazard" problem, i.e. the uncertainty as to the actual conduct of fiscal policy, and transform the current defensive attitudes of the different actors of the coordination process (i.e. the national political authorities and the central bank) into a cooperative and positive search for the most convenient mix of monetary and fiscal policy for the whole area.

The paper is so organised. Section 2 summarises the debate on policy coordination before the crisis of 2007. Section 3 presents a chronology of some selected events regarding the Government debt crisis. Section 4 recalls the content of another debate, held before 2007, on the notion of central bank's independence and underlines the relevance of the conflicts within the governing bodies of ECB and of the uncertainty they left as to the role of lender of last resort in favour of the Government sector for the emergence of the European debt crisis and its solution. Section 5 draws some conclusions.

2. The institutional organization of EMU and the debate on policy coordination before the crisis of 2007.

Before 2007 a debate presented in the literature showed that the existence of uncertainty as to the actual conduct of policies by the different actors is the main source of problems for the process of policy coordination in the euro area.

The EMU is characterised by super-national sovereignty in monetary policy and national sovereignty in fiscal policy. The existence of a single monetary policy (with a uniform interest rate on central bank's swaps over the whole area) makes it necessary to organize a process of coordination between monetary and fiscal policies capable to identify the most convenient policy mix and to avoid that the national political authorities use fiscal policy to give advantages to their voters at the expenses of the voters of the other regions.

The European Union foresee three regimes to coordinate the policies of its member States:

[5] To protect themselves from the instability of the international financial markets the European countries prepared the Barre Report (1969) and the Werner Plan (1970). After the breakdown of the Bretton Woods agreements, they set up the European Monetary Snake (1972), the European Monetary System (1978) and the European Monetary Union in 1999, when a new set of institutions was created to protect the citizens from the damages caused by the international financial speculation.

1. the *soft coordinated regime*, which is applied to social policies, foresees the use of tools (like "dialogue", "multilateral surveillance", "warnings" and "peer reviews") aiming at persuading the member States to behave in what is considered an "appropriate" way;
2. the *hard coordinated regime*, which is applied to fiscal policy, adds to the tools of the soft coordinated regime those aiming at establishing "common rules of behaviour", like the "Stability and Growth Pact" (SGP) and the "Excessive Deficit Procedures" (EDP);
3. the *unified regime*, which is exemplified by the single monetary policy of the euro countries.

The institutional organization of monetary policy foresees the presence of the *European System of Central Banks* (ESCB), composed of the ECB and the National Central Banks (NCB) of the 27 countries belonging to the European Union, and of the *Eurosystem*, composed of the ECB and the NCBs of the 17 countries using the euro. These institutions participate in the identification and implementation of monetary policy in different ways. The Eurosystem, not the ESCB, conducts the monetary policy of the euro area by taking formal decisions and implementing them according to the division of tasks established by the Treaties, which foresee forms of coordination among the ECB and the NCBs with powerful enforcement.[6] In the case of monetary policy the process of coordination is effective because it has been organized in such a way as to remove the uncertainty regarding how the NCBs implement the decisions taken at the European level.

The organization of fiscal policy foresees the presence of the following institutions:

- the *European Commission*, which leads the coordination process among national policies and between monetary and fiscal policies;
- the *Economic and Financial Committee*, which elaborates, with the ECB and the Economic Policy Committee, the analytical basis for the coordination process;
- the *Council of Ministers of the European Union*, whose section called ECOFIN, a political body composed of the Economic and Financial Ministers of the 27 countries of the European Union and of the representatives of the European Commission and the ECB, takes all formal decisions regarding the coordination of fiscal policy;
- the *Eurogroup*, composed of the Economic and Financial Ministers of the 17 EMU countries and of the representatives of the European Commission and the ECB, which has no power on formal decisions regarding coordination and meets every month, before the

[6] For instance, the ECB can replace a NCB in the implementation of a certain policy decision if the behaviour of the latter is not in line with what has been decided by the *Eurosystem*.

meetings of the ECOFIN, to exchange information among participants on the state of their economies and policies.

As can be noticed, there are substantial differences between the institutional organization of monetary and fiscal policy. The roles played by the ESCB and the Eurosystem in monetary policy diverge from those played by the ECOFIN and the Eurogroup in fiscal policy. The Eurosystem takes formal decisions on monetary policy, while the Eurogroup does not take formal decisions on fiscal policies. Moreover, the Eurosystem has considerable power to enhance the cooperative behaviour of the NCBs and to enforce its decisions, while the Eurogroup has hardly any power to enforce cooperative behaviour among the national fiscal authorities (see Panico and Vazquez, 2008). As a result, unlike what happens in monetary policy, in fiscal policy there is uncertainty as to the actual implementation of the decisions taken at super-national level. Any national Government can declare to agree on a fiscal policy stance at the super-national level, but then it can behave differently at home without paying consequences for its deviating behaviour.

According to von Hagen and Mundschenk (2003), the existence of uncertainty on the conduct of the different actors leads to non-cooperative attitudes among national Governments and between them and the monetary authorities. The uncertainty makes the coordination process defective because it leads the actors of the process primarily to defend themselves from the unreliable behaviours of the others, making the search for the most convenient policy for the whole area an empty aspiration.

The defensive stance taken by the actors of the process has several undesired consequences. It engenders that monetary and fiscal policies are conducted as strategic substitutes, rather than as complements (see von Hagen and Mundschenk, 2003 and Wyplosz, 1999; 2005). What's more, it favours the introduction of rigid policy rules, like those contained in the SGP, and hinders the use of policy indicators as reference values, as occurs in monetary policy for the growth of M3, which can flexibly be adapted to the needs of the economies and to the changing conditions of the cycle.

The debate on policy coordination pointed out that the tools aiming at persuading the member States to behave in an "appropriate" way (e.g. the multilateral surveillance) perform satisfactorily (see Fatás and Mihov, 2003 and 2010). They contributed to inducing fiscal discipline among the national authorities during the 1990s, when the Maastricht Treaty fixed the requirements to enter the euro area, and after 1999, when the single monetary policy was introduced. On the contrary, the debate raised several criticisms against the rigid rules of the SGP, which favour the adoption of policies that are pro-cyclical and unable to pay attention to the needs of each economy and to the exploitation of their growth potentials.

The drawbacks of the rigid fiscal rules contained in the SGP emerged during the slow-down of the economy that started in 2001. Several countries failed to comply with the Pact (see Table 1) and had to be sanctioned as prescribed by the Excessive Deficit Procedures (EDP). Yet, the application of these procedures proved difficult and in some cases they were not enforced in the stipulated way.

The cases of the violations of France and Germany are the most relevant. In November 2003 the ECOFIN halted the application of the established procedures against these two countries. This decision induced the European Commission to take legal steps in the European Court of Justice. In 2004, the Court annulled the ECOFIN's decision, but stated that the steps of the EDP are not automatic: even if the Treaties, the SGP and the EDP envisaged them, they are subject to ECOFIN's decisions based on a qualified majority.

The problems that emerged in the management of these cases led to a reform of the SGP and the EDP in March 2005. The reform allowed for more flexible interpretations of the limits on deficits, but was criticized by most economists and the ECB for failing to address the problems identified by the debate on policy coordination (see Calmfors, 2005, pp. 58-70 and Fatás and Mihov, 2010).

There was consensus in the debate on the weaknesses of the coordination process and on the need

- to formulate transparent (i.e. unambiguous) rules,
- to increase flexibility (i.e. to improve the ability of the rules to differentiate among the cyclical conditions and the problems of each economy),
- to strengthen the enforcement in order to enhance cooperative attitudes among the different actors,
- to pay greater attention to financial sustainability, to the avoidance of pro-cyclicality, to the introduction of structural reforms[7], innovation and the formation of physical and human capital.

