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FROM GLOBAL FINANCIAL CRISIS TO SOVEREIGN DEBT CRISIS IN THE EURO AREA: REAL CAUSES

EURO BÖLGESİ'NDE KÜRESEL FİNANSAL KRİZDEN BORÇ KRİZİNE: GERÇEK SEBEPLER

Dr. Derya YILMAZ[1]

ABSTRACT

Global Financial Crisis (GFC) made a lasting impact on the World Economy. But in Europe, the impact was more challenging: GFC paved the way to a Sovereign Debt Crisis (SDC) that put the monetary integration under risk. However, the GFC was only a triggering factor, the problems of the Euro Area laid back at the start of monetary integration. The aim of this study, is to analyze the real causes of the SDC in order to offer right solutions for the crisis and to avoid recurrence. In this framework, analyzes in this paper reveal that, the Euro Area members are structurally different. One size fits all monetary policy in the context of monetary union, leads to a diverging competitiveness trends and concluded with huge imbalances. Any triggering factor could surface these imbalances and started a full-fledged financial crisis. Thus, in order to provide survival of the Euro, member countries should do structural reforms to converge on this ground.

***Keywords**: Global Financial Crisis, Sovereign Debt Crisis, Current Account Imbalances*

***Jel Codes:** F45, F16, G01, F32*

ÖZET

Küresel Finans Krizi (KFK), Dünya ekonomisinde derin etkiler bırakmıştır. Ancak Avrupa'daki etkileri daha sarsıcı olmuştur: KFK Avrupa parasal entegrasyonunu tehlikeye sokan Borç Krizine kapı aralamıştır. Fakat KFK sadece bir tetikleyicidir. Euro Bölgesinde problemler parasal entegrasyonun başlangıcında da vardır. Bu çalışmanın amacı Borç Krizi'nin gerçek sebeplerini ortaya koyarak doğru çözümler önermek ve bu sayede yeniden bir kriz oluşmasının önüne geçmektir. Bu çalışmadaki analizler Euro Bölgesi'ndeki ülkelerin yapısal olarak birbirlerinden farklı olduğunu ve tek para politikası altında bu farklılıkların rekabet avantajlarında farklılıkla sonuçlandığını göstermiştir. Bu rekabet avantajı farklılıkları ciddi dengesizlikler olarak kendini göstermiştir. Tetikleyici bir faktör ise bu dengesizlikleri su yüzüne çıkararak finansal krizin oluşmasına yol açmıştır. Bu nedenle Euro'nun devamını sağlamak adına üye ülkeler yapısal reformlar yapmalı ve bu alanda yakınsamalıdır.

***Anahtar Kelimeler**: Küresel Finans Krizi, Borç Krizi, Cari Hesap Dengesizliği*

***Jel Kodları**: F45, F16, G01, F32*

1. INTRODUCTION

Global Financial Crisis (GFC) was a breaking point in the world economy. The general view about the financial system had changed. In this respect, financial institutions- especially banks and regulatory bodies have been modified. Financial stability has been redefined and active crisis management resuscitated. However, for the Euro Area, it was more prominent as it triggered the first crisis in the Euro Area and put the survival of the European integration at risk. GFC spread to the other side of the Atlantic as a banking crisis at first. European

[1] Uludağ Universitesi, İktisadi ve İdari Bilimler Fakültesi, İktisat Bölümü, deryay@uludag.edu.tr

Central Bank (ECB) - unlikely its counterparts such as Federal Reserve and Bank of England- was conservative about banking interventions. Thus, the governments provided assistance to avoid banking collapses. Interventions to the ailing banking system put strain on government finances. However, sovereign debt markets remained relatively calm till the last quarter of 2009. With the unfolding of the fraud on Greek statistics, the yields of the Greek government bonds skyrocketed and the crisis transformed into a full-fledged Sovereign Debt Crisis (SDC).

SDC started in Greece, but quickly spread to other indebted periphery countries –Ireland, Portugal, Spain and Italy, which are famously called GIPSI[2]. These countries' government bond yields spiked tremendously and some of them were shot out from the markets. The crisis had also repercussions in the real economy. Real GDP shrank and unemployment climbed to the highest level ever seen. The social unrest mounted up in these countries as a consequence.

SDC also threatened the survival of the Euro, especially after the crisis spread to the two giants: Spain and Italy. As breaking up the Euro would impose greater costs to all members, European Institutions and Member Countries tried to avoid this scenario. ECB tried to calm markets by providing liquidity to markets, support the public and private bond markets. Indeed, Draghi himself declared that they could do anything to save the Euro. European Commission (EC) with the consent of all members created new institutions: European Financial Stability Fund (EFSF) and European Financial Stability Mechanism (EFSM)[3]. These institutions would provide credits to indebted governments. ECB, EC and IMF- which are also known as *troika*- bailed out the countries that could not reach private funds conditioning on programs based on austerity measures. But these countries suffered a lot and could not record admissible growth rates. The prolonged recession caused social unrest and anti-austerity movements gained support in these countries.

