Suggestions to Solve the Euro Crisis

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Abstract

The project of a common currency in the European Union has been without a precedent in world history. Although the Economic and Monetary Union is not considered to be an optimum currency area until today, its creation resulted in numerous benefits for its member states. Imbalances within the euro zone however increased in the last years and became evident during the global financial crisis in 2008. The European sovereign debt crisis followed one year later, starting in Greece and gradually affecting many countries of the euro area.

This study evaluates mechanisms and measures implemented in the course of the crisis. The contributions in the subsequent chapters focus on three selected solutions to the crisis, namely the European Stability Mechanism, Eurobonds, and withdrawal from the EMU. Finally, the authors discuss their own possible solution. On the whole, the paper reached a positive conclusion with regards to established measures to solve the crisis. Debt brakes should be included into the national constitutions of each euro member state. Additionally, national councils and a European council should be established to monitor if debt brakes are followed and to impose sanctions if necessary. Nevertheless, while EU and euro zone leaders have established several instruments to solve the crisis, its resolution will need further steps to result in a successful functioning of EMU.

Keywords: Euro crisis, European Monetary Union, sovereign risk, Stability and Growth Pact, public deficits and debt, banks

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List of Abbreviations

CAC	-	Collective Action Clause
EBA	-	European Banking Authority
ECB	-	European Central Bank
EFSF	-	European Financial Stability Facility
EFSM	-	European Financial Stability Mechanism
EMU	-	European Economic and Monetary Union
ESM	-	European Stability Mechanism
ESRB	-	European Systemic Risk Board
GIIPS	-	Greece, Ireland, Italy, Portugal, Spain
HICP	-	Harmonised Index of Consumer Prices
IMF	-	International Monetary Fund
OCA	-	Optimum Currency Area
SGP	-	Stability and Growth Pact
TFEU	-	Treaty on the Functioning of the European Union

1. Introduction

This section serves the purpose of providing the background of this working paper. After the objectives are described, the structure of the paper as well as its limitations will be presented.

1.1. Rationale of the Topic

The creation of the European Economic and Monetary Union (EMU)[1] in 1999 marked a milestone in the history of the European Union. Its elaborated policy framework based on a centralized monetary policy and fiscal policies remaining at national levels presented a promising start for the eleven founding countries. Although never seen as an optimum currency area, the monetary union provided its members with significant benefits, especially those countries that were characterized by lagging economies before the advent of a common currency. The global financial crisis 2007/2008, that turned into the European sovereign debt crisis in 2009, however, put an abrupt end to the period of loose budget constraints and constant capital flows from the core to peripheral countries in the euro zone (CESifo Group, 2011). It became clear that the euro area architecture as it was intended to function failed to identify and tackle arising problems and thus was not able to prevent a crisis in the EMU.

The European sovereign debt crisis does not only refer to immense sovereign debt levels, it involves a sequence of specific crises and thus is not monolithic (Kolb, 2011). Although its causes can be traced back to fiscal indiscipline of almost all euro zone members and economic imbalances that led to large competitiveness differences in the EMU, the crisis gradually took on financial, economic and political dimensions. While Greece faced immense government debt levels, the sovereign debt crisis came together with real-estate and banking crises in Ireland and Spain (Hellwig, 2011). In order to save the EMU project from failing, crisis resolution produced a series of austerity packages, new instruments and bailouts ranging from ad-hoc short-term solutions to permanent long-term mechanisms. Whereas these efforts were a step into the right directions, they were not sufficient to restore calm in financial markets and to bring the crisis to a definitive end. Numerous proposals are still the focus of discussion among politicians, economists, and academics.

The European sovereign debt crisis is the first crisis of such dimension happening in the euro zone. Given the fact that the heads of states and governments of the European

[1] The terms European Economic and Monetary Union and European Monetary Union are used interchangeably

Monetary Union face a decision of principle – cooperate or accept the failure of a common currency experiment – this study will critically depict and evaluate suggested solutions to the euro crisis and make a own suggestion to solve the crisis.

1.2. Goals and Objectives of the Study

The general goals of the paper consist in assessing suggested solutions to solve the Euro crisis. Subsequently, based on the evaluation of different suggestions to solve the crisis, the authors will establish own theoretical solution for the crisis. Several objectives that are identified to achieve these aims are:

- Define the causes of the crisis and describe its development.
- Describe and evaluate measurements already taken to solve the crisis.
- Collect, describe and evaluate various solutions suggested to solve the euro crisis.
- Develop an own possible solution.

1.3. Structure of the Working Paper

In order to achieve the described objectives the paper is based on four chapters. The first chapter serves the purpose of describing the development of the European sovereign debt crisis. After identifying the origins of the crisis, already established measures aimed at resolution will also be presented and evaluated in this part. Chapter 2 depicts three solution proposals – the ESM, Eurobonds and withdrawal from EMU – which are described and evaluated. Based on these proposals and already taken measures, the authors will outline what strategy could help to solve the crisis from their point of view in Chapter 3. The last section will finally summarize the findings of the thesis resulting in a conclusion.

1.4. Limitations of the Study

The euro crisis and its resolution are the subject of many studies and is still highly topical. The abundance of existing literature indicates the multi-faceted and complex nature of this topic that is accompanied by numerous opinions and views. Given that the paper is limited in terms of time and scope, not all aspects of the euro crisis and its solution can be considered. Thus, special focus is put on aspects which are relevant in terms of understanding the crisis and the proposals for the solutions, including an own solution provided by the authors. In terms of the time span the authors consider developments and current issues until December 1st, 2011. Developments after this date will find no consideration in this paper.

2. The European Sovereign Debt Crisis

This chapter will first define the term “euro crisis” and consequently will focus on the causes of the European sovereign debt crisis, its development and the measures taken so far. It will conclude with an evaluation of the instruments and action already implemented to solve the euro crisis.

2.1. The Term “Euro Crisis”

The term “euro crisis” is interchangeably used with the term European sovereign debt crisis and euro zone crisis and refers to the crisis of the euro zone that started in October 2009. The term “euro crisis” is often criticized to be inadequate, as the euro does not play a direct role in its function as a common currency. Although technically not appropriate, the term euro crisis will be used throughout the thesis to keep a general understanding.

2.2. Development of the Euro Crisis

The extent and the impact of the European sovereign debt crisis stand in sharp contrast to the economic size of the peripheral euro area members. The GDP of Greece amounted to 2.5% of the whole euro area, while Ireland and Portugal represented just 1.7% and 1.9% respectively in 2010 (The Economist, 2011). At this point, the question arises how such small economies could endanger the whole European economy and thus how could a fiscal crisis in a small economy like Greece mutate to an EMU crisis.

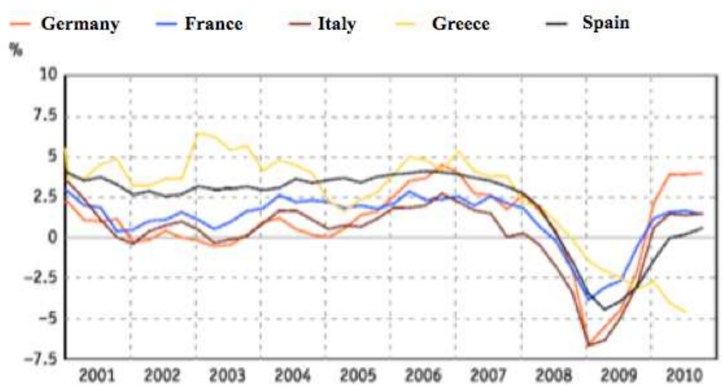
The euro crisis is usually said to be caused by sovereign debt problems (Dadush & Stancil, 2010). Taking a closer look at developments that paved the way for the crisis it becomes obvious that not only fiscal profligacy of certain euro zone members played an essential role – the euro crisis is not a passing malaise, it has deeper underlying roots. Its roots can be found in a “misallocation of resources among (...) countries” (Dadush & Stancil, 2010, p. 9), financial and economic interconnection and a resulting competitive gap that came to light with the economic downturn.

2.2.1. The growing gap between the euro zone members

The common European capital market opened doors to new and enriching possibilities for its members by demolishing barriers between European capital markets and implicitly creating confidence against default risks. The adoption of the euro led to decreased and more converged interest rates (Alesina & Giavazzi, 2010). Due to a common monetary policy governments, corporations as well as individuals were suddenly given the possibility to borrow money at relatively low cost in countries with high inflation (e.g. Greece, Portugal and Spain), thus creating high demand for investment in these countries (Howells & Bain, 2008, p. 509). The contrary was observed in low-inflation countries like Germany, where investments remained at low level. This resulted in immense capital flows from the core to the peripheral euro zone member states, particularly to GIPS[2] countries (Gros & Alcidi, 2011). Consequently, the investment boom lead to high private and public indebtedness and deteriorated current account balances accompanied by creation of real estate bubbles in certain euro zone member states (e.g. Spain).

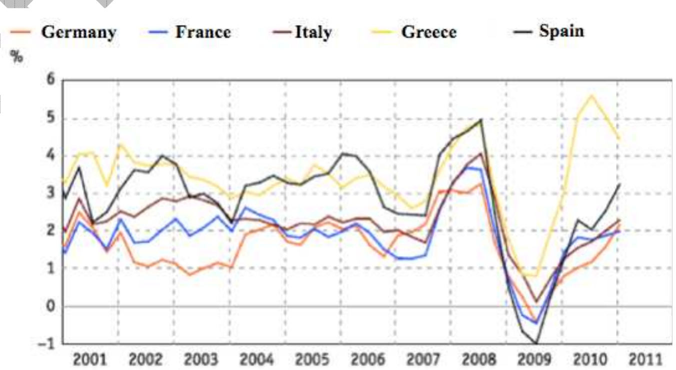
The following figures demonstrate the diverse GDP growth and inflation levels for selected countries of the EMU.

Figure 1 – GDP Growth: Changes in GDP as Compared with Previous Year



Source: Eisenhut (2011)

Figure 2 – Inflation: Changes in Consumer Price Index as Compared with Previous Year)



Source: Eisenhut (2011)

[2] Greece, Ireland, Portugal, Spain

High inflation countries furthermore experienced an increase of wages and prices at above-average pace (Higgins & Klitgaard, 2011). Still, this increase has not been compensated through an improvement in labor productivity and thus led to an increase in unit labor costs in the concerned member states. As visualized by table 2 below, unit labor costs rose sharply in Greece and Spain, while core euro zone members experienced a relatively slow growth. Indeed, Greek unit labor costs increased by about 29% in eight years, while in Germany unit labor costs displayed an increase by 2.3 % (ECB, 2008b, p. 70).

Table 1 – Unit labor costs: Total Economy. Growth Rates Across Euro Area Countries.

(annual percentage changes)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	Cumulative growth 1999 - 2007
Euro area	0.9	1.1	2.3	2.3	2.1	0.8	1.1	1.0	1.5	14.0
Belgium	1.3	0.3	4.2	2.1	0.7	-0.3	1.5	1.6	2.0	14.2
Germany	0.5	0.7	0.9	0.9	1.0	0.0	-0.8	-1.0	0.2	2.3
Ireland	0.6	3.4	4.4	0.8	3.9	5.1	3.7	3.1	4.2	33.0
Greece [1]			2.5	6.0	2.4	1.8	3.7	4.6	4.4	28.3
Spain	1.9	2.8	3.2	2.9	2.9	2.4	2.5	2.3	2.7	26.4
France	0.9	1.1	2.3	2.9	1.8	1.1	1.7	1.9	2.3	17.2
Italy	1.2	0.6	3.1	3.6	4.4	2.1	2.8	2.3	1.5	23.7
Luxembourg	0.7	2.5	6.5	2.2	1.9	1.3	1.7	2.2	3.4	24.7
The Netherlands	1.7	2.9	5.0	4.8	2.7	0.2	-0.2	1.1	1.6	21.7
Austria	0.1	-0.2	1.0	1.0	0.8	-0.3	1.4	0.7	1.2	5.9
Portugal	2.4	4.9	5.2	3.7	3.2	1.2	2.0	1.8	0.4	27.6
Finland	0.8	1.0	3.5	1.1	1.1	0.2	2.3	-0.2	1.1	11.6

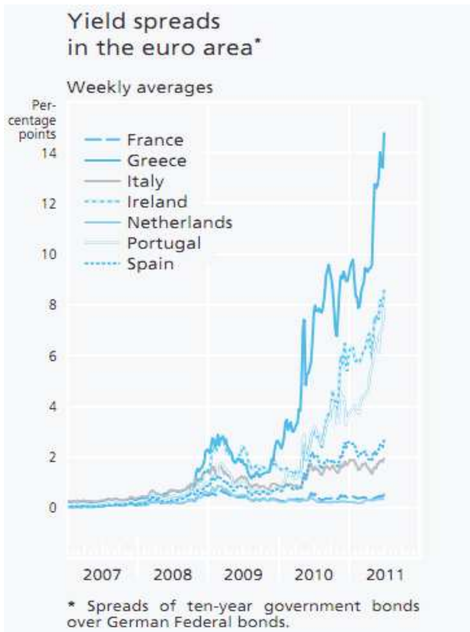
Source: European Commission.
Note: The table shows data for the years since the introduction of the euro in the respective country.
1) In the case of Greece, the cumulative unit labour cost growth refers to the period 2001-07. Calculations by the Bank of Greece may differ from those shown in this table.