The debate also showed significant divergences among the positions held by the participants. At the cost of some simplifications, we can distinguish two of them.

[7] The term "structure reforms" is ambiguous. In some works it refers to modifications of the productive structure of the economy. In others it refers to changes in the legislation of the labour market, of the social security and of the provision of social services and public goods.

In line with the views of the New Consensus in Macroeconomics, the first position assumes that the spontaneous operation of market forces efficiently exploits the growth potentials of the economies. Fiscal policy can play a short-run counter-cyclical role, but the inefficiency of the Government sector and the one-sided interests of the political groups are damaging. These views lead the authors holding this position to deny that fiscal policy can play a positive long-run role. They maintain a defensive attitude against Government intervention and ask for restrictions on it, arguing that the growth potentials can be improved by imposing what they call "structural" reforms, i.e. reforms that restrict the provision of labour force's protection, social security, social services and public goods and that remove the legislation curbing the positive effects of private initiative on innovation and the formation of physical and human capital. For these authors the introduction of rules imposing fiscal discipline on national Governments and defending the independence of the central bank and the adoption of an appropriate and prudent monetary policy, like inflation targeting, is what is needed to achieve satisfactory policy outcomes.[8] The reforms they propose focus on the economic content of the SGP and on the enforcement of its rules to effectively impose discipline on national Governments. Their aim is to achieve a satisfactory balance between the need to impose transparent constraints on the national authorities, in order to protect the independence of the ECB, and the need to introduce flexibility in the rule of the SGP, in order to favour the use of counter-cyclical fiscal policies and to pay attention to the introduction of structural reforms and to the financial sustainability of Government policies.[9] Owing to their views on the efficient working of market forces and on the inefficiency of Government interventions, these authors do not consider that the introduction of punitive measures against the regions of the euro area showing disequilibria in international competitiveness and financial sustainability may intensify the unbalances and generate recessive outcomes for the whole area.

The second position proposed in the debate gathers authors with heterogeneous theoretical views, who consider it necessary to modify the institutional organization of the coordination process in order to introduce commitments on policy decisions at national and super-national level, reduce the

[8] See Canzoneri and Diba (1999), Alesina, Blanchard, Gali, Giavazzi and Uhlig (2001), Buti, Eijffinger and Franco (2003; 2005), Calmfors and Corsetti (2003), Beestma and Debrun (2005), Franco, Balassone and Francese (2003).

[9] Calmfors and Corsetti (2003) focussed on pro-cyclicality and proposed "rainy-day funds", which can be established by channelling government surpluses into them during upswing in order to use them during downswing. Blanchard and Giavazzi (2004) focussed on structural reforms and capital formation by proposing to adopt for the cyclically adjusted deficit a "golden rule", which imposes a balance between Government revenues and current expenditure, excluding expenditure on net investment. Calmfors and Corsetti (2003) and Buiter and Grafe (2004) focussed on financial sustainability. The former proposed to differentiate the deficit ceilings imposed to each country on the base of their outstanding debt, the latter to introduce a "Permanent balance rule", which identifies a tax rate that can guarantee a sustainable long-term path for the Government debt.

uncertainty as to the actual conduct of policy by the different actors and favour the adoption of a unified framework for monetary and fiscal policies.[10]

For Wyplosz (2005), the institutional organization of fiscal policy has to resemble that of monetary policy, which, after acknowledging the failure of rigid rules, like that proposed by Friedman on the growth of monetary aggregates, achieved satisfactory results by moving to institutional reforms and central bank independence. Wyplosz proposed to set up independent "Fiscal policy committees" similar to "Monetary policy committees", arguing that they can generate a superior outcome than rigid numerical rules.[11] The committees fix, year after year, the ratio between Government deficit and GDP that each country must respect, taking into account the prevailing cyclical conditions and the specific needs of the economies and having as final objective the long-term sustainability of Government debts.[12] The introduction of independent fiscal agencies makes it possible to pursue policies intervening on structural disequilibria and to avoid the use of punitive measures, which can intensify the unbalances among the regions and generate recessive outcomes for the whole area (see Panico and Vazquez, 2008).

Moving along similar lines, Pisani-Ferry (2002) proposed to transform the Eurogroup into the fiscal agency of the euro area. This suggestion moves the role of the Eurogroup in fiscal policy towards that of the Eurosystem in monetary policy. They both would have the power to take formal decisions in their fields of operation. Yet, to make the institutional organization of fiscal policy correspond to that of monetary policy, it is also necessary that the decisions taken at super-national level by the different Governments are binding when they are implemented at national level.

Dealing with the coordination between monetary and fiscal policy, Wyplosz and Pisani-Ferry touched on the question of central bank independence. Wyplosz avoided the problems implied by this question by stating the ECB may have more confidence in the independent specialists of the fiscal policy committees than in the political authorities and may be more inclined to reach agreements on policy coordination with the former. Pisani-Ferry, instead, raised the question of the

[10] See Wyplosz (1999; 2005), Casella (2001), Pisani-Ferry (2002), von Hagen and Mundschenk (2003), Fatás and Mihov (2003, 2010), Fatás, von Hagen, Hughes Hallett, Strauch and Sibert (2003), Hein and Truger (2006), Panico and Vazquez (2008).

[11] Pisani-Ferry (2002), Fatás and Mihov (2003; 2010) and Fatás, von Hagen, Hughes Hallett, Strauch and Sibert (2003) hold the same position.

[12] The committees do not have to deal with the structure of tax rates and the composition of Government expenditure. These aspects of fiscal policy cannot be delegated to technical, non-elected, bodies and are to be left with political authorities, because they directly affect the distribution of benefits among social groups and have an immediate political content. The long-term sustainability of Government debts, like price stability, can instead be delegated to a technical authority. Both objectives are relevant for the whole society and affect income distribution indirectly, that is through the operation of market mechanisms.

different meanings of central bank independence and of its most convenient content. He recalled the views of De Grauwe (1998) and pointed out that ‘an ECB that would be perceived as the only policy player of the EMU system would risk being held responsible for whatever does not work in the Eurozone – which could only result in a clash with public opinion’ (Pisani-Ferry, 2002, p. 9). His analysis implies that the decisions taken during the coordination process must be binding for all the actors participating in it, including the monetary authorities. Yet, he avoided stating this conclusion explicitly. The attempts of Wyplosz and Pisani-Ferry to leave out the ECB from the limits imposed to the other actors of the coordination process can be seen as a sign of uneasiness in the discussion on the degree and forms of independence attributed to this central bank.

The reform of the process of coordination introduced in March 2005 overlooked the problems raised by this second position and, to solve the case related to the violations of France and Germany and to the quarrel between the European Commission and the ECOFIN, focussed on changing the SGP and the EDP as proposed by the first position in the debate previously outlined. The reform allowed for more flexible interpretations of the limits on deficits, including adjustments for cyclical conditions. Yet, it was criticized by the ECB and by most economists, including those holding the first position, for weakening the enforcement of the coordination process, for making the content of the rules less transparent and for relaxing the rules to such a point as to make them irrelevant (see Calmfors, 2005, pp. 58-70 and Fatás and Mihov, 2010).