The bailout programs based on austerity measures blamed governments for being fiscally irresponsible. This may be true for Greece, but Ireland and Spain recorded budget surpluses before the crisis. This proves us the inaccurate diagnosis of the SDC and this is the major reason behind this prolonged recession. In fact, the problems of the Euro Area dated back to Maastricht. The structural differences of the countries were discounted with the optimism created by the Euro. When the GFC hit the Europe, the unsustainable imbalances created by these structural differences have surfaced. This study different from previous studies search for the real causes of the crisis in the bright era of the Euro- the first 10 years. The aim of this study is to analyze structural differences between countries and the role of these differences in the formation of SDC. With this aim, the structural differences and the imbalances created as a result of these differences between the GIPSI countries and the core countries – especially Germany- prior to the financial crisis will be scrutinized with descriptive analysis. Then, these will be compared with the performances of these countries' sovereign debts during SDC. According to the results of analyzes, the countries that were severely affected by the SDC, were the ones that had a high unit labor cost increases before the GFC, that is between 1999 and 2007. In structurally different countries, a one-size fits all monetary policy created divergent unit labor cost trends, competitiveness deteriorated and imbalances mounted. These countries were hit badly by the SDC and recorded elevated spreads during the crisis. This study has a deductive approach. First, the crisis will be explained and then the

[2] In this study, the periphery countries and GIPSI (Greece, Ireland, Portugal, Spain and Italy) will be used interchangeably. With the term core countries I mean Germany, France, Austria, Belgium and Netherlands. But for space considerations I use Germany in the graphics and tables representing the other core countries as well.

[3] This was replaced by a permanent mechanism, the European Stability Mechanism (ESM), which is a crisis resolution mechanism, and had a right to issue debt. ESM was inaugurated on October 2012.

causes will be analyzed in detail. In this framework, in the following two sections, the GFC and SDC will be reviewed in a chronological order. In the third section the real causes and how they induced a SDC will be examined in detail. Finally, the last section will be devoted to concluding remarks.

2. GLOBAL FINANCIAL CRISIS

Global financial crisis (GFC) began as a subprime mortgage market crisis on August 2007. It evolved into a global financial crisis with the fall of Lehman Brothers on September 2008. Nevertheless, the roots of the financial crisis dated back to the dot- com crisis. After the dot-com crisis to abate the recession, Fed began to cut the federal funds rate. Federal funds rate was 6.5 percent in the beginning of 2001, but it was lowered to 1.75 percent in the beginning of 2002. It further decreased to 1 percent on July 2003.[4] This accommodative monetary policy stance led to a credit boom in the US and concluded with an asset appreciation- especially in housing sector.

Furthermore, housing appreciation was a major determinant of the rise in consumer spending due to borrowing against housing equity in the US. In fact, housing dynamics were in a vicious circle. Expectations based on housing price increases led to an expansion of mortgage credits, which pushed up the house prices in return (Obstfeld and Rogoff, 2009:28).

This housing bubble and credit boom in the US were also fueled by the surpluses of the developing countries -especially oil exporting countries. Bernanke (2005) emphasized this point in his famous speech in which he dubbed this fact as a "global saving glut". The current account deficit/GDP ratio in the US was 1.5 percent in 1996. Then, it rose to the 5.8 percent in 2006. This deficit was financed by the surpluses of Asian countries- especially China- and the oil exporting countries. In addition to financing US deficits, high surpluses depressed the real interest rates. Thus, the investors in these countries searched for high yields and underestimated the risks. In this respect, the funds in these countries flew to the investment banks of the developed world- such as Goldman Sachs, Merrill Lynch, Lehman Brothers or Northern Rock. They were invested in mortgage markets as mortgage related instruments yields were higher. Rising investment in mortgage market eventually fueled the housing boom (Reinhart and Rogoff, 2011:2010).

However, inflating the housing bubble could not be the sole factor that caused the global financial crisis. According to Claessens et. al (2010), the new feature of the crisis was the sophisticated financial products that increased the opaqueness of balance sheets. This is called financial engineering. With financial engineering, the banks that provide mortgage credits- originator banks- securitized these credits and sold mortgage backed securities (MBS) to investment banks. They acquired liquidity in return and transferred the credit risk. But this is not the end of the story. The investment bank, that acquired this MBS repackaged it and sold it to the other investment banks. This type of securitization was the major determinant of systemic risk according to the Farhi and Triole (2009).

Many instruments were created with the help of financial engineering such as Credit Default Obligations (CDOs) and Structural Investment Vehicles (SIVs). But no one knew the real risk of these products. Even rating agencies did not know the real risk. They rated these products and the grades based on the price. In fact, the operation of these agencies was also flawed. They rated the instruments of the investment banks that paid their fees. Thus, they

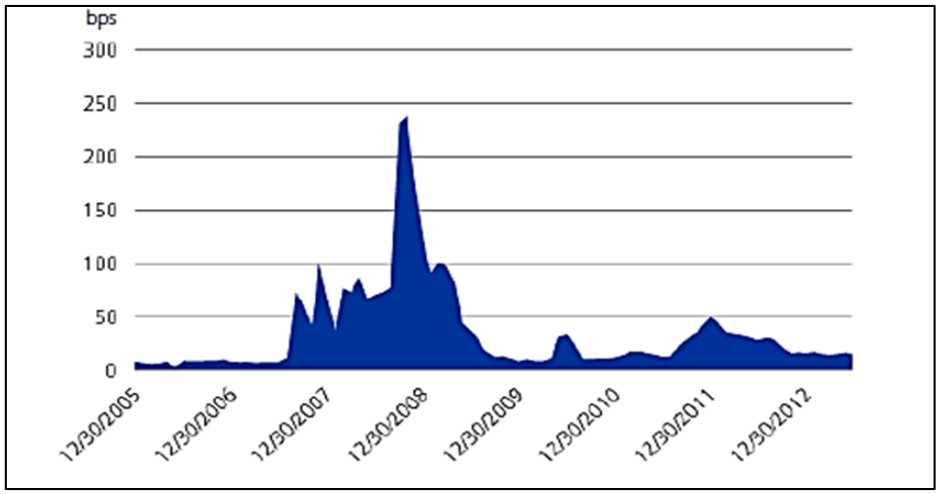
[4] The data were drawn from http://www.federalreserve.gov/monetarypolicy/openmarket.htm

underestimated the risks in these products and gave good ratings. It is important to note that, the regulatory institutions tolerated these agencies.