Source: ECB (2008b)

Through strongly contrasting developments, the EMU saw a dramatic discrepancy in competitiveness among its members. Greece, which experienced the most extreme decline in interest and inflation rates, saw a sustained growth over a period of time. The problem behind its growth was that it was backed by strong investments. The global financial crisis shed light on the fiscal deterioration of euro zone's peripheral countries (Favaro et al. 2011, p. 228). States that financed their debt continuously through credits saw the capital flows dry up quickly, leaving the countries with deficit and public debt levels far beyond the Maastricht criteria.

In October 2009, Greece revealed that it had falsified and manipulated its balance sheets for years, hiding its high budget deficits. This announcement hit the financial market, resulting in a sudden loss of investor confidence in Greek debt sustainability. In December 2009, the rating agencies Fitch and Standard & Poor's downgraded Greece from A- to BBB+ (Smith & Seager, 2009, para. 3). On April 28th, 2010, intra-day interest rate for 2-year government bonds from Greece reached record levels of 38% (CESifo, 2011, p. 71). Extremely unstable capital markets, fomenting deep mistrust towards the creditworthiness of the GIPS countries, have followed this event.

Figure 3 – Interest Rate Spreads for 10-year Government Bonds in the Euro Area



Source: Deutsche Bundesbank (2011)

Since the evolvement of the sovereign debt crisis, various measures have been implemented. Nevertheless, investors still demonstrate mistrust. Facing the possibility of write-downs on Greek, Italian, Spanish and Portuguese government bonds, investors project their concerns onto the market as can be observed in Figure 3 (Evans & Friedman, para. 4, 2011).

2.2.2. The Failure of the Stability and Growth Pact

The Stability and Growth Pact, a contract established in 1997 among the members of the euro zone, prescribes the requirements for budget deficit and governmental debt limits. The purpose of SGP is to enhance the fiscal coordination in the euro area without threatening the national sovereignty in relation to tax policy and thus the creation of the national budget. A major problem with the EMU stability and growth pact was the enforcement of the rules.

Table 2 and 3 below present some figures for selected countries that demonstrate the development of debt and deficit ratios from 1997 to 2010. The tables show that none of the selected countries could reduce their debt and deficit levels in this period. Due to the fact that Germany and France form the most important parts of the EU, the violation casted a shadow on the two states and SGP came under critical discussions (Breuss, 2007). These facts lead to a reform of the SGP with a special focus on the 3% deficit criteria in 2005.

The modification resulted in more exceptions to the rules, making them more flexible but simultaneously letting sanctions fade into the background (Farina and Tamborini, 2008). Indeed, the European Commission has never imposed sanctions against one of the EMU members. Certainly, financial crisis left its marks and during a severe recession, it is legal to have deficits due to additional expenditures and deficiencies in receipts. This has also been defined in the Stability and Growth Pact[3]. Nevertheless, during the "good" times prior to the financial crisis, it would have been necessary to limit the debt level or to decrease it through budget surpluses. Unfortunately, the political will was absent for both the core and peripheral countries of the euro zone. This is where the fundamental shortcoming of the SGP is apparent: the established sanction mechanism was not pursued consequently enough in practice to ensure fiscal discipline in the euro zone. In the crisis, both mechanisms embedded in the SGP have failed due to lacking political will for enforcement.

Table 2 – Debt and Deficit Levels for Selected Countries in 2001

Country	Debt as % of GDP	Deficit as % of GDP
	60.0	**3.0**
France	56.4	1.5
Germany	60.8	3.1
Greece	100.3	4.5
Ireland	33.5	0.9
Italy	107.3	3.1
Portugal	55.8	4.3
Spain	57.9	0.5

Source: Authors' compilation from Eurostat data (2011a)

[3] Resolution of the European Council on the Stability and Growth Pact (1997), pp. 1–2.

Table 3 – Debt and Deficit Levels for Selected Countries in 2010

Country	Debt as % of GDP	Deficit as % of GDP
	60.0	**3.0**
France	81.7	7.0
Germany	83.2	3.3
Greece	142.8	10.5
Ireland	96.2	32.4
Italy	119	4.6
Portugal	93.0	9.1
Spain	60.1	9.2

Source: Authors' compilation from Eurostat data (2011b)

2.2.3. Banking system exposure

The interconnectedness of the euro zone countries has not only been realized through intense trade among its members and the political nature of the project. The EMU is further characterized by extensive and diverse financial interdependence and integration in which banks play a special role[4]. This interconnectedness is crucial point to explain why Greece fiscal crisis could not be left to the country and needed urgent assistance from euro zone leaders.

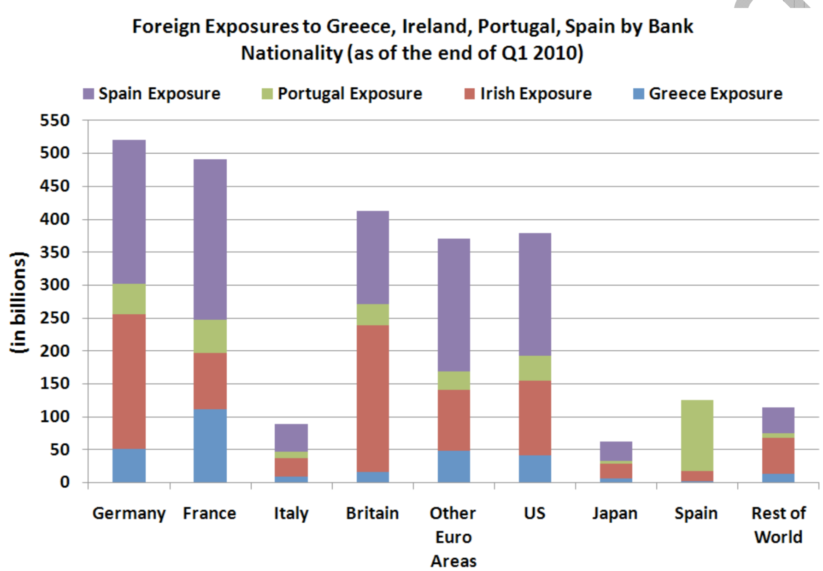
Arguably, the crisis has been (inter alia) a result of fiscal profligacy and a lack of discipline especially in peripheral euro zone countries. Nevertheless, a further important cause for the European sovereign debt crisis can also be found in the banking system (Blundell-Wignall & Slovnic, 2011). The extensive interdependence not only among banks (interbank market) but also among systemically relevant banks and states presents a significant area for reforms and improvement. An important regulation framework in the banking sector is provided by the Basel system.

The Basel system requires banks to meet minimum requirements for its equity. The Tier 1 (core capital) ratio considers the sum of risk-weighted assets in the bank's balance sheet (Gup, 2011, p. 192). While risk weights for company loans lie at 0.5 and 0.2 for interbank lending, governmental bonds are considered risk-free, thus resulting in zero risk weight (Sayer, 2011). Bank's lending operation concerning governmental debts thus was neither regulated nor had it any constraints resulting in the absence of any reserves as equity backing. Exceptions for badly rated countries applied only for governments outside the Europe. Even in case of Greece, which never enjoyed an AAA rating, no equity

[4] See Appendix A for the debt and banking crises logic.

capital requirements have been set until the crisis. The absence of constraints allowed banks to leverage their loans to governments at significant levels. In recent years, European banks' exposure to sovereign debt of the GIPS countries increased significantly. When the crisis emerged, the question arose in how far banking systems of countries exposed to the European debt crisis were actually put at risk by the large write-off losses on government bonds. In its report about global financial stability from September 2011, the IMF emphasized this contagion effect of the sovereign debt crisis on European banking sector by putting a special focus on French banks whose exposure to Italian and Greek bonds is very high and which thus are faced with a possible consequence of a liquidity crisis (IMF, 2011a). Figure 4 provides a visual demonstration of national banks' exposures to Greece, Ireland, Portugal, and Spain. While France holds the largest amount of Greek debt, Germany is highly exposed to Irish and Spanish debts.

Figure 4 – Bank Exposure as of the End of Q1 2010



Source: BIS Quarterly Review September 2010

After reviewing the causes of the European sovereign debt crisis, it becomes visible that euro zone countries were entering the sovereign debt crisis with high debt levels due to the absence of fiscal discipline and the prior global financial crisis, current account imbalances of the peripheral euro zone members were largely financed by core members' banking sector, and banks in the European area were overleveraged (Baldwin & Gros, 2010, pp. 10-14).

2.3. Measures to Solve the Euro Crisis

Since the beginning of the crisis, financial assistance has been provided to Greece, Ireland, and Portugal. The ECB Securities Market Program amounted to 207 billion euro in December 2011, including purchases of Irish, Greek, Portuguese, Italian, and Spanish bonds (Neuger & Kennedy, 2011). Furthermore, the crisis encompassed political dimensions visualized by governmental changes in Greece, Ireland, Portugal, and Italy.

The fast pace and the impact of the sovereign debt crisis put European leaders and institutions under enormous pressure that was felt through inconclusiveness at various debt crisis summits and meetings as well as long debates and decision-making processes. Ultimately, the efforts translated into a package of numerous measures. The following table provides an overview of the most important steps taken to resolve the crisis from April 12th, 2010 until December 1st, 2011.

Table 4 – Chronology of the Sovereign Debt Crisis April 2010 to December 2011

April 11th, 2010	First rescue package for **Greece** 110 billion euro: 80 billion euro from euro zone countries (Germany: 22.4 billion euro), 30 billion euro from the IMF.
May 9th, 2010	**ECB** begins buying governmental bonds through the "Securities Market Program".
May 10th, 2010	**Rescue package:** 750 billion euro to secure stability within the euro area (440 billion euro from EFSF; 250 billion euro from IMF; 60 billion guarantees from EFSM).
June 7th, 2010	Establishment of the **European Financial Stability Facility (EFSF)**.
November 28th, 2010	Agreement of a financial assistance program for **Ireland** (85 billion euro) beginning January 25th, 2011.
December 16th, 2010	Establishment of the **European Systemic Risk Board** (ESRB) to oversee risk in the financial and banking sectors.
January 1st, 2011	Establishment of the **European Banking Authority** (EBA) to ensure common regulatory and supervisory standards across the EU.

March 11th, 2011	**Euro Plus Pact**: 24 member states sign the Pact excluding UK, Denmark, the Czech Republic and Hungary.
March 24th, 2011	Creation of the **ESM** as a permanent crisis mechanism.
May 17th, 2011	Agreement of financial assistance program for **Portugal** (78 billion euro) to implement on June 15th, 2011.
June 20th, 2011	Agreement by euro zone and EU finance ministers to increase **EFSF's** effective capacity, widen its scope of mandate and to finalize the terms of the permanent stability mechanism, the European Stability Mechanism (**ESM**).
June 22nd, 2011	**EFSF's** second issue for Portugal.
July 21st, 2011	**Euro Summit** • Second support package for **Greece** including private sector involvement and increased scope for EFSF/ESM • **EFSF** guarantee framework extended to €780 billion
August, 2011	**ECB** continues its SMP by intervening the sovereign debt markets of Italy and Spain.
September 28th, 2011	Parliament approves the **Six-Pack**
October 18th, 2011	Amended **EFSF** enters into force.
October 26th, 2011	**Euro Summit** • Nominal discount ("haircut") of 50% on notional **Greek** debt held by private investors to be discussed in 2012 • Increase capital to 9% **Core Tier 1** by end June 2012 • Expansion of **EFSF** scope to raise its lending capacity through leverage
November 1st, 2011	**ECB**: Mario Draghi follows Jean-Claude Trichet as the new president of the European Central Bank.

November 10th, 2011	**EFSF**: Payment of 3 billion euro to Ireland.
November 16th, 2011	**Council and European Parliament:** Signing of the Six-Pack.

Source: Authors' compilation

The following section focus on some major measures taken so far along three perspectives: financial assistance, economic governance, and financial and banking regulations.

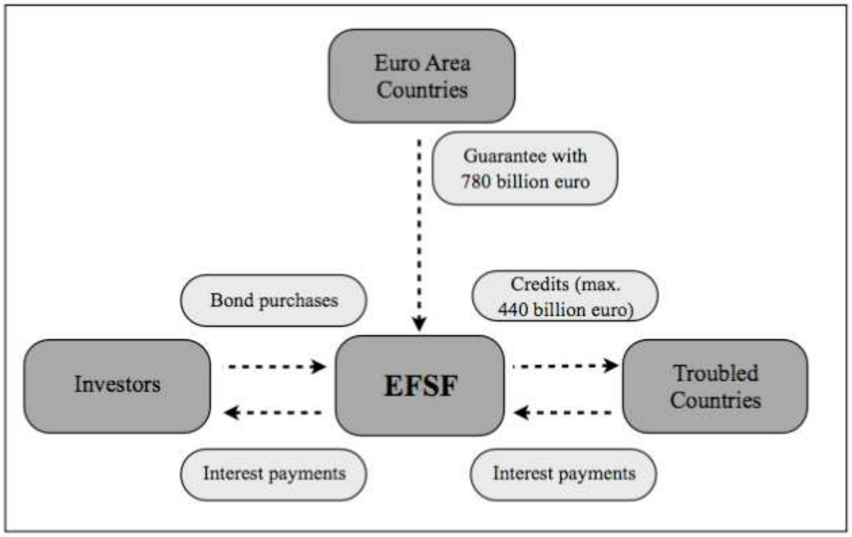
2.3.1. Financial assistance

EFSF – European Financial Stability Facility. EFSF was agreed by euro zone member states on May 9th, 2010 and finally established on June 7th, 2010. The European Financial Stability Facility is a special purpose entity, which is owned by euro area member states and is incorporated in Luxembourg (EFSF, 2011). The EFSF is headed by Klaus Regling[5].