The reform caused concerns as to the working of the coordination process, which are summarised by the following passage: ‘What remains unclear is how the new rules, which provide much more room for the interpretation of what constitutes an excessive deficit, will work in the years to come as the euro economies enter a recessionary environment and deficits are likely to be above the established ceiling’ (Fatás and Mihov, 2010, p. 12). Unfortunately, the defective working of the new rules emerged before the crisis of 2007. Some national Governments actually interpreted the new constraints and sanctions in such a way as to make them irrelevant. The centre-right coalition leading the Greek Government in those years let the deficit-GDP ratio rise again, besides deceiving the Greek citizens and the European Governments and authorities by introducing accounting tricks in its balance sheet in order to avoid the negative consequences of the multilateral surveillance on its political consensus at home (see Table 2).

3. A chronology of some selected events regarding the speculative attacks to the European Government debts.

The European debt crisis began in April-May 2010, when the interest rate on the 10-year bonds of the Greek Government and its differential with that of the German Government steeply rose. Before those months there had been some other rises in the differential (see Figure 1). After the failure of the Lehman Brothers, it moved from a monthly average of 0.79 in September 2008 to 2.85 in March 2009, because the long-term bonds of the German Government had been selected as a safe form of investment by a large number of operators,[13] but returned to 1.21 in August 2009. Another upward movement started in October, when the centre-left Government took power and disclosed the accounting tricks of the previous one.[14] The differential went from 1.36 of October 2009 to 1.62 of November, 2.35 of December, 2.76 of January 2010, 3.29 of February and 3.14 of March, while the level of the interest rate on 10-year bonds of the Greek Government reached 6% in January 2010, 6.46% in February and 6.24% in March (see Table 3).

After March 2010 the rise in the interest rate on the Greek Government bonds rocketed. The weekly data reported in Figure 2 show that the upward movement started the last week of March and went on until the week ending on the 10th of May, when it overtook 12%. During the subsequent week it returned below 7%, but began to slowly rise again in the following weeks. According to ECB data, its monthly average level was 10.7% in August 2010, 12% in December and 15.9% in August 2011. In the subsequent months the rise in the interest rate on 10-year bonds further accelerated and reached 25.9% in January 2012.

The upsurge in the interest rate that occurred in April-May 2010 can be associated to the regional elections held in Renania-Westfalia (Germany) on the 9th and 10th of May. The speculative attack to the Greek debt launched in those weeks gambled on the view that the European Governments and authorities would not have reacted to it until the elections had come to an end. That view was correct. In April the scene was dominated by discussions and contradictory declarations, but the central bank did not counter-act the speculative attack and the other European authorities did not

[13] The rise in the differential can be attributed in equal terms to the reduction of the interest rate on the German Government bonds and to the rise on the interest rate on the Greek Government bonds.

[14] On the 2nd of October, as foreseen by the European rules, the Greek Government, led by the centre-right New Democracy Party of Kostas Karamanlis, sent false data on the state of the economy to Eurostat and made pressures on the officers to decline or postpone the invitation of Eurostat to revise them. On the 21st of October, the new elected Government, led by the PanHellenic Socialist Movement of George Papandreou, sent some revised data to Eurostat, but had to make further corrections in the subsequent months.

take any formal decision on the matter. Only on the weekend finishing the 10^{th} of May was an extraordinary ECOFIN's meeting called to deal with the crisis.

After trying without success to persuade the ECB to play a central role in the solution of the problem, some participants in the meeting turned to the proposal of a unique credit line managed by the European Commission and guaranteed by all the member States of the area. Yet, the agreement was reached on a less ambitious resolution, which included an accord for the provision of bilateral loans to the Greece, the launch of an official procedure, called "European Financial Stabilisation Mechanism" (EFSM) and managed by the European Commission, to provide assistance to the member States requiring it, and the institution of a private fund, called "European Financial Stability Facility" (EFSF), endowed with financial resources provided by the national Governments.

The assistance programme approved in those weeks foresaw loans to Greece for 110 billion euros, 10 of which providing financial support to the banking sector. The euro area member States accepted to provide 80 billion euros in bilateral loans in proportion to their shares in the ECB's capital, while the other 30 billion euros had to be provided by the IMF. All loans had to be given in instalments subject to strict conditionality supervised by the European Commission, the ECB and the IMF. To receive the loans the Greek authorities were asked to implement measures enhancing fiscal consolidation and promoting an export-led growth process. The former mainly consist of increases in direct and indirect taxes and reductions in expenditure in the form of public consumption (1.1% of GDP), compensations of Government employees (1.2%) and social transfers (1.7%). The latter consist of so-called "structural" reforms in the labour and product markets of the type suggested by the authors close to the New Consensus in Macroeconomics identified in the previous Section 2. Since the Greek authorities cannot devalue the currency nor increase their expenditure to affect the productive specialisation of the economy, the measures promoting exports necessarily amount to worsening work conditions, impoverishing the workers and raising inequality.

Until February 2012 Greece had received only part of the funds decided in May 2010, i.e. 73 billion euros, of which 52.9 through bilateral lending and 20 by the IMF. The restrictive measures taken by the Government under the pressure of the speculative attacks and the supervision of the European Commission, the ECB and the IMF, brought about street protests, riots and a change of Government in November 2011. What's more, the results of the programme, in terms of reduction of the deficit and stabilisation of the economy, have not been satisfactory. In spite of the restrictive measures, the ratio Government deficit – GDP has not gone down to the expected levels[15] owing to their recessive effects on GDP, whose rate of growth was -3.5% in 2010 and -5.5% in 2011. The expected rate of growth for 2012, identified at 1.1% in May 2010, when the programme was approved, was revised five times during the subsequent months and in October 2011 it had been reduced to -2.8% (see European Commission, 2010b; 2011a).

In addition to the ECOFIN's resolutions, the Governing Council of the ECB adopted, on the 14th of May, the Securities Market Programme (SMP) to restore the working of the transmission mechanism of monetary policy, which had been disrupted by the tensions in the Government securities markets. The Decision ECB/2010/5 represented a drastic change in the philosophy guiding the activity of the Eurosystem, which had always denied the possibility of funding national Governments through the monetary base. It stated that the Eurosystem can buy Government securities in the secondary markets and that these interventions do not contradict the Treaties on the functioning of the European Union and of the Statute of the SECB and the ECB.

The adoption of the SMP was controversial within the ECB and was publicly criticised by the Governor of the Bundesbank (see Weber, 2010). Moreover, it left uncertain the size of the intervention, which had to be decided by subsequent decisions of the Governing Council. The tensions within the central bank and the uncertainty as to its commitment to play the role of lender of last resort contributed to keeping speculation alive and favoured new gradual increases in the interest rates of Government securities.

The resolutions taken by the ECOFIN and the ECB in May 2010 were considered important for reducing in the short run the risk of a major financial crisis, but insufficient to deter the speculative attacks to the Government securities (see Buiter, 2010). They failed to persuade the markets that betting on the fall of the price of Government securities was not convenient anymore and led to new gradual increases in the interest rates in the subsequent weeks.

In October 2010 some other criticisms raised by the ECB and the Eurosystem to the agreements reached within the ECOFIN on a revision of the European fiscal rules further underlined the uneasiness of the central bank on its role in the debt crisis. The criticisms were expressed on the 21st of October by an official statement of the President, Jean Claude Trichet. A few days later (the 25th of October), however, Juergen Stark, the German member of the Executive Council of the ECB,

[15] The ratio between Government deficit and GDP was -10.6% in 2010 and -8.9% in 2011. The levels expected by the authorities were -8% and -7.6%.

returned on the question in an article in the *Financial Times Deutschland*, corroborating the view that this was a relevant issue in the German political debate.