The things began to change when the Federal Open Market Committee (FOMC) embarked on a contractionary monetary policy beginning from June 2004 due to the upward pressures on prices. In July 2006, the federal funds rate exceeded 5 percent (Obstfeld and Rogoff, 2009:18). This led to a rise in the rates of adjustable rates mortgages and exceeded the payment capacities of mortgage debtors. Delinquencies began and the home prices began to decline. This also caused the MBS values to fall. Then, fire sales arose and the banks began to deleverage. Then, BNP Paribas declared that they could not price the SIVs and shut three mortgage market investment funds on August 2007. This date was accepted as the starting point of the financial crisis.[5] Then counterparty risks mounted up and the confidence was eroded in the markets. This would also lead to a drop both in credit demand and supply. The credit market froze as a result. In March 2008, Bear Stearns was bailed out by FED and Treasury then sold to JP Morgan Chase. However, on September, 15; Lehman was let to go bankrupt. This shocked the markets and transformed the sub-prime mortgage market crisis into a full-fledged global financial crisis.[6]

In Figure.1, one can see the difference between LIBOR and OIS[7], which generally represents the financial stress in markets. The spread jumped from 10 bps to 100 bps on August 2007 and approached 250 bps on September 2008.

Figure 1: LIBOR-OIS Spread ($, 3 months)



Source: Bloomberg

The crisis easily became a global financial crisis as a quarter of the mortgage market in the US belonged to foreigners. Thus, foreigners could have bought these toxic mortgages.

[5] Felton and Reinhart (2008) in their chronological study of the financial crisis, determined that the starting point was the fall of Ownit Mortgage Solutions on December 2006. But the widely accepted starting point was the declaration of BNP Paribas on August 2007.

[6] Mishkin (2009) asked even if FED had bailed out the Lehman Brothers, could the global financial crisis be avoided? He answered no. As the systemic risk skyrocketed before the fall of Lehman, it would be come up with another fact. Bailing out Lehman would also lead to moral hazard problems which would increase the systemic risk in return.

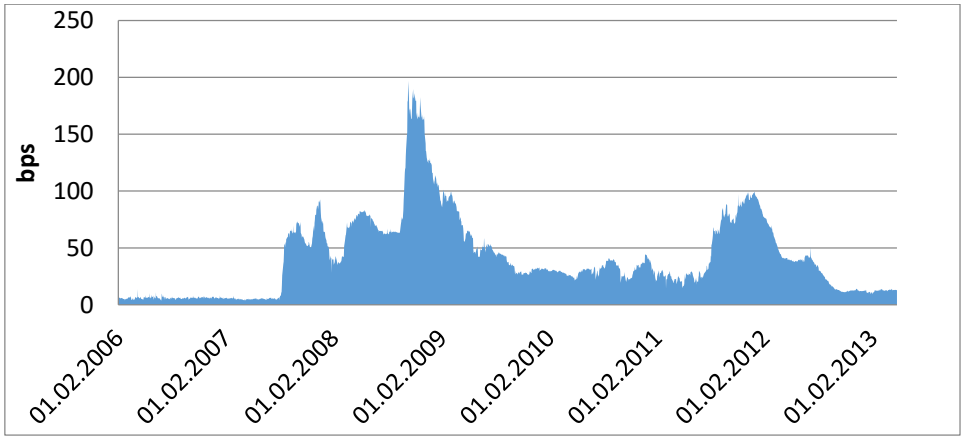
[7] OIS means overnight index swap which swaps the overnight rate with a fixed interest rate. As an overnight rate, the widely used one is federal funds rate. The spread between LIBOR and OIS is used to follow the liquidity and credit risk as it eliminates the expectations (For details see Taylor(2008), Abbasi and Linzert (2011)).

Furthermore, the financial markets were so much integrated when compared to the three decades ago. This means that the US had exported its crisis to the world (Stiglitz, 2010:21).

3. PATH TO THE SOVEREIGN DEBT CRISIS

In the first phase of the financial crisis, Eurozone was thought to be a safe-haven and the demands for Euro denominated instruments rose (Wyplosz, 2009:22). When the cross-border financial flows came to a halt in the last quarter of 2008, the European banks –especially the ones that relied on foreign funding- were not able to find credits. The risks in the markets had risen in this respect. In figure.2, one could follow the Euribor-OIS spread, which represents the financial stress in the markets. It is similar to the one shown in the previous figure. The spread was 5 bp in 2006, rose to 65 bp in August 2007 and reached 200 bp after the fall of Lehman.

Figure 2: Euribor- OIS Spread (€, 3 months)



Source: Thomson's Reuters Datastream

In addition to the liquidity freeze, European banks faced further troubles as the housing bubbles burst in Greece, Spain and Ireland. The liquidity squeeze after the first shock in August 2007 and the loss of confidence in the markets led to the bursting of these housing bubbles. The banks that provided housing credits faced with serious losses and their balance sheets were deteriorated. The governments of these countries needed to provide generous supports to ailing banking systems. The most striking example was the Irish banks. The banks of Ireland were funded by international short-term markets. After the collapse of Lehman, these markets dried up, so the banks were faced with a liquidity crisis. In this respect, the Irish government provided substantial guarantees to avoid the collapse of the banking system.[8] In Table.1, one can follow the financial support of governments to the financial sector of selected countries between 2007 and 2011. As could be observed in the table, Ireland and Greece provided generous support to their respective financial systems.

[8] In Ireland, the total assets of the banks are 4 times greater than the GDP.