The prime aim of EFSF is to safeguard financial stability by providing temporary financial assistance to the members of euro zone. For this purpose the EFSF issues bonds or other debt instruments on the capital markets. EFSF guarantee commitments are backed by the 17 euro area member states and amount to a total of 780 billion euro which corresponds to a lending capacity of 440 billion euro (EFSF, 2011). The EFSF includes further credit facilities including 250 billion euro from the IMF and 60 billion euro from the EFSM.

[5] Klaus Regling is a former Director-General for economic and financial affairs at the European Commission.

Figure 6 – EFSF Functioning Mechanism



Source: Authors' compilation

Loans of the EFSF rank pari passu with private bonds. EFSF is thus affected to the same extent as private creditors with regard to restructuring decisions. The EFSF is allowed to intervene in the primary as well as in the secondary market. Furthermore, it is able to provide loans to finance recapitalization of financial institutions. EFSF presents a temporary mechanism and will be liquidated after June 30th, 2013 as soon as all outstanding debt has been repaid. After June 30th, 2013, the EFSF will be given a permanent character in form of the European Stability Mechanism, which will be discussed in Chapter 3.1.

On November 29th, 2011 the finance ministers of the euro zone agreed to extend the EFSF capacities through leverage. The leverage will be made possible through the introduction of partial risk participation and a co-investment approach including the private sector as demonstrated in Appendix B (EFSF, 2011). Still, so far investors' response was not as positive as expected.

EFSM – European Financial Stability Mechanism. This mechanism applies to all 27 members of the European Union and is administered by the European Commission. Its lending capacity amounts to 60 billion euro (European Commission, 2011a). The EFSM is a temporary mechanism which will expire in 2013.

2.3.2. Economic governance

Euro Plus Pact. The Euro Plus Pact became effective in March 2011. Its purpose is to foster competitiveness, enhance sustainability of public finances, reinforce financial stability, and harmonize basic areas of economy thus promoting convergence, for instance, in tax policies, labor unit costs, and social systems (European Council, 2011a). The aims will be achieved by annual measures to reduce current account and macroeconomic imbalances. Although all participating member states should follow these objectives, the Pact is not binding. Heads of states and governments of the member states will monitor the implementation based on a report provided by the Commission.

Six-pack. One step towards more budget discipline and reinforcement of economic governance has been made with the establishment of the so-called Six-Pack. Incorporated in six legislative proposals on economic governance, the establishment of the Six-Pack is the major reform of the Stability and Growth Pact since the advent of the euro. The objectives of the Six-Pack are to (a) ensure fiscal sustainability through stronger preventive and corrective arm; and (b) reduce macroeconomic imbalances and promote competitiveness (European Parliament, 2011a). While four of the six proposals focus on strengthening the rules of the Stability and Growth Pact, the remaining two rules aim at controlling macroeconomic imbalances within the EU.

European Semester. Euro zone countries agreed on the European Semester seeking to enhance budget issues by reviewing national budgetary and structural policies during their preparation phase, aiming at "strengthening European provisions on economic governance." (European Council, 2011b, para.5). The European Semester has already been implemented for the first time in 2011.

2.3.3. Banking sector regulations

European Banking Authority (EBA): The European Banking Authority was established on January 1st, 2011. It acts as a regularity agency to conduct stress tests of banks, investigates capital requirements in terms of credit risk, market risk, operational risk, fund, and capital adequacy ratios (EBA, 2011a).

European Systemic Risk Board (ESRB): The European Systemic Risk Board was established on December 16th, 2010. It is an independent EU body, which is responsible for financial system oversight within the European Union. Its purpose is to prevent systemic risks incurring within the financial system of the European Union (ESBR, 2011).

Basel III. G20 leaders agreed on a new Basel III system at their meeting in Seoul in November 2010 to be implemented in 2013. Basel III requires banks to hold equity in relation to the sum of their risk-weighted assets as well as on 3% of total assets (Slovik & Cournède, 2011). Since government bonds form a part of total assets, they will be backed by equity while the risk-weight will remain at zero.

Stress tests/recapitalization. In 2011, the European Banking Authority carried out EU-wide credit risk stress tests on 90 banks in cooperation with national authorities, the European Central Bank (ECB), the European Commission and the European Systemic Risk Board (EBA, 2011b). In October 2011, EU leaders addressed the concerns about a fragile banking sector and finally agreed on recapitalization processes for its banks under the pressure from the G20 summit. The agreement resulted in a tier 1 core capital ratio to be increased to 9% by the end of June 2012 (BaFin, 2011).

2.4. Evaluation of the Current Measures

During the last couple of years, the Greek sovereign debt crisis developed into a big issue of concern for the euro area governments and EU institutions. The European sovereign debt crisis shed light on vulnerabilities and deficiencies of the European Monetary Union, which were especially inherent in insufficient provisions for indebtedness, low level of economic coordination, incompleteness of financial market regulations, and a lacking crisis mechanism. Immensely high sovereign debt levels, especially in the GIPS countries, and contagion effects at both sovereign and bank level endangered the whole euro project resulting in a number of mechanisms established to solve the crisis.

The reform of the Stability and Growth Pact is aimed at reducing debt levels and prevent high deficits and indebtedness in the future. Surveillance and corrections of macroeconomic imbalances as well as enhancement of competitiveness should be achieved via the European Semester and the Euro Plus Pact. The problem of insufficient financial regulations has been addressed through the European System of Financial Supervision (EBA, ESRB). New crisis mechanisms have been institutionalized presented through a temporary mechanism aimed at acute crisis problems (EFSF and EFSM) and a permanent crisis mechanism, the so-called European Stability Mechanism.

The short-term solution taken by the EU officials and heads of government and states provided the necessary time to establish solutions that could help to resolve the crisis in the long-term. Though, these ad-hoc measures were not the most efficient decisions, they helped to calm down financial markets for some time while preventing defaults in the euro area and ensuring governmental borrowing in the euro zone.

One of the main issues under discussion was the inability of the **Stability and Growth Pact** to safeguard fiscal discipline in the euro area. Consequently, strong focus has been put on a reform of the Pact. The current reform of the Stability and Growth Pact goes into the right direction. The reformed Pact, for instance, includes a reverse qualified majority voting, in which “a Commission recommendation is deemed to be adopted unless the Council decides by qualified majority to reject the recommendation.” (European Parliament, 2011, para. 1). Thus, these semi-automatic sanctions present faster punishment of fiscal profligacy. Still, its new framework incorporates certain threats.

While strongly focusing on public debt and stricter sanctions, the criteria do not pay any attention to the private debt levels of countries. The cases of Ireland and Spain demonstrate why private debt plays a larger role than currently assumed[6]. Both countries had debt levels below the 60% threshold prior to the global financial crisis in 2007 and even recorded budget surpluses and thus had better positions than Germany and France (De Grauwe, 2010). The sharp increase of their deficits was caused by governmental intervention in bursting credit bubbles. Further, the global financial crisis left its marks. Both countries saw their private debt transforming into public debt. Therefore, public deficits and debt should be supplemented by private debt inherent in economies to deliver a more sensitive indicator for national debt levels (Horn et al., 2010).

With regard to fiscal reforms the fact of a monetary union and thus the absence of certain adjustment mechanisms should be considered. On the one hand, the Pact promotes fiscal discipline by incorporating various infringement procedures, consequently forcing euro zone member states to decrease its debt and deficit levels. On the other hand, this action could lead to pro-cyclical adjustments resulting in recessions. The new framework enforces limits on deficits without taking individual economic conditions into account (Manasse, 2010). Furthermore, no regulations have been provided on budget and debt level in economically good times. Thus, countries face no incentive to reduce its debt and deficit levels when the economy booms. Such incentives could contribute to the prevention of economy overheating (Alesina & Giavazzi, 2010, p. 40).

The **EFSF** proved to be an effective instrument to stem the euro crisis. Its main purpose is to provide loans to financially distressed countries at appropriate debt servicing rates, which they would not get on the market. Its establishment was a signal of solidarity among euro zone members. The planned leverage of the mechanism could however weaken this feature of the fund. While it could increase its lending power to a considerable level, there exist certain limits to the level of leverage. The higher the leverage of the EFSF, the higher is also its risk and hence the higher the price it will need to pay to borrow. Thus, higher leverage could result in a less effective EFSF in terms of low borrowing costs

[6] See Appendix C for private and government liabilities in the euro zone (1999-2008).

(Horváth & Huizinga, 2011). Furthermore, the financial assistance provided by the EFSF may undermine the incentive for troubled countries to pursue fiscal discipline (Ahearn et al., 2011).

The **Euro Plus Pact** addresses one of the core problems of the EMU, namely the great economic divergence between its core members and peripheral countries. The Pact lists concrete objectives that should enhance convergence processes, for instance the adjustment of wages to the productivity. However, the Pact neither provides measures to achieve the objectives, nor are the targets binding. The process will simply be monitored on an annual basis. Leaving too much room for discretion and definitions already showed dramatic consequences for the Stability and Growth Pact, especially after its reform in 2005. Thus, it can be expected that this Pact may not provide the ultimate solution which leads to a more converged EMU.

One of the major problems was and remains the lack of confidence on the **financial markets**. The EU-wide stress tests failed to reassure investors that European banks would be adequately capitalized in the event of sovereign defaults. Eight banks failed the European Banking Authority's tests, with a combined shortfall of 2.5 billion euro (Spiegel Online, 2011). Skepticism and mistrust on investors' side could only be eliminated in the short term. Even recapitalization of European banks may not be able to calm down financial markets because investors would still question the ability of governments to service its debt (Crossland, 2011). EFSF is relied upon as provider of additional capital to banks. Nevertheless, EFSF does not have the financial power to finance both troubled banks and troubled sovereigns.

Although EU officials already put measures in place which target not only fiscal problems, but also focus on the banking and economic governance sector vulnerabilities, the euro crisis would need more detailed and regulatory frameworks to ensure its successful functioning.

3. Suggested Solutions to the Euro Crisis

In 2001, Romano Prodi, the president of the EU Commission at that time, mentioned: “I am sure the euro will oblige us to introduce a new set of economic policy instruments. It is politically impossible to propose that now. But some day there will be a crisis and new instruments will be created." (Lorca-Susino, 2011, p. 273). Only eight years later his statement became reality.

This chapter will present three proposals and instruments to the euro crisis, namely the European Stability Mechanism, Eurobonds, and withdrawal of financially weak members from the euro zone. After a detailed description of these measures, the authors will shed light on possible benefits and threats of these instruments and measures.

3.1. European Stability Mechanism (ESM)

This section will discuss the European Stability Mechanism as a permanent bail-out instrument to solve the current crisis and preserve future crises in the euro area.

3.1.1. Description of the ESM

On October 28-29th 2010, the European Council decided to transform the European Financial Stability Facility and the European Financial Stabilization Mechanism (EFSM) into a permanent bail-out instrument – the European Stability Mechanism. With the European Stability Mechanism 17 finance ministers of the euro zone made an attempt to “safeguard the stability of the euro area as a whole” (ESM Treaty, 2011, p. 3). In March 2011, ultimately an agreement for the ESM has been reached. Its functioning has been made possible by an amendment of Article 136 of the Treaty on the Functioning of the European Union (TFEU). The European Council added a new paragraph, which will be effective as of January 2013 saying:

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 (TFEU, Art. 136, para. 3).

In addition, the European Stability Mechanism will be established under the *Treaty Establishing the European Stability Mechanism*. Under this Treaty the ESM will be an intergovernmental institution under public international law based in Luxembourg. It will consist of the ESM Board of Governors represented by the Eurogroup and the ESM Board of Directors (ESM Treaty, 2011).

Table 5 – ESM Board of Governors and ESM Board of Directors

Board of Governors
The Eurogroup, i.e. finance ministers of the euro area, are entitled to make the most important decisions of the ESM. The President of the ECB and the European Commissioner for Economic and Monetary Affairs take the role of the observers. Mutual agreement of the Eurogroup is necessary on following key issues: conditions and granting of financial assistance lending capacity and changes to the menu of instruments. Mutual agreement has to be reached unanimously by all countries actively participating in the vote (abstentions do not hinder an agreement).
Board of Directors
The ESM Board of Directors is in charge of specific tasks that are delegated by the Board of Governors. Each individual euro zone country will appoint one Director and one alternative Director. The ECB and the European Commission act as observers. A Managing Director who is in charge of daily management of the Stability Mechanism will chair the Board of Directors.

Source: ESM Treaty (2011)

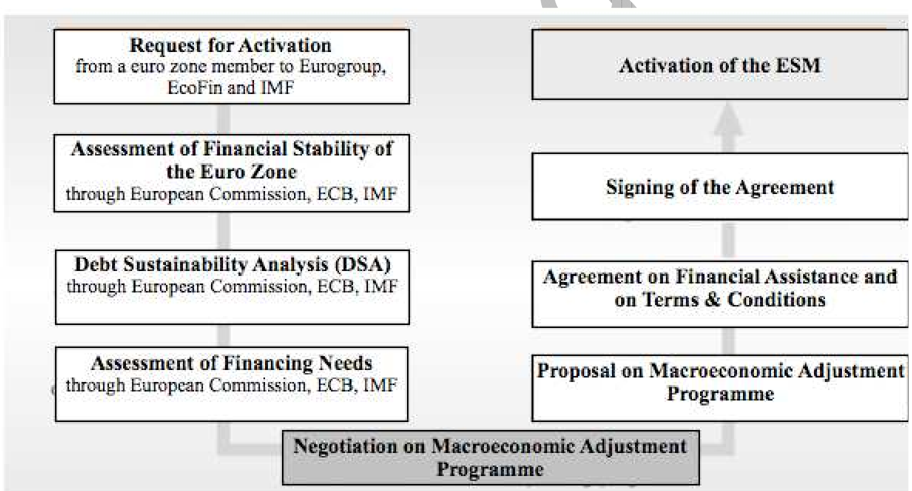
As already applied under the EFSF, the ESM may be joined by non-euro zone member states belonging to the EU. Furthermore, there will a close collaboration between the ESM and the IMF. The IMF will actively be participating in providing technical and financial advice. Furthermore, the IMF will be an essential part in activation and monitoring processes still having its own decision-making procedures and mandate (ECB, 2011b, p. 76). The ECB will also form a supporting part for the ESM. It will have responsibilities for a debt sustainability analysis and work closely with the European Commission and the IMF examining potential risks of financial instability for the euro zone as a whole. Additionally, technical expertise will be sought from the ECB for macroeconomic adjustment programs and in monitoring procedures of the ESM (ECB, 2011b, p. 76).