Meanwhile, the crisis spread to other Government securities. In November 2010 the interest rate on the long-term bonds of the Irish Government overtook 8% and showed a further tendency to rise in the subsequent months. Portugal faced the same situation; the interest rate on the long-term bonds of its Government reached 6.9% in November and steadily moved towards 10%, a value overtook in June 2011 with a further tendency to rise. The interest rate on the long-term bonds of the Spanish and Italian Governments also showed a tendency to rise during the following months, although to a more moderate pace.

In December 2010 Ireland asked the activation of the EFSM's procedures and an assistance programme for 85 billion euros, of which 35 were provided for financial support to the banking sector, was approved. The programme was financed through the following contributions: 22.5 billion euros from the EFSM, 17.7 from the EFSF, 22.5 from the IMF, 17.5 from the National Pensions Reserve Fund of the Irish Treasury, 4.8 from bilateral loans from UK, Sweden, and Denmark. It was subject to strict conditionality. The Irish Government was asked to implement a fiscal consolidation plan of 15 billion euros by means of a decrease in current expenditure (7 billion, i.e. 4.5% of GDP) and in capital expenditure (3 billion, 3.2% of GDP) and an increase in tax revenues (5 billion). Moreover, the Government was asked to encourage export-led growth by enhancing competitiveness in labour and product markets. In Ireland too, the restrictive measures proposed by the programme had recessive effects and the rate of growth of GDP was -0.4% in 2010 and -1.1% in 2011. The expected growth rate for 2012 was 1.9% at the starting of the programme, but it was revised and reduced to 1% in Autumn 2011 (see European Commission, 2011b; 2011c).

In the subsequent months, under the pressure of intensified speculative attacks, the European Governments and authorities were bound to take new measures. The ECOFIN's meeting of the 16th and 17th December 2010 resolved to make the stabilisation fund permanent, thus accepting what had been proposed without success in previous meetings, and took the decisions to set up a new inter-governmental institution, the European Stability Mechanism (ESM), to re-organise the interventions by replacing the EFSM, the EFSF and the bilateral loans.[16] To implement this decision, on the 25th

[16] It is uncertain whether the European authorities will decide to allow the EFSF to continue to work and to add its financial resources (440 billion euros) to those of the new ESM (500 billion euros), or they will decide to allow the EFSF to continue to operate only to manage the loans it has already conceded.

of March 2011, the European Council[17] emended Art. 136 of the Treaty on the functioning of the European Union as follows:

> The Member States whose currency is the euro may establish a stability mechanism to be activated if indispensable to safeguard the stability of the euro area as a whole. The granting of any required financial assistance under the mechanism will be made subject to strict conditionality.

The ESM has not yet been established because the Treaties require that the Parliaments of the euro countries must ratify this amendment, a procedure that takes time to be carried out.

During the meeting of the Council of Europe of March 2011, the European authorities also decided to increase the guarantees and the lending capacity of the EFSF and to put on the agenda of subsequent meetings the strengthening of the European fiscal rules and the rise in the amount of conditional loans to be provided to Greece.

Meanwhile the ECB and the Eurosystem were showing low activism in the Government securities markets. According to Valiante (2011), even after the 14th of May 2010, they bought limited amounts of Government bonds and held in their balance sheets a lower percentage of these assets than the Federal Reserve and the Bank of England.[18]

In May 2011, Portugal had to ask the activation of the EFSM's procedures and an assistance programme for 78 billion euros, of which 12 were provided for financial support to the banking sector, was approved. The programme was financed through the following contributions: 26 billion euros from the EFSM, 26 from the EFSF, 26 from the IMF. This programme too was subject to strict conditionality. The Portuguese Government was asked to implement a fiscal consolidation plan essentially consisting of cuts in administrative operating costs (0.6% of GDP), in public health expenditure (0.5%), social transfers (0.5%), wage payments (0.5%), and investments (0.5%). The usual "structural" (or competitiveness) reforms in the labour and product markets were also required in order to promote export-led growth. In Portugal too, the restrictive measures proposed by the programme had recessive effects and the rate of growth of GDP was 1.4% in 2010 and -1.6%

[17] The European Council composed by the Heads of State or Government of the member States of the European Union, by its President and by the President of the European Commission, defines the general political direction and priorities of the European Union.

[18] As Valiante (2011) shows, at the end of the first quarter of 2011, Government securities represented 5.45% of the total assets of the Eurosystem balance sheets, most of which had been sitting in the balance sheets since the inception of the euro. They represented 11.25% of the total assets of the Federal Reserve and 17.71% of total assets of the Bank of England.

in 2011. The expected growth rate for 2012 was estimated at -1.8% in May 2011 and at -3.5% in Autumn 2011 (see European Commission, 2011d; 2011e).

In July 2011, speculative attacks against the securities of the Italian Government raised their interest rates, which reached 5.5%. Some restrictive fiscal measures had to be adopted by the Italian fiscal authorities in July and August.

In September 2011, the resignation of Juergen Stark, the German member of the Executive Council, again betrayed the existence of conflicts among national interests within the ECB. These conflicts, according to the principles inspiring the organisation of the Eurosystem and the Treaties of the Union, should not affect the members of the Governing Council of the ECB, whose decisions must not reflect the national interests, but those of the whole area.[19] The resignation increased the uncertainty as to the role of lender of last resort and caused a fall in the European stock and exchange markets and a further acceleration in the interest rates on Government securities.

In November 2011, the interest rate on the long-term bonds of the Italian Government reached 7.1% and a new Cabinet set in to cope with the situation. In December, the new Government took other restrictive measures under the pressure of the speculative attacks.

On the 8th of December 2011 the ECB implemented its Governing Council's decision to introduce two additional "non-standard" measures, in the form of extraordinary long-term refinancing operations at fixed rate tender and full allotment, for the banks of the euro area. The maturity of the loans was three years and the interest rate 1%. The first operation provided over 489 billion euros to credit institutions. The second operation took place on the 29th of February 2012 and provided the credit institutions with about 530 billion euros. Jens Weidman, Governor of Bundesbank, raised some criticisms to these measures in a letter to Mario Draghi, Governor of the ECB, made public by the *Frankfurter Allgemeine Zeitung* on the 29th of February 2012. The decision to publish the letter in a national newspaper signals the intention to introduce external pressures in the debate within the ECB by appealing to national interests in conflict with others.

[19] Art. 7 of the Statute of the SEBC and the ECB states: "In accordance with Article 130 of the Treaty on the Functioning of the European Union, when exercising the powers and carrying out the tasks and duties conferred upon them by the Treaties and this Statute, neither the ECB, nor a national central bank, nor any member of their decision-making bodies shall seek or take instructions from Union institutions, bodies, offices or agencies, from any government of a Member State or from any other body."

Finally, in March 2012, the European authorities must define the details of the second assistance programme to Greece and the future of the EFSF. The second assistance programme is expected to amount to 230 billion euros. A part of them, 100 billion euros, will be provided by the private sector through a 53.5% "haircut" of the nominal value of the Greek Government securities held in their balance sheets. The euro area Member States and the IMF will provide loans for the remaining 130 billion euros.

4. Lender of last resort, central bank independence and the cost of the debt crisis

The events described in the previous section support the interpretation of the Government debt crisis in terms of the faulty institutional organization of the euro area and underline the relevance of the conflicts within the ECB on the role of lender of last resort in favour of the Government sector. The uncertainty caused by the faulty institutional organization has favoured the speculative attacks and, according to Valiante (2011, p. 4), the transmission mechanism of monetary policy will not return to normal working unless the Eurozone institutions make clear that they are ready to deploy all their resources, including a thoroughly played role of lender of last resort by the central bank, to make the markets believe that they are firmly determined to stabilize the Government securities markets.