Table 1: Support Programs to Financial Institutions (2007-2011)

	Liquidity Support *(percentage point increase in central bank claims on financial institutions as a ratio of deposits and foreign liabilities)*	***Gross restructuring Costs*** *(%GDP)*	***Asset Purchases*** *(%GDP)*	***Asset Guarantees*** *(€)*
Greece	42.3	25.3	-	-
Ireland	16.3	40.7	20.3	19.7
Portugal	16.7	0	-	-
Spain	3.5	3.8	1.8	-
Italy	5.7	0.3	-	-
Germany	3.5	1.8	11.1	6.1

Source: Leaven and Valencia (2012)

With the beginning of 2009, the real sector repercussions of the financial crisis became evident. The real GDP shrank 4.5 percent in 2009 in the Euro Area. The recession caused tax revenues to fall as well. Furthermore, with the operation of automatic stabilizers the expenditures rose. Moreover, fiscal stimulus programs were introduced in succession to support the real sector. Eventually, with falling tax revenues and rising expenditures – both with fiscal stimulus and supporting financial institutions- put a strain on government finances.

In Table.2, the deterioration of the fiscal balances could be observed. In 2006 Ireland and Spain had budget surpluses, but in 2010 this turned to a deficit. Especially in Ireland, the budget deficit was one third of the GDP in 2010. Debt levels have increased accordingly. In Ireland, debt level tripled in 4 years. In Spain, it was nearly doubled in the same period. As a comparison, we can look at the debt level in Germany. It had also risen, because German bank balance sheets were also hampered after the financial crisis due to their close ties with the US banks. Thus, Germany also provided generous support to the financial system (see Table.1). But the debt level had risen not as much as GIPSI countries. Furthermore, it decreased in 2013 as the country recovered early.

Table 2: Fiscal Indicators

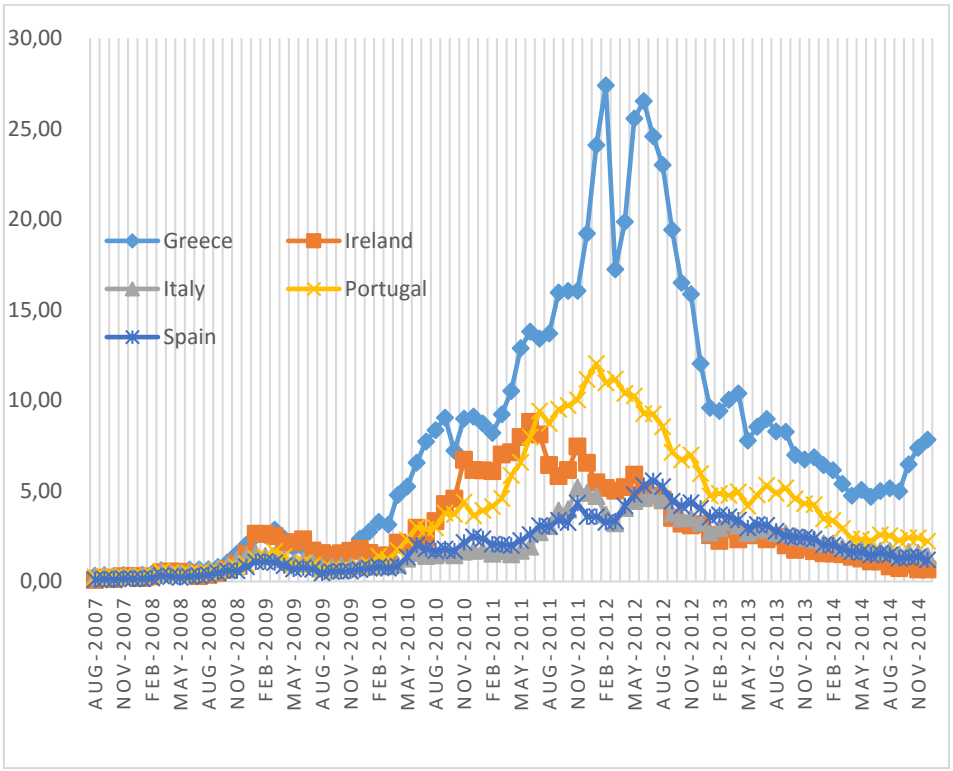
	Net Lending/net barrowing of general government (% GDP)		***General government consolidated debt (% GDP)***		
	2006	**2010**	**2006**	**2010**	**2013**[9]
Greece	-5,9	-11,2	103,5	146,2	177
Ireland	2,2	-32,3	23,6	86,8	120
Portugal	-4,3	-11,2	69,2	96,2	129
Spain	2,2	-9,4	38,9	60,1	93,7
Italy	-3,6	-4,2	102,5	115,3	128,8
Germany	-1,7	-4,2	66,4	81	77,4

Source: AMECO

[9] The guarantees to the financial sector appeared on the contingent liabilities and it was not included in the budget deficit or debt level of the respective year. If the government pay for the guarantees, it is recorded as a capital transfer and rises the debt level. The guarantees provided between 2007 and 2011, would increase the debt level if the government pay for these in the future. Thus, in Table.2, one could follow the debt levels of 2013.

Despite rising deficits, until the end of 2009, the problem was thought to be a banking problem. Sovereign debt markets remained stable at first (Lane, 2012:55). However, the triggering factor was the election in Greece. The newly elected government revised the budget deficit/ GDP estimates for 2009, from 6.7 percent to 12.7 percent. This shocked the markets and rating agencies downgraded the Greek bonds (Nelson, et. al, 2010:4). Furthermore, in the beginning of 2010, Greece was condemned for falsifying the data about its public finances. After all, the rates of Greek bonds skyrocketed. The spread between bonds of GIPSI countries and German bunds could be observed in Figure.3. The spreads of Greek bonds were separated from other countries beginning from the start of 2010 and exceed 27 percentage points by February 2012.