The ESM implementation is limited to severe cases and is subject to strict terms and conditions. The support to financially distressed euro area countries will be provided via loans. Loans are granted under the so-called ESM stability support (ESS), which is closely linked to the compliance with the macroeconomic adjustment program (ESM Treaty, 2011, p. 28). ESS loans' maturity is not fixed and depends on the type of imbalances and ability to regain access to financial markets of the country in question.

Additionally, these loans will have either fixed or variable interest rates. The pricing structure is set according to principles governing the pricing of IMF financing (ECB, 2011b, p. 76). Interest rates play an important role to prevent moral hazard and reduce attractiveness of financial assistance. Consequently, interest rates are set at a level that is above the average rate requested by the market under normal conditions. Furthermore, higher interest rate levels provide a compensation for risks taken by members of the ESM. As of July 2013, the ESM will enjoy preferred creditor status in a similar fashion to the IMF while IMF's preferred creditor status of the claims will be set above the ESM claims (ECB, 2011b, p. 82).

The activation process of the European Stability Mechanism is demonstrated by the following figure.

Figure 6 – ESM Activation Procedure



Source: Authors' compilation based on the ESM Treaty (2011)

The European Stability Mechanism will be enabled to buy bonds of a beneficiary euro zone country in the primary market (Bundesregierung, 2011, para. 4). ESM thus helps the country in question to sell bonds not taken up by private bidders and to get an access to financial market. Still, bond purchases are strictly linked to the macroeconomic adjustment program applied under the ESM stability support.

Each country requesting assistance from the ESM will be subjected to a debt sustainability analysis. In cases where an analysis results in the fact that a macroeconomic adjustment program will not reduce public debt or make it sustainable thus leading to a possible insolvency of a country, the beneficiary country will have to actively negotiate with its non-official creditors to ensure their assistance in achieving debt sustainability (ESM Treaty, 2011, p. 25). If these negotiations result in a credible program including private creditors' willingness for support, the ESM may grant financial assistance to the country in question.

The type and level of involvement of the private sector in the financial assistance of the ESM will be decided in each individual case separately but in line with IMF practice. This process will be supported by standardized collective action clauses (CACs). As from July 2013, collective action clauses will be included in terms and conditions of all new governmental bonds with a maturity of above one year thus allowing common negotiations on all debt securities issued by a euro zone country (ECB, 2011b, p. 80). Consequently, collective action clauses allow sovereign debt restructuring without an explicit agreement from the majority of creditors.

The ESM will be equipped with a total subscribed capital of 700 billion euro (Table 7). This sum consists of a guaranteed sum of 620 billion in form of callable capital or securities; the remaining 80 billion euro is paid-in capital provided by individual euro area countries (ESM Treaty, 2011, p. 19). The 80 billion euro paid-in capital will be divided in five equal installments, which are due on an annual basis. The effective lending capacity of the ESM amounts to 500 billion euro. IWF contributes further 250 billion euro. Only a small amount of the ESM capital is hold back. The majority amount consists of securities for which individual euro states are liable.

Table 6 – Subscriptions to the Authorized Capital Stock

ESM Member	Number of shares	Capital subscription (EUR)
Kingdom of Belgium	243 397	24 339 700 000
Federal Republic of Germany	1 900 248	190 024 800 000
Republic of Estonia	13 020	1 302 000 000
Ireland	111 454	11 145 400 000
Hellenic Republic	197 169	19 716 900 000
Kingdom of Spain	833 259	83 325 900 000
French Republic	1 427 013	142 701 300 000
Italian Republic	1 253 959	125 395 900 000
Republic of Cyprus	13 734	1 373 400 000
Grand Duchy of Luxembourg	17 528	1 752 800 000
Malta	5 117	511 700 000
Kingdom of the Netherlands	400 190	40 019 000 000
Republic of Austria	194 838	19 483 800 000
Portuguese Republic	175 644	17 564 400 000
Republic of Slovenia	29 932	2 993 200 000
Slovak Republic	57 680	5 768 000 000
Republic of Finland	125 818	12 581 800 000
Total	**7 000 000**	**700 000 000 000**

Source: ESM Treaty (2011)

3.1.2. Critical evaluation of the ESM

ESM is an important and necessary step towards financial stability and the functioning of the EMU. It entails various benefits but also incorporates certain threats, which sometimes go hand in hand with the advantages.

One of the benefits of the ESM lies in its permanent structure. While the euro zone has been hit by a severe crisis of such dimension for the first time in its history, lengthy processes and endless negotiations hindered an adoption of rapid solution in the midst of the financial turmoil. Having a permanent mechanism at hand, fast and efficient containment of future crises can be reached while contagion effects and immense ad-hoc bailout packages could be avoided (Claessens et al., 2011). Furthermore, since the ESM will be able to call capital when needed, it is not limited in its financial dimension. Theoretically, the ESM would be able to deal with any budget difficulties regardless of its magnitude. However, political reasons restrict the lending capacity of the ESM for obvious reasons. Additionally, the lending capacity must be restricted for moral-hazard reasons.

A further strength of the ESM lies in its emphasis on the activation of the fund only in cases of absolute necessity (ultimo ratio) and in the link of the assistance to strict conditionality (ECB, 2010, p. 2). Furthermore, ESM terms stress the stability of the *whole* euro zone, rather than helping a certain beneficiary country for its own sake. These requirements could limit the moral hazard and ascertain that the prospect of financial assistance from the EMS does not undermine incentives to conduct sound fiscal policies. Additionally, the ESM will only grant financial assistance if the beneficiary country is facing liquidity problems, not insolvency. Consequently, the ESM entails projects which have prospects for success. Involvement of the IMF further strengthens the fiscal insurance mechanism represented by the ESM. While these benefits seem to justify the establishment of the ESM, various critical points also reveal downsides of that mechanism.

The ability of the ESM to call capital and thus theoretically serve any budget need seems advantageous but only at first sight and only for countries under deep financial stress. According to Article 21 of the ESM Treaty this theoretically limitless capital call option could result in a pitfall for stable euro zone countries like Germany. The Treaty of ESM states:

If an ESM Member fails to meet the required payment under a capital call (…) a revised increased capital call shall be made to all ESM Members with a view to ensuring that the ESM receives the total amount of paid-in capital needed (Article 21 - Coverage of losses).

Thus, if one of the euro zone countries is not able to follow the capital stock call, other members have to stand up for others. Theoretically, it is obvious who will end up bearing the brunt. Italy, for example, is facing a debt level of about 120% and thus hardly will be in the position to bailout further member states of the euro zone (Münchau, 2011). Still, Italy’s share in the ESM is about 18%. Economically stable euro area members, particularly Germany, face a risk at this point.

The seniority of ESM credits could include a further difficulty of the ESM. While EFSF credits are equally ranked with private bonds, ESM credits are senior to other sovereign debt securities (Alloway, 2011). This means owners of sovereign bonds would be the first who suffer from a default, as they will be hit first and to a greater extent than ESM or IMF, while taxpayers’ money will be saved. With a continuous provision of loans to a distressed country the ESM will hold the larger part of debt letting the credit risk to be shared by increasingly fewer private investors (Manasse, 2011). The few private creditors would ask for higher risk premia, resulting in increased debt servicing costs and simultaneously increasing default risk for troubled countries. This phenomenon could be observed in the latest developments of the euro crisis, where investors presumed higher default risks of Portuguese and Irish debt. With the establishment of the ESM investors might position peripheral governmental bonds as subordinate and thus reject to invest in those countries (Eurointelligence, 2011). Distressed euro area members would consequently face a potential funding crisis resulting in considerably complicated return to the bond market. Such seniority would consequently exacerbate access to capital markets for distressed countries instead of enhancing it.

The inclusion of the collective action clauses raise further concerns. Collective action clauses are surely a necessary and plausible measure and they are already successfully used in U.K. and U.S. They allow a more efficient coordination between creditors, quicker decision making as well as an orderly procedure for default. Still, investors fear to be dragged into rescheduling, which actually is a “partial default”, especially against the background of the ESM seniority (Gros, 2011). Consequently, collective action clauses would intensify investors’ doubts that will be reflected in higher risk premia. Further, collective action clauses will come into force when a majority (75%) of the governmental bonds is issued including these clauses. Until that point is reached, private creditors will not be involved in the rescue measures from the ESM. Gros (2011) stressed that until these clauses are applicable for a half of the outstanding debt of a country, many years have to pass by. He further points out that the clauses probably will be in full application only in the year 2030. Collective action clauses therefore remain applicable to future debt, which is expected to decline continually as fiscal discipline is enacted. Still, the current and acute crisis needs a mechanism that limits existing debt levels.

The unanimous decisions are taken by the Governors and thus only by the finance ministers of the euro area member states. At this point, the ESM has been criticized for showing democratic deficits. The ESM Treaty draft does not make any provisions about parliamentary participation nor does it have a veto right. From a budgetary perspective it would mean a gradual drain of authority in national parliaments. Many critics see the sovereignty of the parliaments and thus its budget rights endangered.

Still, parliamentary involvement has two sides. On the one hand parliaments have their own federal budget autonomy that has to be respected. Europe and the euro zone are based on democratic principles and these principles should remain in place. However, if parliaments had rights to intervene in decisions of the ESM, the question remains if they did not submit to the pressure like in May 2010. Furthermore, the question remains how immediate the ESM would be able to take decisions if it needed approval from each single parliament. This problem could already be observed in question of freeing up loans for Greece where reaching an agreement took endless negotiations. Thus a mandatory decision of a parliament before granting a loan could hamper immediate coping with the crisis.

Not also the Treaty itself but also the macroeconomic adjustment programs of the ESM entail some risks. Its strict measures could endanger the stability in the euro zone instead of providing it (Manasse, 2011). The program forces beneficiary countries to apply tough budgetary austerity programs to be able to receive loans from the fund. Countries applying for the ESM will probably already face recession. The application of adjustment program could result in more pro-cyclical policies (lower spending, higher taxes) leading to a seemingly inescapable spiral downwards toward further recession (De Grauwe, 2011). A further point of criticism refers to a possible credibility shortfall of the European Stability Mechanism. The criteria upon which the decision is made with regard to solvency or liquidity has not been defined, it remains a political one. The 2005 reform of the SGP, which evolved in new definitions of violations leaving too much room for interpretation, should be kept in mind. The mistakes made by France and Germany could happen again if the ESM does not establish concrete processes.

Finally, despite high interest rates of credits provided by the ESM, they still would provide more favorable conditions than the market. These fact and guarantees from euro zone states could undermine incentives to troubled countries to pursue sound fiscal policies.

3.1.3. Conclusion

With the ESM moral hazard of the member states could arise. This is a major problem. Thus the ESM should be rethought. Conditions when to help individual countries should be very strict. The majority to decide whether to help a country in need should be at least a qualified majority, An even further step would be to ask for a consensus among the euro zone members. The ESM should be aimed more at providing incentive for sound fiscal policies and adopt its programs to each country's individual needs. Furthermore, improvements have to be made in terms of democratic and transparent procedures of the ESM[7].

[7] For further information see Appendix D

3.2. Eurobonds

This chapter deals with the proposal of Eurobonds as an instrument to solve the current European sovereign debt crisis. A general description of Eurobonds will be followed by a categorization of these instruments. Based on the elaborated Eurobond types, one concrete proposal will be briefly described. Finally, the chapter will close with an evaluation of Eurobonds based on their benefits and downsides.

3.2.1. Description

The long-hold perception of low risk in European credit markets before the global crisis in 2007 led to an accumulation of risky assets in the balance sheets of investors and financial institutions. This perception changed dramatically in the last years transferring from what de Grauwe and Moesen (2009, p. 132) call a "flight to risk" to a "flight to safety". The sovereign debt crisis in the euro area, which is monitored by highly suspicious investors, resulted in rapidly rising interest spreads on government bonds. Government bonds that were substitutable for years under the assumption to be default-free are now regarded as "imperfect substitutes" due to its liquidity risk or creditworthiness (Codogno et al., 2003). In order to deal with such distortions, politicians, researchers and economists brought up the idea of Eurobonds.