During the ECOFIN's meetings the question of the forms of independence enjoyed by the ECB entered the discussion among the European and national authorities on the solutions to be adopted and there were unsuccessful attempts to persuade the ECB to play a more active role in stabilising the interest rates on Government securities in order to normalise the working of the transmission mechanism of monetary policy and defend the citizens from the speculative attacks.

The ECB and a large part of the literature have justified the absence of a lender of last resort in favour of the Government sector in the euro area in terms of the "moral hazard" problem related to the behaviour of the national Governments under the existing institutional organization of the process of coordination between monetary and fiscal policies (see Section 2). For some authors, close to the positions of the "New Consensus in Macroeconomics", the defence of the current characterisation of the ECB independence is an essential ingredient of the efficient working of the coordination process.[20] Others, instead, recognize that the efficient working of the coordination process requires that the decisions on coordination taken at the European level must be binding for all the actors, including the ECB, and consider that the current characterisation of the independence enjoyed by the ECB may be a source of problems for the area.[21] For some of the latter, the degree and forms of independence attributed to the ECB must not limit its role of lender of last resort in favour of the Government.[22] Others, instead, have avoided intervening on this point in their reform proposals.[23]

To further clarify this point let's recall that the specialised literature distinguishes several forms of independence that a central bank can enjoy:[24]

- *financial independence*, which aims at endowing the authorities with some capacity to resist the pressures of political and economic groups, depends on the norms and procedures regulating the revenues of the central bank;
- *personnel independence*, which has the same function as financial independence, depends on the norms and procedures regulating the appointment and dismissal of the monetary authorities, the earnings and the career development of their staff during and after the term of service;
- *technical independence* is the power of central banks to decide discretionarily the tools to use and the intensity of their interventions;
- *money issue independence* refers to the ability of central banks to control the different channels through which the monetary base comes in circulation;
- *goal independence* is the power of central banks to define the level of the objective-variables of economic policy (e.g., the rate of inflation to be achieved);
- *priority independence* is the power of central banks to define the order of priority over the different policy objectives (e.g., the relative importance to be attributed to inflation and unemployment in policy decisions).

[20] See Canzoneri and Diba (1999), Alesina, Blanchard, Gali, Giavazzi and Uhlig (2001), Buti, Eijffinger and Franco (2003; 2005), Calmfors and Corsetti (2003), Blanchard and Giavazzi (2004), Beestma and Debrun (2005), Franco, Balassone and Francese (2003).

[21] See De Grauwe (1998, 2009; 2011a; 2011b; 2011c), Pisani-Ferry (2002), Valiante (2011).

[22] See De Grauwe (1998, 2009; 2011a; 2011b; 2011c), Valiante (2011).

[23] See Pisani-Ferry (2002) and Wyplosz (2005).

[24] See Debelle and Fischer (1994), de Haan (1997), de Haan and Kooi (1997), Bernanke and Mishkin (1997), Stiglitz (1998), Panico and Rizza (2004).

Like other central banks, the ECB enjoys a high degree of financial, personnel and technical independence. With respect to goal, priority and money issue independence, there are some differences between the ECB and the other central banks.

In several countries the powers to take the most important decisions for the life of a society, like identifying the rate of inflation to be achieved and the relative importance to be attributed to inflation and unemployment, are not entrusted to the central banks, but to democratically elected bodies, moving from the idea that they can learn the preferences of the voters through the electoral mechanisms. The 1990s reforms of the central banks in England and Sweden maintain this standpoint, whereas the Treaties of the European Union endow the ECB with goal and priority independence.

What is however particularly important for the problems examined in this paper is the fact that the ECB enjoys a higher degree of money issue independence than other central banks. Unlike what happens in other countries, the Treaties and the Statute of the ESCB and the ECB forbid the direct funding of national Governments through the issue of monetary base.[25] They thus endow the ECB with greater ability than other central banks to control the channel reserved to the Government sector, through which the monetary base comes in circulation. In line with this prohibition, unlike the open market operations of other central banks, those of the ECB are not carried out in Government securities, but in central bank's swaps. Moreover, if the prohibition is interpreted in an extensive way, as is also suggested by the "no bailout clause" of the SGP[26], the role of lender of last resort in favour of the Government sector is forsaken.

The Decision ECB/2010/5, taken by the Governing Council of the ECB on the 14th of May 2010, contradicts the view that within the euro area any form of funding of the Government sector is

[25] Panico and Rizza (2004) point out that the power to control the domestic channels of base money issue, in particular that used to finance the Government sector, has been strengthening in most countries since the mid-1970s. The external channel, by contrast, has eluded the control of central banks on account of the liberalisation of international capital movements. The existence of these two opposite tendencies is the result of the dominance of positions favouring economic liberalism and the consequent tendency to reduce the role of the State in the economy. On the one hand, it is believed that reducing the influence of democratically elected bodies on monetary decisions can increase the effectiveness of monetary policy. On the other, it is believed that it is possible to rely on the spontaneous working of market forces, including the speculative movements on international financial markets, to increase the rate of growth of the economy and social welfare.

[26] The SGP is based on four prohibitions: 1. The national Governments cannot be bailed out by euro area interventions; the ratio between Government debt and GDP must not be greater than 60%; the ratio between *actual* Government deficit and GDP must not be greater than 3%; the ratio between the *cyclically adjusted* Government deficit and GDP must be close to zero. See Panico and Vazquez (2008).

prohibited. It points out that the Eurosystem can buy Government securities in the secondary markets without infringing the Treaties of the Union.

The fact that the Governing Council of the ECB felt it necessary to take this Decision and the delay with which the ECB adopted it, when the speculative attack leading to the unsustainable increases in the interest rates was launched for first time against the Greek Government securities, testify to the conflicts within its governing bodies and the uncertainty regarding its intention to play the role of lender of last resort in favour of the Government sector. Given its consistency with the contents of the Treaties, the ECB could have acted in line with the Decision already in April 2010. At that time, the total value of the Greek Government debt was around 270 billion euros and it is reasonable to assume that it was sufficient for the ECB to purchase during those weeks a percentage of it to persuade the markets that the European institutions were determined to stabilise the interest rates and normalise the transmission mechanism of monetary policy.

To avoid the negative consequences of the speculative attacks outlined in the previous Sections, it was thus necessary at the time to spend a sum that is small, when we compared it with the approximately 1,000 billion euros extraordinary three-year loans at an interest rate of 1%, that the ECB granted on the 8th of December 2011 and on the 29th of February 2012 to the euro area’s credit institutions, with the funds activated by the assistance programmes of the EFMS, and with the losses in GDP, employment and growth, which have been caused by the restrictive policies that the European Commission, the ECB and the IMF have imposed to the countries under attack. The sum to be spend in April 2010 to counter-act the speculative attack appears even smaller if we consider that the imposition of policies, undesired by the majority of the population, is seriously interfering with the working of democracy and with the respectfulness of the international relations that has characterised the history of regional integration in Europe since the 2nd world war. Moreover, it is increasing inequality, triggering social conflicts at unprecedented levels, magnifying frictions among member States, and undermining the confidence in the European values and institutions.