Figure 3: Sovereign Bond Spreads



Source: OECD

In May 2010, Greece could not be able to borrow from markets. When the country was about to default, the *troika* provided €110 billion rescue fund to Greece. After this, the rating agencies turned to other indebted Euro Area countries and downgraded them as well. By doing this, rating agencies helped the spread of the sovereign debt crisis. Until the crisis appeared in Greece, they could not realize the problems of Greece and gave good ratings. However, in the aftermath of the crisis they overreacted and downgraded other indebted countries (De Grauwe, 2010:1). Gartner et al. (2011) argued that GIPSI countries got lower grades compared to other 26 OECD countries in both 2009 and 2010. They further argued that these lower grades were the major reasons of the interest rate hikes in sovereign bonds.

After the Greek crisis, both rating agencies and investors in sovereign debt markets turned their eyes on Ireland because of high deficits and rising debt level. Rating agencies downgraded Ireland quickly and investors lost confidence. The rates of the 10-year sovereign

bonds exceeded 10 percent. Thus, Ireland was also shut out from the markets on November 2010. *Troika* provided €85 billion rescue fund to the country.

Portugal was the third country hit by sovereign debt crisis. But in Portugal, there were no housing bubble or unsustainable deficits. Portuguese banks relied on foreign lending (Reis, 2013:153). This made the country fragile and after the Greek crisis, rating agencies also downgraded Portugal. Despite the government announced austerity programs, it was not able to restore the confidence. The country could not find funds from the markets and bailed out by *troika* on May 2011 with a €78 billion fund.

The *troika* provided financial assistance to Greece but imposed a program. With the financial assistance the sovereign default was avoided. The program aimed to make Greece to reach private sources of funding. In this respect, the program called for Greece to give primary surplus in order to lower the sovereign debt. Greece imposed austerity measures to reach the program targets. At first, there was an optimism that Greece would meet the targets and debt ratios would be reduced. But in early 2011, this optimism evaporated. EC revised the deficit-2 percent above the previous estimate. This meant that meeting the targets would be less possible. Furthermore, the tensions rose again in the sovereign debt markets due to Ireland and Portugal. It was expected that Greece could borrow from markets in late 2012. But by early 2011, the assumptions of early return to private sources of funding were not materializing (Ardagna and Caselli, 2012:11). Thus, on July 2011, the troika provided a second bailout program- amounting to €109 billion- to Greece[10].

In the summer of 2011, the crisis spread to the two giants: Spain and Italy. In Spain, the problem was rooted in the banking system. With the bursting of the house price bubble, the banks' balance sheets deteriorated. On the other side, high debt level of Italy worried the investors. The 10-year bond rates of these countries spiked accordingly. The credit rating institutions downgraded the bonds of these countries as well. The sovereign default of these countries threatened the survival of Euro as they were the two big economies of Euro Area. Thus, ECB started a program called Outright Monetary Transactions (OMT) and bought these countries' bonds from secondary markets to support sovereign bonds market. Furthermore, Eurogroup provided financial support to restructure financial institutions in Spain. The European Financial Stability Fund (EFSF) provided €100 billion to Spain, but the country only used €38.9 billion within this context (see EC, 2012).

4. THE REAL CAUSES

GFC paved the way to the sovereign debt crisis in Euro Area. But GFC was only a triggering factor. The problems of the Euro Area countries dated back to Maastricht. Euro Area was far from being an Optimum Currency Area (OCA) at that time.[11] On the contrary, according to Frankel and Rose (1997), even if the member countries are not suitable for OCA ex ante, they would be suitable ex post. They argued that, using a single currency would foster bilateral trade and countries would converge accordingly. Furthermore, political motives dominated the economic ones. Integrated Europe was politically desirable for all member countries.[12] Finally, US was not an OCA at first (see Rockoff, 2000). As the time passed by,

[10] In this program, IMF decided to apply Private Sector Involvement (PSI) procedure. In this procedure, IMF could only provide funds to the countries that has sustainable debt levels. If the country has unsustainable debt levels, the bondholders should comply with a haircut. By March 2012, the restructuring of Greek bonds on this procedure was completed. With this restructuring, the nominal value of the bonds were reduced by 53.5 percent.

[11] See Bayoumi and Eichengreen (1997), Baldwin and Wyplosz (2009) and the references therein.

[12] Virtually, France wanted to dilute the dominance of the Bundesbank and impose a single currency condition for the ratification of Germany's reunification. But for Germany it was also a good deal, because with the help of

Euro Area would turn to be an OCA. These arguments encouraged European countries and 11 countries formed the EMU in 1999.[13] However, they retained their structural differences. They did not feel the need for structural reforms in the optimistic environment of Euro. When the GFC hit Euro Area, things began to change. This section is devoted to this structural differences and how they induced the SDC.

4.1 Growing Imbalances

Prior to the crisis, optimism dominated the Euro Area economy. The spreads between long term interest rates fell (see Figure.3) and the growth was ignited through domestic credit. In Table.3 one could see the private credit dynamics of selected countries. The share of private credit in GDP was multiplied in all GIPSI countries. The major upsurge was in Spain and Ireland. In Spain, the increase was 97 pp and in Ireland it was 106 pp. But in Germany, the private credits/GDP ratio rose through 2002, but fell again through 2007. The average growth rate between 1999 and 2007 exerts the same picture. The average growth was more than 6 percent in Ireland and nearly 4 percent in Greece and Spain. However, the average growth rate was 2.3 percent in the whole Euro Area. Furthermore in Germany, with respect to low credit growth, the average growth rate was 1.6 percent.[14]