Eurobonds as a form of joint EU bonds have been already in discussion in 1993. At that time Jacques Delors stressed the positive effects of "union bonds" on growth, competitiveness and employment in the EU (Jones, 2001, p. 283). The idea has been reseized several times, inter alia in the year 2000 in the Giovannini Report on joint bonds (Berrigan, 2010, p. 21). However, the focus of previous discussions on common bonds was limited to their benefits in terms of increased market liquidity. Due to resistance especially from Germany the idea found no further consideration. With the evolvement of the crisis, the idea of Eurobonds returned under the aspect of enhancing stability and thus as a possible measure to combat the financial distress in the euro zone. While Germany still raise considerable objections to the proposal, it finds wide approval from the European Commission president Jose Manuel Barroso. A number of analysts claim that Eurobonds are necessary to address liquidity constraints and save the European Monetary Union from a break-up, while opponents of this instruments stress higher borrowing costs and risks from joint issues faced by creditworthy nations. Proponents and opponents of the proposal remain far from reaching consensus.

3.2.2. Basic considerations of Eurobonds

Currently, all member states issuance procedures are conducted by each member state individually. The general proposal behind Eurobonds foresees euro zone member states' issues to be pooled, resulting in shared revenues and debt servicing costs (Wyplosz, 2011). The guarantee of each other's debt is given jointly and severally. The purpose of a Eurobond is to provide creditworthiness to investors, who in turn demand lower interest rates. Individual countries would be prevented from being hit with market fears of default that is usually accompanied by increased interest rates. With the introduction of Eurobonds the euro zone sovereign debt market would adopt a new structure.

Issuance of debt could be conducted through a central agency or in a decentralized manner by each member state of the euro zone. In the latter case the issuance would require tight coordination and uniform terms and conditions among the states (Wyplosz, 2011). Issuance shares would define the allocation of revenues and interest rates among the members.

3.2.3. Types of Eurobonds

The severity of the European sovereign debt crisis generated numerous approaches and proposal for Eurobond types. Although no agreement about the form and application of Eurobonds has been achieved so far, numerous suggestions already exist. They vary considerably in terms of institutional framework, extent of issuance or interest rate calculation. Nevertheless, a general categorization can be made between the substitution degree of national bonds with Eurobonds and the guarantee extent provided by the participants. Based on these categories, there exist the following types of eurobonds: full substitution with joint and several guarantees, partial substitution with joint and several guarantees, and partial substitution with several (not joint) guarantees (European Commission, 2011b).

3.2.3.1. Full substitution with joint and several guarantees

This approach would imply full substitution of Eurobonds for national bonds covering full refinancing needs of the euro zone countries. Thus, governmental financing in the whole euro zone would take place completely through Eurobonds, leading to abandonment of national bonds. Under this approach, a pooling of credit risk would be required, including joint and several guarantees by all euro zone members (Favero & Missale, 2011).

The issuance process could be completed on a decentralized level through national treasuries or via a centralized agency. By using a central agency all processes regarding the Eurobonds would be concentrated in one place (Emmot, 2011). The agency would issue the bonds and collect debt servicing costs and principal payments from its members.

This approach would require adjustments of the EU Treaty, which implies a long implementation time frame. This option is thus not appropriate to solve current difficulties. Furthermore, due to a complete substitution of Eurobonds for national debt this approach incorporates the greatest moral hazard risk (Favero & Missale, 2011). It would require very strict budget discipline and economic competitiveness rules. Germany as the main opponent of Eurobonds would probably not be willing to abandon its AAA national bonds and transfer its borrowing to the EMU, thus underwriting debt of others.

3.2.3.2. Partial substitution with joint and several guarantees

This approach would imply joint and several guarantees from the euro zone members as in the previous suggestion. However, substitution of Eurobonds for national bonds would be only partial and thus limited to a certain amount of governmental debt. Under this approach, Eurobonds would be guaranteed jointly and severally while the remaining part of national issuance would still be under national control and responsibility (European Commission, 2011b). Depla and von Weizsäcker were among the first to deliver detailed proposals on partial substitution of Eurobonds for national bonds in 2010 (updated in 2011). The so-called “Blue Bond Proposal” became the focal point of discussions on Eurobonds and will be presented later in this chapter. The issuance of Eurobonds under this approach could be implemented by each national government individually or bundled in one place by a debt agency. Like the previous approach, this option would imply a Treaty revision. It additionally includes the risk of free riding.

3.2.3.3. Partial substitution with several (not joint) guarantees

As in the previous approach Eurobonds would be substituted only partially for national bonds and therefore only a part of national financing needs would be covered by the common bonds (Fidler, 2011). The contrasting feature of this version lies however in the several but nor joint guarantee option. Thus, this approach is the most limited one. Guarantees would be based on a pro-rata basis, meaning on a proportionate allocation (Stearns, 2011). Consequently, each individual euro zone member would retain liability for its part in the share in the Eurobonds and retain full liability for its national bonds.

This approach could harm the credit quality of Eurobonds as it includes several but not joint guarantees. Its credit rating would probably be based on the weighted average of the creditworthiness of the euro zone countries and could risk being compromised by the rating of the less creditworthy euro zone member (Holland, 2011).

3.2.4. Delpla & von Weizsäcker proposal

In May 2010 Jacques Delpla and Jakob von Weizsäcker provided a framework proposing issuance of Eurobonds, discussed under the name “Blue Bond Proposal”. The aim of their proposal was to construct Eurobonds that allow refinancing of sovereign bonds at favorable interest rates on the financial market in the euro area as well as force self-responsibility of each individual euro area member for its government debt in the sense of a “no-bailout” clause to ensure fiscal discipline (Delpla & von Weizsäcker, 2010).Delpla and von Weizsäcker focus in their attempt to tackle these problems on a differentiation between two types of bonds: the blue bonds and the red bonds.

3.2.4.1. Blue bonds

Blue bonds would be issued only up to a defined level of 60% of countries’ GDP. These bonds would be issued and guaranteed jointly by the euro zone countries and thus represent a Eurobond. Given the fact that the guarantee is jointly given from the participating countries, Delpla and von Weizsäcker call the status of the blue bonds AAAA, that stands for super-safe (Delpla & von Weizsäcker, 2010). Thus, blue bonds could be considered default-free. According to the authors, with the existence of the blue bonds the whole euro zone would have the possibility to borrow part of the sovereign debt at lower or equal interest rates compared for instance to German bonds. Low interest rates would unburden financially distressed countries. Consequently, the aim of low refinancing costs could be achieved.

Countries with debt-to-GDP ratios exceeding 60% would have stronger incentives to embrace an austerity course as well as to have sound fiscal policies in the future to avoid high interest rates. Furthermore, assistance from the new EU mechanisms (EFSF, EFSM, ESM) will not be allowed. Sole responsible for issuing red debt would be left to national treasuries. This scheme should ensure that the ESM size remains at low level, as its financial assistance would be limited to primary deficits.

3.2.4.2. Red bonds

The remainder of the sovereign debt, i.e. debt above the 60% threshold has to be issued under completely national responsibility and thus will not enjoy a joint guarantee by participating countries. Given that debt levels beyond 60% would be left to national liability, red bonds would revive the “no-bailout” clause, which has been abrogated in the course of the crisis (Delpla & von Weizsäcker, 2010). Red bonds should ensure fiscal discipline through higher borrowing costs. At the same time these instruments should strengthens market signals when a credible fiscal stance is lacking, consequently complementing the SGP criteria.

3.2.4.3. Governance system

As a governmental mechanism for the bonds Delpla and von Weizsäcker propose a European Debt Agency and Independent Stability Council similar to the Board of the ECB (Delpla & von Weizsäcker, 2011). The European Debt Agency would issue both types of bonds – red and blue bonds – on behalf of individual countries. Additionally, the Stability Council would be responsible for allocation of revenues from the Eurobonds.

3.2.5. Critical evaluation of Eurobonds

Numerous arguments have been put forward in favor of common Eurobonds. Proponents of joint bonds stress that common issuance of bonds is supposed to stop speculative attacks against single member countries experienced at the beginning of the euro crisis (Favero & Missale, 2011). Furthermore, Eurobonds could relax the distorted situation on the financial markets and prevent future crises by ensuring constant market access for financially distressed countries. Troubled member states would profit from the creditworthiness of stable states and gain access to lower funding costs. Even if the implementation would take some time, markets reflect expectations of investors and the fact of the forthcoming introduction could help to calm down the dramatic development of the markets already before full implementation (Missale, 2010). As fiscally distressed countries would have the possibility to borrow at relatively low cost, ad hoc rescue measures and bailouts could be avoided. Further, crisis mechanisms (e.g., ESM) would be resorted to only in emergency cases, thus lowering the risk of guarantees given by financially stable euro zone members (Delpla & von Weizsäcker, 2010).

As previous chapters outlined, the euro area-wide interconnected banking system also feels the consequences of the sovereign debt crisis due to its huge exposure to sovereign debt of troubled states. Eurobonds could be used at this point as a more stable and reliable collateral in refinancing operations and serve as liquidity buffers for the banks in the euro area.

Given that the Eurobond market would be characterized by high liquidity and high credit quality resulting in low debt servicing costs, this market could be broadened by encouraging non-sovereign issuers including not only the public but also the private sector, consequently providing both with low financing costs (Economic Commission, 2011b). Such actions could support economic growth.

Recent proposals for Eurobonds foresee a creation of debt market on par with the U.S. Treasury Bond in terms of safety and liquidity, thus strengthening the use of the euro as an international reserve currency (Delpla & von Weizsäcker, 2011). This in turn would be even more attractive for countries like China or institutional investors and thus contribute to a constantly low interest rate. Furthermore, having the euro as a more important alternative reserve currency next to the dollar would create a more balanced global financial system.

Although common issued bonds by euro zone member states could create a bond market comparable to that of the U.S. Treasury market, this status can only be achieved if Eurobonds are jointly guaranteed by all members (Schmiedel et al., 2010). Joint guarantees however are based on mutualised credit risk, which would require sound fiscal behavior from its members to be accepted.

Fiscal discipline of the euro area countries has been the most essential and problematic element since the advent of the euro. The creation of a common bond market and thus of a credit-risk pool backed by all members would not necessarily contribute to sound fiscal policies in the euro area. Rather it would lead to higher risk of moral hazard and free riding problem, as consequences of unsound fiscal behavior of one member would be borne by all member states (Tilford, 2011). Therefore, Eurobonds would create certain "insurance" for troubled countries, resulting in risk-sharing among all euro zone members. This critical point is the main reason for the rejection of common bonds from its opponents, above all Germany.

While providing financially distressed countries with lower borrowing costs, Eurobonds could result in higher funding costs for those euro zone members who currently enjoy low rates (e.g, Germany, Finland). While Delpla and von Weizsäcker (2011) claim that Eurobonds could have the same quality as German Bunds but higher liquidity depending on its form, Kai Carstensen, chief economist of the IFO Institute in Germany, points out that Eurobonds would cost Germany 47 billion euro per year (about 15% of governmental expenses next year), resulting in a high burden for taxpayers (Kaiser, 2011, para. 5).

Due to the risk pooling of all member states, Eurobonds' implementation as an instrument require measures that go beyond its technical design. The higher the level of credit risk pooling among euro zone member states, the lower would be the market volatility but at same time also the lower fiscal discipline (Missale, 2010). Therefore, successful functioning of Eurobonds requires deeper coordination, integration and surveillance on the economic and political level. Only a combination of these processes could prevent moral hazard and ensure sustainable and sound fiscal policies, enhance competitiveness, and reduce macroeconomic imbalances (European Commission, 2011b).

Competitiveness, economic development, and budgetary situation vary in the euro zone. Different risk premia act as incentives for sound fiscal and economic policies. These variations should be reflected by different risk premia for sovereign debt requested by creditors. Eurobonds would result in unification of interest rate and communitisation of sovereign debts, thus eliminating the incentives for fiscal discipline (Favero & Missale, 2011).

The advent of Eurobonds is also connected to immense cost and management difficulties. Depending on the type of issuance, strong coordination, common terms and regulations will be needed combined with the establishment of a new institution in case Eurobonds would be issued through a central debt agency.

Finally, Eurobonds, as many other instruments implemented to solve the euro crisis, face a violation of the Treaty, Article 125 regulating the "no-bailout" clause, could be either created in such a way as not to break the law or EU officials would have to agree on changes to the Treaty (Tilford, 2011). However, any changes to the Treaty are regarded with objection.

In order to achieve high acceptance and creditworthiness on the European and international markets and avoid higher borrowing costs for stable euro zone members, it is essential for the Eurobonds to enjoy high credit quality (Favero & Missale, 2010). Any disturbances in its rating could result in higher interest rates and losing acceptance among investors, especially if Eurobonds co-exist with national bonds that enjoy AAA ratings. As a new instrument, the Eurobond should provide enough transparency to avoid high yields. Eurobonds interest rates that are too high would have an adverse effect on stable and creditworthy euro zone countries (Wyplosz, 2011). Stable euro zone countries would need further assurance in form of fiscal disciplines to share a common bond with its neighbors (Tilford, 2011). This assurance could be given through stricter surveillance of fiscal policies or compensated through funding advantages achieved through the Eurobonds.

Delpla's and von Weizsäcker's proposal try to eliminate the negative effects of common bonds. According to the authors, a distinction into blue and red bonds would contribute to the strengthening of the Stability and Growth Pact, which is an essential prerequisite for a successful functioning of the European Monetary Union (Wyplosz, 2011). Compared to common bonds, the blue and red bonds concept gives positive incentives to adhere to the Stability and Growth Pact criteria and thus enforce fiscal discipline. Furthermore, the bond scheme would be able to coexist with the European Stability Mechanism (Missale, 2010). Although red and blue bonds provide a stronger incentive for sound fiscal policies, liquidity crises can never be excluded in the future. Within the scope of the bond proposal the mechanism would need less capital and thus decrease the risk borne by stable euro zone members like Germany.