The moral hazard problems as to the behaviour of the involved actors emerge when the central bank plays the role of lender of last resort in favour of both the banking and the Government sector. Yet, they have only been mentioned to curtail the ECB’s intervention in favour of the Government sector, in spite of the fact that, during the last two decades, the moral hazard problems posed by the behaviour of the Government sector have proved easier to solve than those posed by the behaviour of the banking sector. As the literature has pointed out, the rules on multilateral surveillance have worked more effectively than those on financial regulation. The former have been able to induce some discipline in the behaviour of the national Governments, while the latter have failed to induce prudent behaviours among the managers of the financial firms. In the face of this evidence, it is difficult to understand why the ECB does not eliminate, by way of consistent actions in the securities markets, the uncertainty that surrounds its behaviour, as it did in the credit markets when the financial crisis manifested itself on the 9th of August 2007 and after the break down of the Lehman Brothers (for the details of the timely actions taken by the ECB during these events, see Panico and Purificato, 2010).

The need to protect the central bank from the inefficient working of the current institutional organization of the process of coordination of monetary and fiscal policies must not be underplayed. Yet, technical solutions to improve policy coordination without having to turn down the stabilisation of the markets, the smooth working of transmission mechanism of monetary policy and the protection of the citizens are available. They can produce better results than the punitive measures implemented until now.

5. Conclusions

In the euro area the existence of elements of uncertainty as to the actual behaviour of the actors of the process of coordination between monetary and fiscal policies is a major source of problems. It incentives non-cooperative attitudes among national Governments and the ECB, which lead to a defensive approach to coordination and make the search of the most convenient policy solution for the whole area an empty aspiration.

This faulty institutional organization of the coordination process affected the cyclical and growth performance of the euro area before the financial crisis of 2007. In the subsequent years it has intensified the conflicts of national interests, which, contrary to the principles that have inspired the organization of the Eurosystem and the Treaties of the Union, have manifested themselves in the central bank too.

When in April-May 2010 speculative attacks against the securities of some Governments of the euro area started, these conflicts paralysed the central bank, as occurred during the Wall Street crisis of 1929, and favoured speculation. The governing bodies of the ECB failed to act in favour of the

Government sector as firmly and consistency as it did in favour of the banking sector on the 9th of August 2007, when the financial crisis first manifested itself, and after September 2008, when the Lehman Brothers went bankrupt.

The governing bodies of the ECB still resist acting as lender of last resort in favour of the Government sector, arguing that the central bank cannot play this role unless the moral hazard problems regarding the behaviour of the national fiscal authorities is solved. They disregard that moral hazard problems also affect the behaviour of the managers of financial firms and that in the last decades, as the literature has pointed out, the technical solutions available to solve these problems have proved more effective in inducing discipline within the Government sector than within the banking sector.

The costs of uncertainty in the coordination process and in the ECB's response to speculative attacks have been huge for the economies and the citizens. Yet, in spite of the unsatisfactory outcomes in terms of stabilisation of Government finance, of the recession affecting the economies and the disrupting effects in terms of democracy, respectfulness in international relations, inequality, social tensions, conflicts among member States and confidence in the European values and institutions, the European Governments and authorities, trapped by the defensive approach outlined above, still propose punitive measures similar to those that the Washington Consensus and the IMF imposed to Latin American countries in the 1980s and the 1990s.

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Statistical appendix

Table 1 - Ratio between Government deficits and GDP in some euro countries
(share of GDP and average value)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	1999-2007
Ireland	2,7	4,7	0,9	-0,4	0,4	1,4	1,7	2,9	0,1	1,6
Greece	-3,1	-3,7	-4,5	-4,8	-5,7	-7,6	-5,5	-5,7	-6,5	-5,8
Spain	-1,2	-0,9	-0,5	-0,2	-0,3	-0,1	1,3	2,4	1,9	0,2
Italy	-2,0	-0,8	-3,1	-3,1	-3,6	-3,5	-4,4	-3,4	-1,6	-2,9
Portugal	-2,7	-2,9	-4,3	-2,9	-3,0	-3,4	-5,9	-4,1	-3,1	-3,6
Germany	-1,6	1,1	-3,1	-3,8	-4,2	-3,8	-3,3	-1,6	0,2	-2,2
France	-1,8	-1,5	-1,6	-3,3	-4,1	-3,6	-2,9	-2,3	-2,7	-2,7
Euro area[1]	-1,5	-0,1	-2,0	-2,7	-3,1	-2,9	-2,5	-1,4	-0,7	-1,9

Source: Dataset AMECO

Note: (1) UEM to 17 countries.

Table 2 - Ratio between Government deficits and GDP in Greece, revisions
(share of GDP)

	2005	2006	2007	2008	2009
April 2009	5,1	2,8	3,6	5,0	3,7
October 02, 2009	5,1	2,9	3,6	5,6	…
October 21, 2009	5,1	2,9	3,7	7,7	12,7
January 2012	5,5	5,7	6,5	9,8	15,8

Source: April 2009 and October 2009 (2005-2008), see European Commission (2010a); April 2009 and October 2009 (2009), see European Commission (2010b); January 2012 see database AMECO.

Table 3a - Secondary market yields of some European countries government bond with maturities of close to ten years, absolute value

(percentages per annum; period averages)