Table 3: Private Credit Dynamics and Average Growth Rate

	Private credit by domestic banks and other credit institutions (% GDP)			*Average GDP growth*
	1997	**2002**	**2007**	**1999-2007**
Greece	29.9	56.5	84.4	3.9
Ireland	72.7	100.6	178.3	6.6
Portugal	71.3	129.6	148.1	1.8
Spain	73.4	100.1	171.0	3.8
Italy	53.8	76.9	95.1	1.5
Germany	107.7	117.2	104.6	1.6

Source: Global Financial Development Indicators, World Development Indicators

Besides these positive developments, the current account imbalances mounted as well. In Table.4, one can follow the cumulative current account balances, the cumulative inflation between 2000 and 2007 and the real effective exchange rate (REER) in 1999 with respect to the historical average. In Greece and Portugal the cumulative current account deficit was around 70 percent. The REER was also above the historical average in 1999 in these countries. This means that they had entered the Euro Area with appreciated exchange rates. Intrinsically, they had started with a disadvantageous position in competitiveness. In Spain, the current account deficit was also high. In Ireland and Italy the deficit was moderate. However, in Germany there was a cumulative surplus. In the deficit countries, the cumulative inflation was also above the normal.

single currency , the country could guarantee a market for its exports. But as it was afraid of inflationary moves and irresponsible fiscal acts of the southern members, it insisted on the debt and deficits restraints for members.

[13] Greece was only able to satisfy the criteria in 2001 and joined thereafter.

[14] In Italy and Portugal, the average growth rate was below the Euro area average. In Italy, the stagnant growth was a major problem in that period and Euro was blamed for this stagnant growth. Furthermore, the monetary policy of ECB was perceived to be very tight for an economy like Italy's (See Eichengreen, 2010a). Portugal lost its competitiveness after the Euro area membership as the country entered the union with an appreciated real exchange rate and this hampered the Portuguese growth potential (See Reis, 2013).

Table 4: Current Accounts and Inflation in the Euro Area (2000-07)

	Cumulative Current Account *(as of %GDP)*	**Cumulative Inflation**	**REER in 1999 relative to 1980-99 average**
Greece	-67 %	26.2 %	9.4%
Ireland	-15 %	32 %	-5.7%
Portugal	-71 %	24.4 %	12.3%
Spain	-46 %	25.8 %	-1%
Italy	-10 %	18.6 %	-3.4 %
Germany	26 %	12.9%	-2.4%

Source: Baldwin and Gros (2010), Chen et.al (2012) and AMECO

Before the GFC, this process was deemed a normal catch-up effect. The peripheral Euro Area countries had lower wages and prices compared to the cores, and in the context of convergence hypothesis, the wages in the former had to rise. According to Balassa-Samuelson effect, this would in turn boost the prices. However, things would be more complicated in a monetary union. Alan Walter famously criticized the European Monetary System (EMS) on these grounds. In a common monetary policy with similar interest rates, the real interest rates would be lower in high inflation countries and higher in low inflation countries. This also means that the monetary policy stance would be more expansionary in high inflation countries and contractionary in low inflation ones, which would create a growing disequilibria in return: inflation would increase in high inflation countries and decrease in low inflation ones. Rising inflation in a fixed exchange rate system, would cause a deterioration in current accounts by hampering competitiveness. But according to Angeloni and Ehrman (2004) and Mongelli and Wyplosz (2008), this effect could be compensated with the declining demand through an appreciating real exchange rate. Mongelli and Wyplosz (2008), in the introduction of the report prepared by European Commission for the 10th anniversary of Euro, argued that *"this process is self-equilibrating and current account divergences are no cause of concern"*.

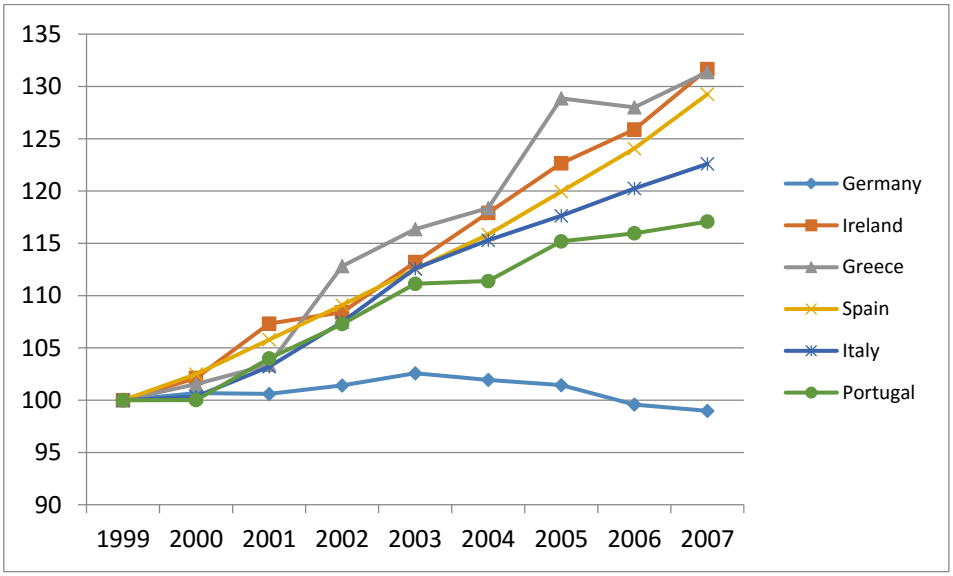
Theoretically, it is true that fast-growing countries faced current account deficits. They could attract capital –thanks to the high growth- and finance these deficits. But with an exception: even if these funds could be channeled to the productive sectors and contributed to the future growth (Giavazzi and Speventa, 2010:7). However, these funds were channeled to housing market instead of productive sectors. The house prices rose 12.5 percent annually in Ireland between 1997 and 2007. In Spain, in the same period, house prices rose 8 percent annually. However, in the US, house prices rose 4.6 percent annually. We see the similar pattern in the share of construction sector in GDP. Between 1997 and 2007, the rate of construction in GDP rose from 9.8 percent to 13 percent in Spain. In the same period, this ratio rose from 7.9 percent to 10.4 percent in Ireland. But it only rose from 4.6 percent to 4.9 percent in the US (Yifun-Lin and Triechel, 2012:8). House related construction sector would not result in productivity gains or support future growth. In fact, these only helped to inflate the house price bubble.[15]

[15] According to Taylor (2008), the interest rate deviated from the Taylor rule for Euro Area members. In Spain, Ireland and Greece, this deviation was the highest and this led to house price bubbles in these countries.