The implementation of the bond scheme could be difficult during the crisis. Although red bonds provide an incentive for member states to keep their debt level within the 60% limit, in the light of highly indebted euro zone countries however it is questionable whether Greece or Italy could bear the costs of issuing red bonds being confronted with higher interest rates. The Delpla / von Weizsäcker proposal would not be as efficient in solving the current crisis as it would be to prevent crises in the future (Wyplosz, 2011).

3.2.6. Conclusion

Eurobonds ensure market access for all euro zone member states, discourage speculations among them and strengthen the position of the euro as an international reserve currency. A point of major concern is that Eurobonds have a negative effect on budget discipline and thus can increase the probability of a bailout.

Eurobonds require a higher degree of integration on economic, political and financial level and fiscal discipline within the euro zone. These conditions are not given yet. Thus Eurobonds are not an appropriate instrument to solve the euro crisis.

3.3. Exclusion of Financially Weak Members from the Euro Zone

Previous chapters already outlined that members of the euro zone are not only interconnected through a common currency but also in its economic and fiscal relations. Systemic risks as well as contagion effects force member states to cooperate and offer financial assistance to troubled members. Facing the fear of a default in the Greek case the ultimo ratio scenario regarded for this country was, inter alia, an exclusion from the euro zone. This section focuses on a possible exclusion of financially weak members from the EMU and its consequences.

3.3.1. Description

In response to Papandreou's referendum decision on a further bailout measure from the EU in November 2011, Nicolas Sarkozy responded to Greece by stating: "abide by the eurozone rules or leave." (Hewitt, 2011, para. 4). Latest developments of the persistent sovereign debt crisis and the pressure to find a solution led to an increased risk as well as consideration of a "secession" of financially weak members from the euro zone as a possible scenario. Sarkozy is supported by the German Finance Ministry, who recently presented its calculations for consequences of Greece default in Brussels (Elliot et al., 2011). Similar to numerous other solutions this idea finds as many proponents as opponents and thus is controversially discussed. In order to evaluate a withdrawal as a possible solution to the euro crisis, a hypothetical scenario of Greece's exit acts as an exemplary case.

3.3.2. Scenario: Greece's withdrawal from the EMU

Since the creation of the EMU, the situation of Greece has never been more complex and desperate. With an immense level of governmental debt being at about 150% of GDP (September 2011), a current fiscal deficit exceeding 10% of GDP, and insolvent banks the EMU member does not expect bright prospects for its future. What long has been an unthinkable consequence has received much attention in the light of growing political and financial chaos in the wake of the euro crisis. A growing body of economists considers a withdrawal of Greece from the EMU and return to the drachma as a possible or even inevitable course of action. Greece could default on its sovereign debt, devalue its new national currency and thus stimulate demand eventually resulting in a trade surplus (Feldstein, 2011, para. 3). What sounds like a fast and efficient process entails certain risks not visible at the first glance. While a withdrawal from the monetary union could improve Greece's economic situation, this move would also be accompanied by further far-reaching effects for the country itself as well as for the whole euro zone. As pointed out by German officials, regardless of whether Greece would leave the monetary union or default within, either case involves a haircut on its debt (Lynn, 2010, p. 233). At this point the question arises whether the benefits of re-inventing national currency would outweigh the costs of abandoning the euro.

With the abandonment of the euro, Greece would be able to increase its competitiveness through currency devaluation in the short-term. Greece goods and services would be cheaper, without requiring a change in the productivity level. The adjustment of the currency value would replace the adjustment of economic structures. Consequently, competitiveness could be established without major reforms, for instance wage adjustments, pension cuts, or tax increases (Thomas, 2011). The advent of the new, cheaper drachma could lead to lower imports as well as increased exports and thus restructure the Greek current account deficit (Skaperdas, 2011). What is more important, an own currency would give Greece the control over its monetary policy and smooth the influence of fiscal retrenchment (Lorca-Susino, 2011).

Proponents of the advent of a new drachma in Greece put their main focus on a rapidly growing and flourishing economy caused by the new devalued currency and the ability to control it. Considered to be an "imperfect parallel" by the economist Paul Krugman (2011, para. 1), the Greece example is often compared to that of Argentina. During a financial crisis in 2001-2002, Argentina defaulted on its 102 billion US dollar of most foreign debt (Stewart, 2011). In 2002, the peg of peso to the US dollar has been broken. In 2005, Argentina was able to agree on a haircut with the majority of its creditors (76%), which cost them more than two-thirds of their investments (Thomas & García-Fronti, 2007, p. 2). Nevertheless, Argentina in contrast to Greece had peso notes already established. Greece would have a new start which according to Krugman makes a difference between experiencing "a brief period of shock and an extended financial breakdown." (Krugman, 2011, para.1). Thus, Greece's withdrawal would also bear some threats. Empirical studies have shown that currency devaluation has only short-term positive effects[8]. Consequently, the positive effects would be overshadowed by negative developments in the long term resulting in substantial costs for its economy.

The immediate response to the introduction of the new drachma would present a system-wide bank run on Greek banks like could be observed already in April 2010 when the Bank of Greece reported about foreign lenders and individuals who withdraw funds from Greek banks (Salmon, 2010). In anticipation of value depreciation in the course of the reintroduction of a new currency and a possible haircut depositors would transfer their capital from local banks to foreign countries outside Greek borders. Private investors would shift their Greek claims into claims on other euro zone governments thus creating a crisis of the Greek bond market. Without imposing capital controls Greece would see it money flowing out of the country, simultaneously paralyzing the banking system. The truth is thus that those who do not take advantage of free capital movement and put their savings abroad at the right time would lose a great part of their savings overnight.

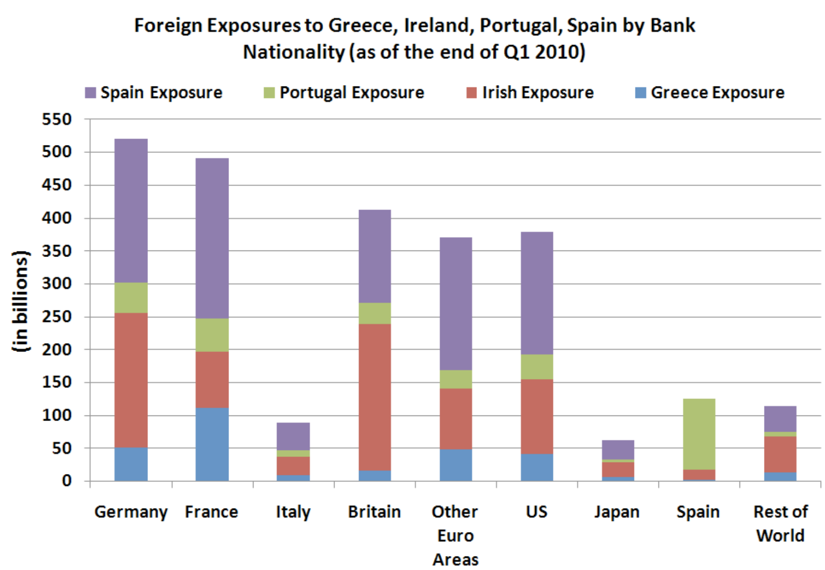
Not only Greek banks would be influenced by a new drachma. Banks and other

[8] Studies on this topic has been conducted among others by Kalyoncu et al. (2008).

financial institutions in the European Union and the euro zone, inter alia in France and Germany, are heavily exposed to Greek's government debt. As the recent stress test of the European Banking Authority demonstrated, euro zone banks are not yet equipped with an appropriate level of capital to survive a Greece default and thus would lose immense amounts of capital. The necessary haircut for Greek debt presents a further obstacle.

Servicing only a part of its debt, Greece would leave its creditors including the ECB, European banks and states, and insurance companies facing significant losses (Gloy, 2011).

Figure 7 – Bank Exposure to Government Debt as of the End of Q1 2010



Source: BIS September Quarterly Review 2010

Greece default bears an even higher risk of inducing sovereign defaults in other euro zone countries, especially in Spain and Italy. Italy's credit rating was downgraded by Standard & Poor's in September 2011 (Milne, 2011). Defaults by these countries would result in more disastrous consequences for euro area core countries as for instance Germany's bank exposure to Italian and Spanish debt is even higher than to Greek sovereign debt (compare figure 7). Due to its leverage mechanism, the EFSF has enough capital power to finance Greek debt but it would not be sufficient to finance Italy and Spain in case they lose access to private markets. Already ahead of an exit, facing a Greek default, private investors would transfer their mistrust to other distressed countries considering defaults of these countries more probable and thus refuse to finance governments and banks at reasonable rates. This lack of confidence from the private market and increased interest rates would lead to higher national debt levels and simultaneously to a higher risk of insolvency of other countries than Greece.

A further possible economic cost for Greece coming with a withdrawal process evolves from the devaluation of the new currency in order to enhance its competitiveness, one of the main weak points in that country. The anticipation of devaluation from the workers' side would lead to wage inflation that would offset benefits with reference to external competitiveness (Eichengreen, 2010). Thus, the advent of a new currency would need a labor market reform to be able to adjust real wages. Additionally, after the introduction of the new currency, unemployment benefits caused by private sector bankruptcies would increase, resulting in either higher unemployment insurance contributions or an increasing budget deficit. Additionally, the new drachma would be weaker and cheaper against the euro resulting in increased prices for imported goods (Alesina & Giavazzi, 2010).

Further reforms will be needed for fiscal institutions to avoid increased debt servicing costs. Withdrawing from the EMU would isolate Greece from the international capital market. Greece would need structural reforms that would result in smaller future deficits and thus persuade lenders to invest capital into the country again.

Besides the economic costs, one further obvious obstacle to the introduction of a new drachma would lie in its practical implementation. Redenomination of the euro into domestic currency would require major technological and administrational effort. The extensive planning of the introduction of the euro delivers a rough idea for processes Greece would need to run through.

One last point in the discussion of withdrawals is also its legal applicability. While the Lisbon Treaty includes a withdrawal from the European Union in Article 50.1 by stating that "any Member State may decide to withdraw from the Union in accordance with its own constitutional requirements", exclusion from the euro zone is not specified legally (Treaty of Lisbon, 2007). Although theoretically possible, a withdrawal from the euro zone would require a simultaneous exit from the European Union or in case of a new legislative framework, the transition period would need a certain lead-time; time that Greece and other distressed euro zone member states do not have.

Overall, when withdrawing Greece would face a crisis of its banking system and increasing inflation. Gaining access on international credit markets would need years. Further, in case of a simultaneous exit from the EU, it would have to waive the privilege of financial support it receives currently. The Greek population would not only lose part of its money deposited in banks, it also would face increased prices. The exit strategy thus could result in a diminished standard of living.

3.3.3. Critical evaluation of a withdrawal from the EMU

The described scenario for a possible Greek withdrawal from the European Monetary Union and its related consequences leads to the conclusion that a withdrawal from the EMU is relatively unlikely to take place. Admittedly, a withdrawal from a monetary union does not automatically have an adverse effect. If a devaluation of the new currency was accompanied by fiscal, economic and social reforms, certain disadvantages (wage inflation, increased interest rates) could be prevented. Nevertheless, facing the problems and financial difficulties of members that could leave the euro, it is unlikely that these countries would be able to reduce its debt burden with limited market access and support from member states and simultaneously conduct important and necessary structural reforms by themselves.

Furthermore, introduction of a national currency does not only come along with technical and legal difficulties, it is also not certain that economic and fiscal concerns will be abandoned through a withdrawal (Ahearn et al., 2011). In the case of Greece, a withdrawal from the monetary union and return to the drachma would probably not fix its political, social, and economic problems. According to some research, conducted among others by Eichengreen (2007), reintroduction of a national currency does not automatically increase countries' competitiveness and help to solve debt problems. Depreciation of debt value combined with an inflationary monetary policy could result in lower credit-ratings from rating agencies and in an increase in interest rates as investors' reaction to government actions. Increased debt servicing levels would certainly not be that kind of solution Greek government currently needs.

Greece enjoys an umbrella-like protection from the participation in the EU and EMU like other members also do. Giving up the advantage of such an "insurance", especially in financially unstable and hard times, would be an ill-considered action from Greece's side. The EMU provides financially distressed countries not only with reputational benefits but more importantly it gives them access to appropriate financing conditions. From a financial viewpoint of the withdrawing member, a withdrawal is accompanied by increased financing costs for national debt and limited access to new capital. Thus, an exit would demand a debt restructuring to be adopted as one of the first steps; otherwise the distressed country could not carry its burden alone. Greece is facing a recession in its third year, its international competitiveness declined by 30% since it entered the euro (Thomas, 2011, para. 29). Therefore, Greece is not equipped with necessary force and resources to meet the challenge of an exit. The danger of being burdened with even more debt, accompanied by economic, financial and social problems, outweigh the possible benefits of an exit.

From the perspective of those euro zone members who are burdened by bailouts, at the first glance an exit of financially distressed member seems attractive. Nevertheless, a deeper look at contagion effects and consequences of a withdrawal do not show an optimistic picture. Against the background of a high bank exposure and a complex economic and financial interconnectedness, an exit strategy does not provide many incentives for the remaining euro zone members to accept a withdrawal. The costs of an exit could entail a one-off crash effect.

For indeed, one thing can be deemed certain: Greece's withdrawal from the European Monetary Union does not result in a positive forecast in the short term neither for Greece itself nor for other members of the monetary union as well as for European Union as a whole. Still, it should be considered that the euro could translate into a downfall of its upholders if costs of its maintenance outweigh its benefits.