	Ire	*Gr*	*Spa*	*It*	*Po*	*De*	*Fra*		*Ire*	*Gr*	*Spa*	*It*	*Po*	*De*	*Fra*
2008 Jan	*4,3*	*4,4*	*4,2*	*4,4*	*4,3*	*4,0*	*4,2*	***2010 Jan***	*4,8*	*6,0*	*4,0*	*4,1*	*4,2*	*3,3*	*3,5*
Feb	*4,2*	*4,4*	*4,2*	*4,4*	*4,3*	*4,0*	*4,1*	***Feb***	*4,7*	*6,5*	*4,0*	*4,1*	*4,6*	*3,2*	*3,5*
Mar	*4,2*	*4,4*	*4,1*	*4,4*	*4,4*	*3,8*	*4,0*	***Mar***	*4,5*	*6,2*	*3,8*	*4,0*	*4,3*	*3,1*	*3,4*
Apr	*4,4*	*4,5*	*4,3*	*4,5*	*4,5*	*4,0*	*4,3*	***Apr***	*4,8*	*7,8*	*3,9*	*4,0*	*4,8*	*3,1*	*3,4*
May	*4,6*	*4,7*	*4,4*	*4,7*	*4,6*	*4,2*	*4,4*	***May***	*4,9*	*8,0*	*4,1*	*4,0*	*5,0*	*2,7*	*3,1*
Jun	*4,9*	*5,2*	*4,8*	*5,1*	*5,0*	*4,5*	*4,7*	***Jun***	*5,3*	*9,1*	*4,6*	*4,1*	*5,5*	*2,5*	*3,1*
Jul	*4,9*	*5,2*	*4,8*	*5,1*	*5,0*	*4,5*	*4,7*	***Jul***	*5,3*	*10,3*	*4,4*	*4,0*	*5,5*	*2,6*	*3,0*
Aug	*4,6*	*4,9*	*4,6*	*4,8*	*4,7*	*4,2*	*4,4*	***Aug***	*5,3*	*10,7*	*4,0*	*3,8*	*5,3*	*2,4*	*2,7*
Sep	*4,6*	*4,9*	*4,6*	*4,8*	*4,7*	*4,1*	*4,4*	***Sep***	*6,1*	*11,3*	*4,1*	*3,9*	*6,1*	*2,3*	*2,7*
Oct	*4,6*	*4,9*	*4,5*	*4,8*	*4,6*	*3,9*	*4,2*	***Oct***	*6,4*	*9,6*	*4,0*	*3,8*	*6,1*	*2,4*	*2,7*
Nov	*4,6*	*5,1*	*4,2*	*4,7*	*4,4*	*3,6*	*4,0*	***Nov***	*8,2*	*11,5*	*4,7*	*4,2*	*6,9*	*2,5*	*3,0*
Dec	*4,6*	*5,1*	*3,9*	*4,5*	*4,0*	*3,1*	*3,5*	***Dec***	*8,5*	*12,0*	*5,4*	*4,6*	*6,5*	*2,9*	*3,3*
2009 Jan	*5,2*	*5,6*	*4,2*	*4,6*	*4,3*	*3,1*	*3,6*	***2011 Jan***	*8,8*	*11,7*	*5,4*	*4,7*	*7,0*	*3,0*	*3,4*
Feb	*5,7*	*5,7*	*4,2*	*4,5*	*4,5*	*3,1*	*3,7*	***Feb***	*9,1*	*11,4*	*5,3*	*4,7*	*7,3*	*3,2*	*3,6*
Mar	*5,8*	*5,9*	*4,1*	*4,5*	*4,7*	*3,0*	*3,7*	***Mar***	*9,7*	*12,4*	*5,3*	*4,9*	*7,8*	*3,2*	*3,6*
Apr	*5,3*	*5,5*	*4,0*	*4,4*	*4,5*	*3,1*	*3,7*	***Apr***	*9,8*	*13,9*	*5,3*	*4,8*	*9,2*	*3,3*	*3,7*
May	*5,3*	*5,2*	*4,1*	*4,4*	*4,3*	*3,4*	*3,8*	***May***	*10,6*	*15,9*	*5,3*	*4,8*	*9,6*	*3,1*	*3,5*
Jun	*5,7*	*5,3*	*4,3*	*4,6*	*4,5*	*3,5*	*3,9*	***Jun***	*11,4*	*16,7*	*5,5*	*4,8*	*10,9*	*2,9*	*3,4*
Jul	*5,5*	*4,9*	*4,0*	*4,4*	*4,3*	*3,3*	*3,7*	***Jul***	*12,5*	*16,2*	*5,8*	*5,5*	*12,2*	*2,7*	*3,4*
Aug	*4,9*	*4,5*	*3,8*	*4,1*	*4,0*	*3,3*	*3,6*	***Aug***	*9,6*	*15,9*	*5,3*	*5,3*	*10,9*	*2,2*	*3,0*
Sep	*4,9*	*4,6*	*3,8*	*4,1*	*3,9*	*3,3*	*3,6*	***Sep***	*8,5*	*17,8*	*5,2*	*5,8*	*11,3*	*1,8*	*2,6*
Oct	*4,8*	*4,6*	*3,8*	*4,1*	*3,9*	*3,2*	*3,6*	***Oct***	*8,1*	*18,0*	*5,3*	*6,0*	*11,7*	*2,0*	*3,0*
Nov	*4,8*	*4,8*	*3,8*	*4,1*	*3,8*	*3,2*	*3,6*	***Nov***	*8,5*	*17,9*	*6,2*	*7,1*	*11,9*	*1,9*	*3,4*
Dec	*4,9*	*5,5*	*3,8*	*4,0*	*3,9*	*3,1*	*3,5*	***Dec***	*8,7*	*21,1*	*5,5*	*6,8*	*13,1*	*1,9*	*3,2*
								2012 Jan	*7,7*	*25,9*	*5,4*	*6,5*	*13,9*	*1,8*	*3,2*

Source: ECB database

Table 3b - Secondary market yields of some European countries government bond with maturities of close to ten years, differential with Germany

(percentages per annum; period averages)

	Ire	Gr	Spa	It	Po	Fra		Ire	Gr	Spa	It	Po	Fra
2008 Jan	0,2	0,4	0,1	0,4	0,3	0,1	**2010 Jan**	1,6	2,8	0,7	0,8	0,9	0,3
Feb	0,3	0,4	0,2	0,4	0,3	0,1	**Feb**	1,6	3,3	0,8	0,9	1,4	0,3
Mar	0,4	0,6	0,3	0,6	0,6	0,2	**Mar**	1,4	3,1	0,7	0,9	1,2	0,3
Apr	0,4	0,5	0,3	0,5	0,5	0,2	**Apr**	1,7	4,8	0,8	0,9	1,7	0,3
May	0,4	0,5	0,2	0,5	0,4	0,2	**May**	2,1	5,2	1,4	1,3	2,3	0,4
Jun	0,4	0,7	0,3	0,6	0,4	0,2	**Jun**	2,8	6,6	2,0	1,6	3,0	0,5
Jul	0,4	0,7	0,3	0,6	0,5	0,2	**Jul**	2,7	7,7	1,8	1,4	2,9	0,4
Aug	0,4	0,7	0,4	0,6	0,5	0,2	**Aug**	3,0	8,4	1,7	1,5	3,0	0,3
Sep	0,5	0,8	0,5	0,7	0,6	0,3	**Sep**	3,8	9,0	1,8	1,6	3,8	0,4
Oct	0,7	1,1	0,6	0,9	0,7	0,3	**Oct**	4,1	7,2	1,7	1,5	3,7	0,4
Nov	1,0	1,5	0,6	1,2	0,8	0,4	**Nov**	5,7	9,0	2,2	1,7	4,4	0,5
Dec	1,5	2,0	0,8	1,4	1,0	0,5	**Dec**	5,5	9,1	2,5	1,7	3,6	0,4
2009 Jan	2,1	2,5	1,1	1,6	1,3	0,5	**2011 Jan**	5,7	8,7	2,4	1,7	3,9	0,4
Feb	2,5	2,6	1,1	1,4	1,4	0,6	**Feb**	5,9	8,2	2,1	1,5	4,1	0,4
Mar	2,7	2,9	1,0	1,4	1,7	0,6	**Mar**	6,5	9,2	2,0	1,7	4,6	0,4
Apr	2,2	2,4	0,9	1,2	1,4	0,5	**Apr**	6,5	10,5	2,0	1,5	5,9	0,4
May	1,9	1,9	0,7	1,1	0,9	0,4	**May**	7,6	12,9	2,3	1,7	6,6	0,4
Jun	2,3	1,9	0,8	1,1	1,0	0,4	**Jun**	8,5	13,8	2,6	1,9	8,0	0,5
Jul	2,1	1,6	0,7	1,0	0,9	0,4	**Jul**	9,7	13,4	3,1	2,7	9,4	0,7
Aug	1,6	1,2	0,5	0,8	0,6	0,3	**Aug**	7,4	13,7	3,0	3,1	8,7	0,8
Sep	1,7	1,3	0,6	0,8	0,7	0,3	**Sep**	6,7	16,0	3,4	3,9	9,5	0,8
Oct	1,6	1,4	0,6	0,9	0,6	0,4	**Oct**	6,1	16,0	3,3	4,0	9,7	1,0
Nov	1,6	1,6	0,6	0,8	0,6	0,3	**Nov**	6,6	16,1	4,3	5,2	10,0	1,5
Dec	1,7	2,4	0,7	0,9	0,8	0,3	**Dec**	6,8	19,2	3,6	4,9	11,2	1,2
							2012 Jan	5,9	24,1	3,6	4,7	12,0	1,4