4.2 Structural Differences

Berger and Nitsch (2010) argued that these imbalances were large, persistent and above the norms. According to the authors, these were a symptom of underlying rigidities or distortions. The underlying distortions stemmed from the structural differences of member countries. Boltho and Carlin (2012) argued that rather than asymmetric shocks in the Euro Area, there were asymmetric policies. The reason behind this is the different socio-cultural structures of the countries. There are two different growth models that are prevalent in the Euro Area. Core countries -namely Germany, Austria, Netherlands, Belgium- followed export-led growth strategies. They were able to decline their labor cost and gain a competitive advantage. Dustman et al. (2014), in their study, focused on German economy by stressing the role of several labor market reforms after the reunification on the success of Germany. Germany increased the labor market flexibility in this context. In 1996, with the cooperation of work councils, trade unions and employer associations, the zero-inflation in nominal unit labor cost was targeted in Germany. The bargaining process in Germany became decentralized. This enhanced the flexibility of the labor market (Bonatti and Fracasso, 2013:1029). In Figure.4, one can observe that, Germany was able to achieve zero-inflation unit labor cost between 1999 and 2007.

Figure 4: Nominal Unit Labor Cost (1999=100)



Source: AMECO database.

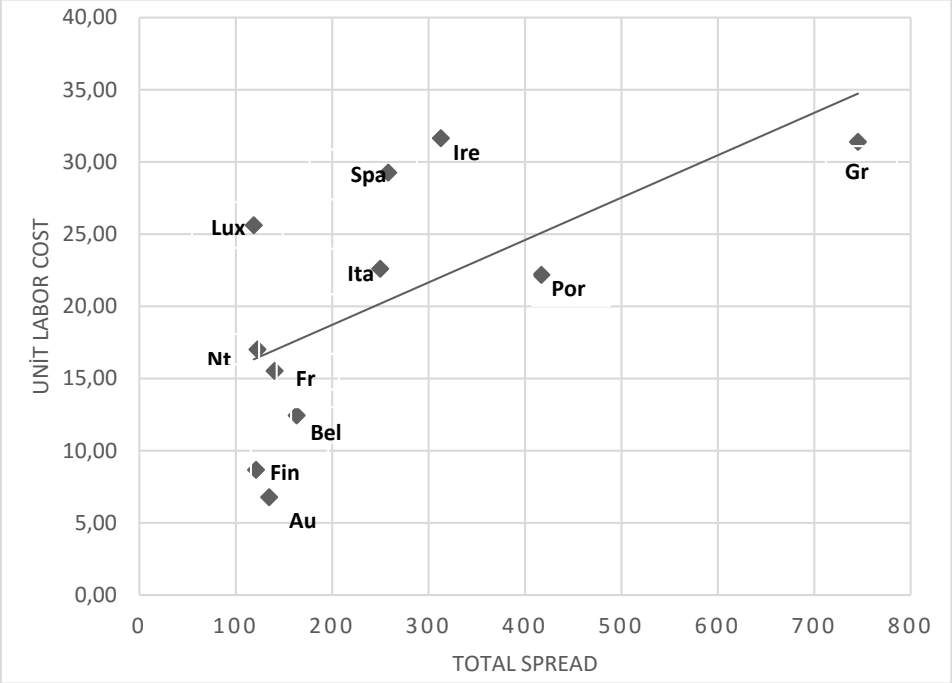
On the other hand; Greece, Portugal, Ireland, Spain and Italy followed demand-led growth strategies. (Hall, 2012: 360). In Figure. 4, it could be observed that the unit labor cost climbed up in all GIPSI countries. Especially in Greece and Ireland the cumulative increase was nearly 35 percent during this period.[16] In Spain the cumulative increase was above 30 percent.

Countries that had high unit labor cost after the introduction of Euro, lost competitiveness and faced large current account deficits. When the GFC hit these countries, banks' balance sheets deteriorated. Government intervened in the banks to avoid banking collapses. With the crisis unfolding in Greece, the banking crisis turned into a sovereign debt crisis and spread

[16] The rise in labor cost was mainly driven by the wage increases in the public sector. For example, in Greece public wages rose 100 percent between 2000 and 2008 and reached 11.4 percent of the GDP (EC, 2010:16).

to other fragile economies of the union. The spread between the Member Countries bonds and German bunds spiked. Figure.5 demonstrates this relationship. The y-axis, displays the cumulative increase in unit labor cost between 1999 and 2007. On the x-axis, the total spread during the SDC –between May 2010 and December 2014- could be observed. It is clear from the figure that there is a positive relationship between the unit labor cost increase after the introduction of the Euro and the spreads during SDC. In Greece, Portugal, Ireland and Spain the unit labor cost increase is the highest. That means the countries, which lost competitiveness after the Euro Area membership, were hit hardest by the SDC.