3.3.4. Conclusion

A legal exclusion of financially weak members from the euro zone would provide the country in question short-term relief in terms of competitiveness, it will probably result in a crisis of the financial system of that country. Furthermore, remaining euro zone countries would be hit by contagion effects and thus would in the short term not benefit from exclusion of financially weak members. Consequently, although an exit from the euro zone would be possible in theory, this option should probably not be chosen if there is a realistic perspective that the country in question can set up reforms that enable the country to follow EMU rules.

4. Authors‘ Solution Proposal

The persistent and complex character of the European sovereign debt crisis indicates a deep structural problem of the European Monetary Union. Previous chapters of the thesis outlined that the crisis and its impact were a consequence of various factors including, inter alia, different development levels among the core and peripheral euro zone members, high financial interconnectedness and integration, and failure of the Stability and Growth Pact resulting in fiscal indiscipline. Thus, while monetary policy could be described to be relatively effective at the EMU level, fiscal policies, financial regulations and structural reforms aiming at more efficient economic governance need further attention (Baldwin & Gros, 2010). The EMU needs mechanisms which, besides putting an emphasis on budgetary policies, also consider macroeconomic imbalances and underlying problems of competitiveness as well. Therefore, it is not only one area that needs reforms but rather a whole series of steps is needed to bring the EMU to a sustainable path. Measures already taken by EU institutions and officials laid the foundation towards a successful resolution of the crisis. Still, this framework is not yet complete.

4.1. Monetary Policy

The European sovereign debt crisis clearly demonstrated that the European Central Bank's purpose went beyond keeping inflation low. While the ECB could record some successes in keeping bond yields of distressed euro zone member countries down for some time, the central bank should not remain a weapon against investors' mistrust for a longer period. Interventions to help countries in need should be forbidden to keep the ECB independent. Its objective to safeguard price stability should continue to be its primary goal to ensure that its purpose of monetary policy activities is not complicated by current action, and balance-sheet risks must be avoided. Nevertheless, if the ECB would give up itsSecurities Market Program immediately, turmoil on the financial markets would be immense. Therefore, a cautious withdrawal from the program should be considered.

4.2. Fiscal Policy

Fiscal policy plays the lead when causes and consequences of the euro crisis are discussed. The authors agree that the European approach of enhancing rules and regulations and enforcing sanctions to ensure fiscal discipline is an effective instrument to safeguard fiscal stability. Nonetheless, against the background of wide economic divergence in the euro area and a monetary union being far away from presenting an optimum currency area, a "one-size-fits-all" surveillance and regulations framework is no longer acceptable.

Although, automatic sanctions favored by the German Chancellor Angela Merkel may force euro zone members to cut its deficit and debt levels, the threat of recession caused by strict measures is not desirable. Thus, a more flexible approach to economic governance should be established, which embraces growth and competitiveness differences as well as individual weak points of each euro area member state. Sanctions are a must, but – depending on individual circumstances – the payment of sanctions could be postponed to the future until the economy has reached again an certain economic growth rate.

4.2.1. Strengthening the Stability and Growth Pact through debt brakes

The Stability and Growth Pact was set to discipline fiscal policies at the national level while leaving enough room for national sovereignty and budget decisions. Unfortunately, the creation of this fiscal safeguard did not provide the results that were expected, mainly due to the absence of sanctions for breaching the criteria. As the CESifo Report (2011, p. 79) states, the Pact has been violated 68 times while there have never been any sanctions for any of the country. Only few of the violations can be attributed to recession periods. Obviously, the Stability and Growth Pact experienced abyss of ignorance from the participating countries while demonstrating inadequacy of the European surveillance procedures. As a consequence, the new Stability and Growth Pact should put an emphasis on timely and effective sanction mechanisms for euro zone member states. Still, while prudent fiscal policy and corrections of any deviation from that path are the core of stability-oriented policy making, history of the EMU demonstrated that wide macroeconomic imbalances, including low competitiveness, can result in harmful effect on public finances. In order to improve growth and competitiveness levels while paying attention to fiscal consolidation, each country would need different approaches, which are more adjusted to its realistic development process. Austerity measures are not an appropriate tool in every economic cycle, as they usually result in slower growth and might increase unemployment (Ball et al., 2011). In consequence, the authors propose to strengthen and complement the Stability and Growth Pact with decentralized national debt regulations that have sufficient built-in flexibility to allow adjustments to business cycles in the long run resulting in sustainable growth and confident capital markets.

Numerous concepts for balanced-budget rules can already be found in the American states as well as in Switzerland, where such a rule has been successfully introduced in 2003 (Feld & Kirchgässner, 2008). Germany has been one of the recent states in the euro zone to enshrine a balanced-budget rule in its constitution in 2009. Starting in 2011 the debt brake regulation forces the German government to reduce its structural budget deficit to less than 0.35% of GDP by 2016 (Bundesfinanzministerium, 2009). Since Germany is known to be a benchmark for capital markets, and Switzerland could register major successes with its type of balanced-budget rule and the models of both countries share similar features, they could be extended to other euro zone member states or used for optimizing purposes for already established balanced-budget rules[9].

Debt brakes, as implemented in Germany and Switzerland, are mechanisms that aim to balance income and expenditure of national budgets over time, while allowing a separation of cyclical and structural deficits. The purpose of a debt brake is to enforce debt cutback while leaving the automatic stabilizers enough leeway to operate. Under the use of debt brakes, surpluses of good economic times should balance deficits in subsequent recessions, i.e. over an economic cycle (Manasse, 2007). Consequently, pro-cyclicality of fiscal policy could be prevented (Fatas & Mihov, 2003).

Further advantages of debt brakes lie in its flexible dynamic character that allows reacting to current economic developments while leaving room for increased expenditures in extraordinary situations (e.g., severe recessions or natural disasters). Nonetheless, additional expenditures would have to be compensated in subsequent years, thereby preventing misuse of the exemption clause. Furthermore, increased expenditures caused by excessive credits or similar issues should be sanctioned when such overruns are not balanced, resulting in incentives for governments to ensure sound fiscal policies.

Additional benefits of debt brakes are presented by a strict numerical constraint laid down in constitutions, which expresses its credible and accountable nature. Debt brakes act as anchors that support governments to ensure fiscal sustainability. Fiscal sustainability in turn influence expectations of investors in the capital markets as it fosters their confidence in long-term sound fiscal policies, resulting in lower risk premia for government bonds and increased economic activities (Hallerberg & Wolf, 2008).

While the Stability and Growth Pact should remain the main instrument to ensure sound fiscal policies on the euro-area level, national debt brakes would present complementary mechanism to the Pact at national levels, thus avoiding conflicts between the two instruments. The preventive arm of a reformed Stability and Growth Pact entails requirements for a structural budget balance set in Medium-Term Objectives (MTO)[10],

[9] See Feld (2010) and Bodmer (2006) for more information on the German and Swiss debt brakes respectively.

[10] Rationale of Medium-Term Objectives is that "adherence to the medium-term objective of budgetary positions close to balance or in surplus allow member states to deal with normal cyclical fluctuations

which differ across euro area member states. For instance, Germany is allowed to have a structural deficit of 0.5% of GDP (European Commission 2011c). Thus, German debt brake is set at a lower level with 0.35% of GDP. The structural component of the debt brake would complement these Medium-Term Objectives of the Pact and thus the preventive arm, while being adjusted to the long-term growth trend. The cyclical, more flexible feature of the deficit that is defined by the EU cyclical adjustment method and characterizes the adjustment of borrowing to economic environment (deficits in recessions, surpluses in boom phases), would be left to national levels.

Against the background of the ineffectiveness of the Stability and Growth Pact to ensure fiscal sustainability in the EMU, national debt brakes embraced by constitutions could present a substantial contribution to fiscal discipline. The conditions under the sovereign debt crisis do not provide a perfect platform to introduce debt brakes immediately. Successful introduction and implementation of debt brakes require country-specific solutions, which cannot be achieved in few months. Still, a launch should be agreed on in the near future.

In order to guarantee effective monitoring and enforcement, Calmfors and Wren-Lewis (2011) underline the importance of domestic fiscal institutions that should strengthen national fiscal policies.

Experience shows that domestic fiscal institutions are not enough to monitor fiscal discipline.

4.2.2. Independent Fiscal Policy Councils

Due to their special and essential role in the monetary union, measures that ensure sound fiscal policies should go beyond the Stability and Growth Pact and national debt brakes. Sole introduction of debt brakes does not confirm its positive influence on fiscal policies, despite its constitutional character. Political convictions of the need for budget consolidation as well as credible institutions play a decisive role for a successful functioning of debt brakes (Lienert, 2010). Therefore, the authors would like to seize the suggestion of independent national fiscal councils.

This idea has received wide attention in the course of the crisis and its urgent need for fiscal discipline. Proposals to establish such bodies have been provided among others by the ECB (2010) and the European Commission (2010). Most proposals distinguish

while keeping the government deficit within the 3% of GDP reference value." (Resolution of the European Council on the Stability and Growth Pact, June 1997).

between two types of independent fiscal institutions: those that make actual fiscal policy decisions and those analyzing, advising, and evaluating fiscal policy matters. Further distinction can be made in terms of centralization. While a number of authors stressed the importance of independent European-level institutions (Brück et al., 2003; Zimmermann, 2011), Wyplosz (2005) and Schuknecht et al. (2011) suggest national councils. In practice, a number of various fiscal councils exist, inter alia, in Netherlands, Denmark, Belgium, Slovenia, or Hungary. Most recently, in July 2011, Ireland followed such proposals and established the Irish Fiscal Advisory Council (IMF, 2011b).

Fatás and Mihov (2010) see independent fiscal policy councils as an effective supplement to strict budgetary rules. Fiscal councils could monitor compliance with the debt brake rules thus acting as "watchdogs", and give warning signs to the public to avoid debt crises in the future. At the same time councils could prevent statistical manipulations by governments like in the Greek case. The European Union already established some new mechanisms that go into this direction. The European Semester, for instance, focuses on a pre-assessment of national budget proposals in order to underline the budget decision presented to national parliaments with a preliminary expert estimate. The tasks of independent fiscal councils would go further and would strongly focus on country-specific circumstances. Besides ex-post and ex-ante evaluation of national budget plans, fiscal councils could provide advice as to adoptions of fiscal rules to ensure short-term stabilization of economies while simultaneously ensure long-run fiscal sustainability. Fiscal councils could help governments to find a way towards optimal fiscal policy in case a departure from the rules would be necessary. Overall, independent fiscal councils would counteract excessive risk-taking and thus contribute to sound fiscal behavior.

Due to domestic policy reasons, the rules of fiscal discipline could be ignored or changed again, or member states could even cheat on their budget deficit figures. Thus the authors suggest an additional independent European council which monitors whether member states observe national debt brakes. This council must have the right to impose sanctions if member countries do not follow their own rules or even cheat.

4.3. Banking and Financial Market Regulation

Fiscal policy frameworks were not the only vulnerable points that lead to the crisis. The financial system also included certain shortcomings allowing the sovereign debt crisis to gain even more influence on the whole euro area. Fragile European banks, especially system-relevant banks, are one of the most vulnerable parts in the euro crisis. The impact of the sovereign debt crisis made clear that the interconnectedness of the EU banking system achieved levels at which banks in distressed countries that lack an ability to fund and recapitalize themselves through markets has effects on banks at the whole EU level. Better management of bank failures and treatment of systemically important financial institutions thus need further progress.

Several mechanisms and measures have already been introduced to reduce risk in the financial sector. Stress tests being applied by the European Banking Authority are of great importance. Transparent and regular stress tests clear needs for recapitalization and enhances trust among banks and make sure that these banks are able to stem the impact of the crisis. Investors need information about individual banks to feel reassured as their fears are projected onto the capital market.

Financial institutions should improve its capacities and ability to shield them against market distress instead of relying on support from the central banks and governments. Financial market regulation should for instance reconsider the zero-risk weight of sovereign debt as there is no credit business without risk. Historical evidence suggests that interactions between developments in the financial sector and real economic activity are shaping not only recessions but also recoveries (Claessens et al., 2011).

Furthermore, EU banks must increase their equity capital to avoid financial distress in the future. At least they should stick to the Basel-III rules which prescribes a further increase in equity capital compared to the status quo.

4.5. Exit Rules for Member Countries

Last but not least the European Union must introduce the possibility that one country can or must leave the EMU. On the one hand every country which is member of the EMU must have the unconditional right to withdraw from the euro area without having to leave the European Union. On the other hand the euro area members must have the right to exclude any EMU member in case of breaking the rules. For example it should be possible to exclude a country if it does not meet the deficit criteria – budget deficit must be lower than 3% and government debt must be below 60% – for three consecutive years.

4.4. Concluding Remarks

This section demonstrated that a single solution for the crisis does not exist. The solution to the European sovereign debt crisis is a set of measures and instruments that target at different architectural deficiencies of the EMU. Besides fiscal discipline, financial and banking regulations are of special importance. With a strong monetary policy and strong fiscal policies that encompass debt brakes and independent fiscal councils, an important step towards a stronger euro zone can be made. Furthermore, exit rules to leave the EMU must be introduced.

Still, there is no panacea for the euro crisis and patience is definitely needed.

5. Conclusion

The project of the European Monetary Union began in 1989 and was finalized in 1999 with Stage III – the advent of the euro. The independent European Central Bank, with a strong focus on price stability, was established to safeguard monetary policy. Fiscal policy, in contrast, has been left to individual member states. In order to promote fiscal discipline and prevent moral hazards, the EU leaders established the Stability and Growth Pact that prescribed debt and deficit levels for euro area member states.