Source: ECB database

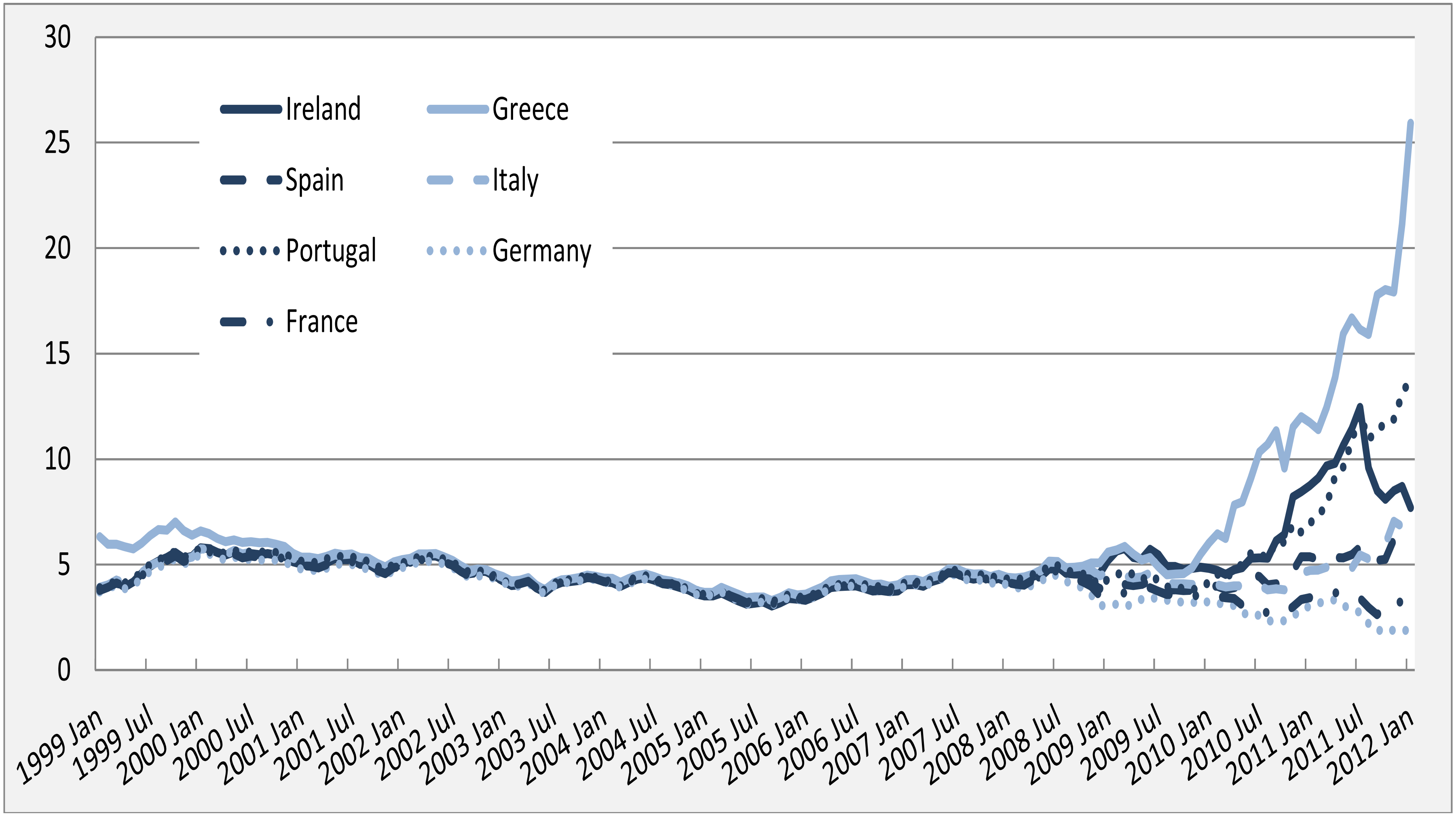

Figure 1 – Secondary market yields of some European government bonds with maturities of close to ten years (January 1999 – January 2012). Monthly data.
Source: Elaborations on ECB database

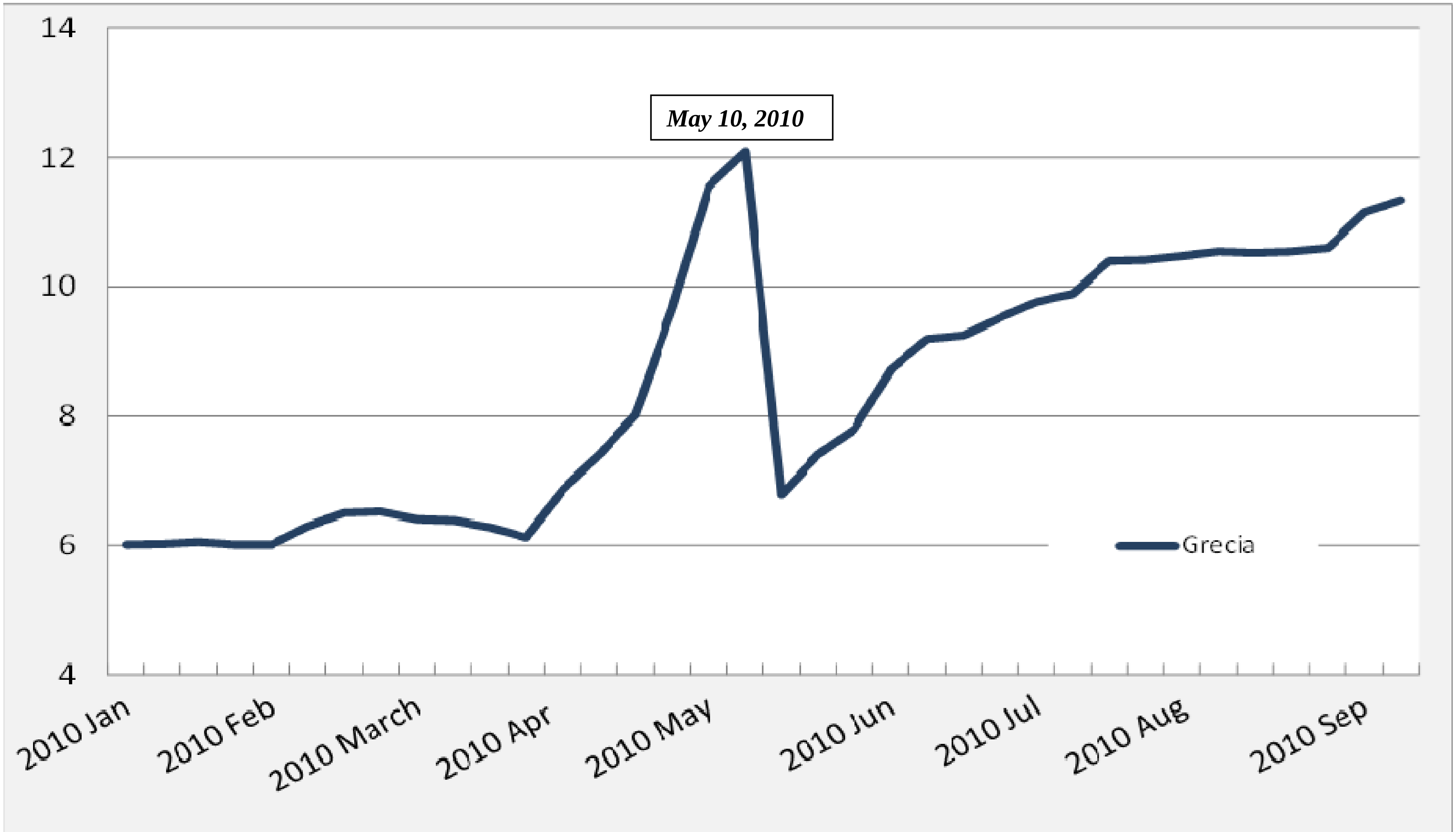

Figure 2 - Secondary market yields of Greek government bonds with maturities of close to ten years (January– September 2010). Weekly data

Source: Buiter (2010)