Although, the European Monetary Union has never been seen as an optimum currency area due to its rigid labor markets and diverse economies, the advent of the euro brought significant advantages to its members. The common capital market removed barriers and led to significant capital flows from the core euro zone countries (Germany and France) to the periphery (Greece, Spain, Ireland, Portugal), boosting growth in the latter countries. While wages and prices rose in these countries, labor productivity remained relatively low, finally resulting in immense labor unit costs. These strongly contrasting developments ultimately led to a dramatic discrepancy in competitiveness in the euro zone.

The European sovereign debt crisis laid bare the divergence within the euro area and unveiled the poor architecture of the monetary union. Beginning 2009 in Greece, the crisis expanded at an enormous pace and soon endangered the existence of the whole euro zone. What at first sight seemed like a sovereign debt crisis developed into a crisis that also entailed banking and financial sectors, economic governance, and even political areas. The turmoil in the euro area forced EU leaders to apply ad-hoc measures to save the EMU from a break-up and Greece from a default. The European Central Bank found itself in a new role as a buyer of sovereign debt, while those member states that have conducted sound fiscal policies ended up paying for those countries that enjoyed the umbrella-like protection from the euro zone and lived beyond their means. Like de Grauwe (2010) pointed out, "mutual solidarity cannot be avoided in a monetary union, even if it implies solidarity with the sinners" (para. 24).

Among a plethora of suggestions the authors of this thesis focused on three possible solutions to the crisis: the ESM, Eurobonds, and withdrawal of financially weak members from the EMU. While the European Stability Mechanism would be able to save the euro zone from a break-up, the mechanism is criticized for its lack of democracy and transparency as well as for not providing enough incentives to pursue sound fiscal policies. Thus, the ESM is judged of not being appropriate to solve the current euro crisis.

The second proposal under examination focused on Eurobonds. This instrument finds as many opponents as proponents. Successful implementation of Eurobonds depends strongly on its form of application. While the main argument for Eurobonds includes a large liquid euro zone bond market that could eliminate liquidity constraints and provide distressed euro zone members with lower interest rates for loans, opponents of the Eurobonds, above all the German Chancellor Angela Merkel, emphasize that such common bonds would increase borrowing costs for stable countries and put them at risk caused by joint guarantees. Additionally, Eurobonds would weaken member states' incentive to follow fiscal discipline. Thus, Eurobonds are not seen as a successful tool to be used to solve the crisis.

Finally, a withdrawal of financially weak members from the euro zone has been considered as a third suggestion to solve the euro crisis. Although, the withdrawing country may face some advantages by devaluating its currency and imply its own monetary policy, these positive effects would hold only in the short-term. Other short-term effects are the negative impact on the rest of the euro zone due to banking exposure and contagion effects. Furthermore, an exit from the euro zone is not considered in the Treaty so far. In the long run, excluding a country from the euro zone should be possible. Hence the authors suggest to change the EU treaty to both allow a withdrawal and exclusion from the EMU.

In the subsequent chapter the authors established their own proposal for a solution based on four areas: monetary policy, fiscal policy, banking and financial supervision, as well as change of the EU Treaty. From the authors' point of view, the ECB intervention in the crisis should be limited to a short-term solution to restore confidence in the markets. In the long-run the ECB should stick to its independence to ensure price stability in the EMU. With regards to fiscal policies, the authors propose to strengthen fiscal discipline and the Stability and Growth Pact by introducing national debt brakes. In contrast to the centralized approach of the Stability and Growth Pact, debt brakes could take into account the divergent economic situations of the euro area member states and thus provide a more appropriate regulation for sound fiscal policies. In order to guarantee effective monitoring and enforcement of debt brakes, the authors turn to independent fiscal councils at national and European level. Addtionally, further progress should be made in terms of banking and financial market regulations to ensure that banks have enough safeguards to shield them against market distress. Finally, the EU Treaty should be changed to allow euro area member states to leave or to be excluded.

The euro crisis is not only a consequence of fiscal profligacy, it goes beyond this level. Credible institutional frameworks as well as economic and financial measures are essential to ensure fiscal discipline and a smooth functioning of the EMU. Each approach has its advantages and drawbacks. As Eichengreen (2007) points out that a “monetary union by its nature entails compromises and trade-offs”. Thus, there will be no optimum solution for each national state and the EMU as a whole. So far, strong focus has been put on fiscal issues and leverage in public finances. Still, the EMU will need more solutions that foster competitiveness and enhance liquidity to stimulate growth and regain market confidence. In the short-term the European Monetary Union will probably encompass slow growth, lower living standards, and even social unrest caused by stricter austerity programs. Although immediate return to economic health is not possible in the near future, in the long run the suggested measures could result in a stronger monetary union coming one step closer to a stable euro.

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Appendices

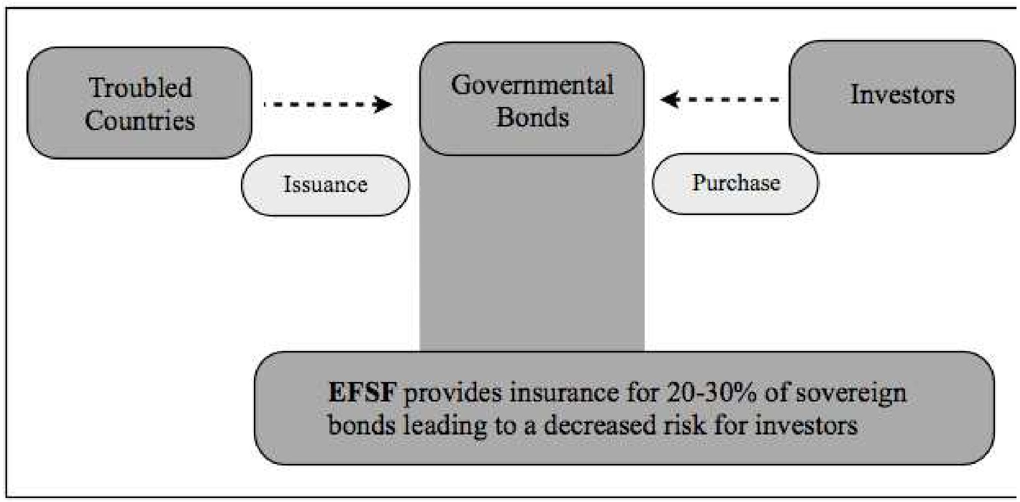
Appendix A – Debt and Banking Crises Logic

Debt and Banking Crises Logic
In theory, debt has a sustainable character as long as debt increases parallel to the GDP growth. This fact draws the attention to two figures: actual and expected GDP growth as well as current and expected budget deficits. A debt crisis occurs when investors change their previously positive perception about government's ability to serve its debt. If the market fears a default, it causes interest rates to rise in order to compensate for the extra risk, which results in an increased budget deficit if GDP does not follow the increase. Thus, expectations play a crucial role in the development of the interest payments as well as in the default risk of a country. Banks can experience similar crises, whereby two distinctions have to be made. Banks borrow capital at short-term in order to lend it long-term. If the capital the banks lend is fixed to long-term projects the bank will not be able to pay out the short-term funders. Leverage even puts more risks into this business model – for each euro borrowed the bank lends higher amounts long-term. While in booms this model is profitable; it becomes a risk in recessions. The interconnectedness of governments and banks has been demonstrated in the Spanish real estate bubble burst. During the increase of real estate prices, Spanish budget experienced a surplus while the debt looked sustainable. When the bubble burst, budget deficit increased by more than 10% in a period of two years, putting Spanish banking system under pressure. Reinhart and Rogoff (2009) affirm the effect by pointing out that when a credit bubble bursts, private debt becomes public debt. The main difference between government and bank debt lies in its dimensions. While the debt of euro zone countries accounts for about 70% of its GDP, banks' liabilities have a significantly different dimension. In 2007, German bank debt was over 300% of the country's GDP. This figure demonstrates a possible impact of systemic banking crises that could affect a whole nation and not only the banks. Lehman Brothers presented an extreme example. News about its default affected the whole US credit market within few hours and the world within few days. Banks have an immense influence on the economies and its interconnection bears a high risk of contagion effects.

Source: Adopted from Baldwin & Gros (2010)

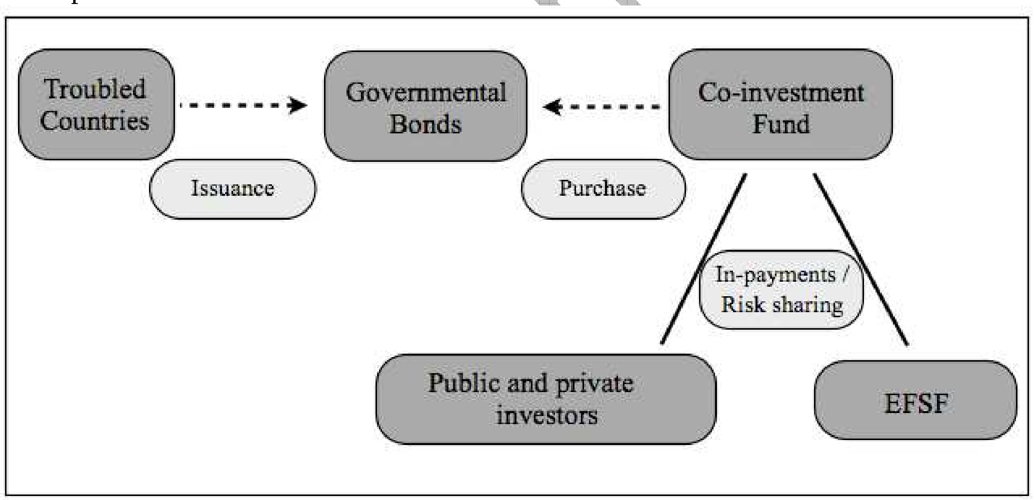
Appendix B – EFSF Leverage Mechanism

Option 1: EFSF Partial Risk Protection



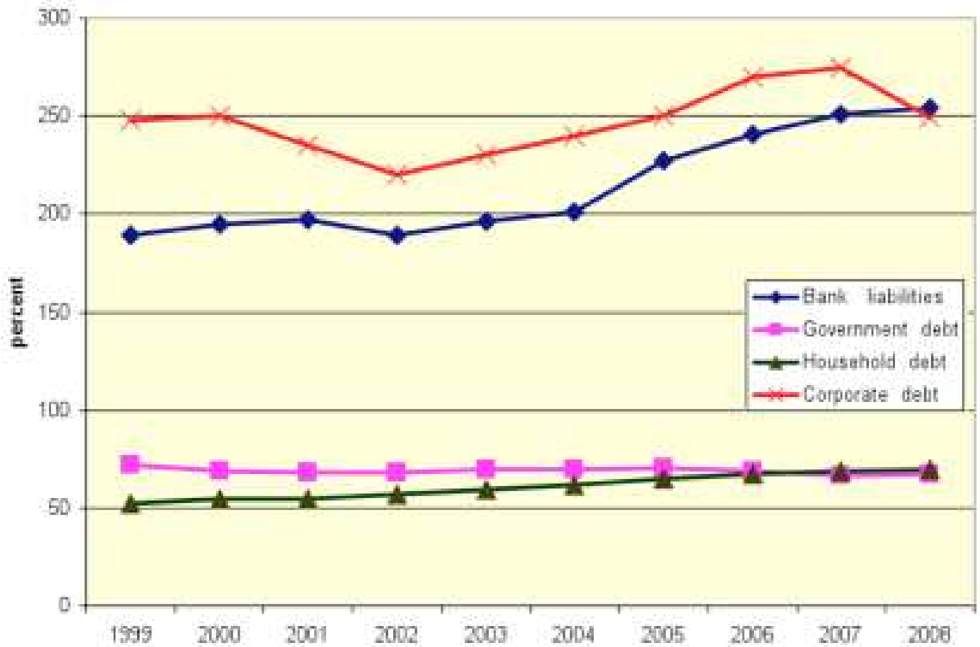
Source: Authors' compilation

Option 2: EFSF Co-investment Fund



Source: Authors' compilation

Appendix C – Private and Government Liabilities in the Euro Zone (Share of GDP)



Source: de Grauwe (2010)

Appendix D – Extracts from the ESM Treaty Draft

ARTITLE 8 - Authorised capital stock: (1) The authorised capital stock shall be EUR 700,000 million.
ARTITLE 9 - Capital calls: (3) ESM Members (…) **irrevocably** and **unconditionally** undertake to pay on demand any capital call (…) within seven days of receipt.
ARTICLE 10 - Changes in authorised capital stock: (1) The Board of Governors (…) may decide to **change the authorised capital stock** and amend Article 8 and Annex II accordingly.
ARTITLE 21 - Coverage of losses: If an ESM Member fails to meet the required payment under a capital call (…) a revised **increased capital call** shall be made to all ESM Members with a view to ensuring that the ESM receives the total amount of paid-in capital needed.
ARTITLE 27 - Legal status, privileges and immunities: (2) The ESM shall have full legal personality; it shall have full legal capacity to (c) be a party to legal proceedings; (3) The ESM, its property, funding and assets (…) shall enjoy **immunity from every form of judicial process**; (4) The ESM, its property, funding and assets (…) shall enjoy immunity from every form of judicial process or any other form of seizure, taking or foreclosure by executive, judicial, administrative or legislative action.
ARTITLE 30 - Immunities of persons: (1) (…) Chairperson of the Board of Governors, Governors, alternate Governors, Directors, alternate Directors, as well as the Managing Director and other staff members shall be **immune from legal proceedings** (…) and shall enjoy inviolability in respect of their official papers and documents

Source: Author's compilation based on the ESM Treaty (2011)