Figure 5: Unit Labor Cost* and the Government Bond Spreads**



Note: Aus: Austria, Fin: Finland, Bel: Belgium, Fr: France, Nth: Netherlands, Ita: Italy, Spa: Spain, Ire: Ireland, Lux: Luxemburg, Por: Portugal and Gre: Greece.

*Unit labor cost is cumulative unit labor cost between 1999 and 2007. **Government Bond Spreads are calculated based on the 10-year government bond yields of the respective country minus Germany' 10 year government bond yields. The total spreads acquired through the adding the monthly spreads from May 2010 to December 2014.

Source: AMECO and OECD databases.

What lies behind these diverging unit labor costs? The major reason is the differences in the structure of the industrial relations of the member countries. On the one hand, Germany is characterized by large wage setters oriented toward a real exchange rate target. According to Carlin (2012), this is a rational wage setting process. However in the periphery the wage setting process is non-rational. Especially in Italy, Greece and Spain there are strong trade unions and these unions have backward looking behavior. Indexation play a central role in these countries and wage setting process could not be coordinated (Carlin, 2012:491). The consequence of strong trade unions with a backward looking behavior and demand-led growth strategy, is an inflation through an upward pressure on wages. If these countries were not members of a monetary union, they could offset the effect of inflation through

depreciating their respective currencies and restore competitiveness. But they had lost the chance of depreciation. The only way was internal devaluation that rests upon depressing the wages. With this type of strong and uncoordinated trade unions wage depression was very hard. In fact, in an environment of easy financing and cheap credit, they did not even feel the need.[17]

4.3 The Other Side of the Coin: Claims of the Core Countries

These imbalances were sustained since they could be financed easily. After the introduction of Euro, the countries welcomed the credible central bank, ECB. Following the tradition of Bundesbank, ECB targeted price stability. This eliminated the risk of the debt issued in all Euro Area countries. Exchange risk was also eliminated since they used the same currency.[18] Furthermore, introduction of the Euro created an over-optimism and this also caused these countries to borrow from other members in the Euro Area freely (see Berger and Nitsch (2010), Chen et.al (2012), Jaumotte and Sodsriwiboon (2010))[19]. Additionally, financial integration played a catalyzer role in this process. Thus, as these deficits were easily financed, the underlying distortions remained untouched. The periphery countries postponed the needed reforms and the deficits became persistent.

In this credit abundant environment, the governments also use the advantage of easy financing and borrowed from the markets. According to Bagus (2012:28), producing high deficits and accruing high debt were irresistible in a monetary union. Government produces deficit and in order to finance this, the government issues bonds. Government could easily sell these bonds to the banks and the banks in the union could use these bonds as a collateral to borrow from ECB or interbank market. The credits and the money supply would increase in a deficit country as a result.[20]

On the other hand, creditor banks did not hesitate to lend to these countries. They borrowed from the rest of the world with their sophisticated banks and lent to periphery countries (Eichengreen, 2010b:2). The assets of the core and periphery might be close substitutes for a bank in the core country, because it could easily use this instrument as a collateral in ECB or interbank market and provide credit as mentioned earlier.

Table 5: Debts of the GIPSI Countries Held by the Core Countries (€ billions)

	1999	**2009**	**% Change**
Greece	24	141	491
Ireland	60	348	391
Portugal	26	110	320
Spain	94	613	554
Italy	259	822	217
Total	**463**	**2 034**	**340**

Note: Core countries are: Germany, France, Austria, Belgium and Netherlands.

Source: Hall (2012)

[17] According to Hall (2014), the policymakers recognized this mythology but they expected the member countries would converge on competitive institutions.

[18] The only risk remained was default risk but the markets underestimated this risk because they were sure that no country would be allowed to default (Higgins and Klitgaard, 2010).

[19] Jaumotte and Sodsriwiboon (2010) found that, the current account deficit could not be explained only by fundamentals. They further identified the excess of these fitted values as a "euro effect".

[20] Even if all the countries give deficits, prices would go up and the real purchasing power of the common currency would diminish. But the first country that gives deficit would benefit. Bagus (2012) called this fact "tragedy of commons".

In Table.5, one could follow the claims of core countries from the GIPSI countries. It could be easily seen that the major hikes were in Spain and Greece. In Spain, the debt climbed up more than fivefold and in Greece the debt climbed up nearly fivefold. In Ireland, the debt was 60 billion in 1999 but reached to 348 billion in 2009. However in Italy, the debt level was already high in 1999 and the increase was moderate compared to other GIPSI countries. These funds flew from core countries to the periphery to finance the deficits of the latter.

Albeit when we look at the whole picture, the periphery countries lost competitiveness after Euro area membership and they gave significant current account deficits with the core countries. But these deficits in turn were financed by the funds from core countries.[21] According to Bibow (2012), this strategy is neo-mercantilism. The core countries –especially Germany- gave great surpluses with the periphery and then lent them in order to sustain their export demands.

But this unsustainable loop was broken with GFC. The confidence eroded in the markets and the banks of the core countries were not able to find credits. They were faced with a banking crisis at first. Then as explained earlier, as the the fraud on Greek statistics blew up, sovereigns were not able to borrow from markets. It could be argued that, the GFC and then the problems of the Greek economy created a "sudden stop effect"[22] and revealed the imbalances of the periphery countries.

5. CONCLUDING REMARKS

Global Financial Crisis was started as a subprime mortgage market crisis in the US, but rapidly spread to the entire financial system and then to the world via interconnectedness of financial systems. In this respect, the crisis also affected the the Euro Area financial system and appeared as a banking crisis at first. But then it provoked the Sovereign Debt Crisis, which threatened the survival of the European monetary integration. In order to avoid the dissolution of the union, Euro Area institutions and Core Members supported the ailing GIPSI countries conditioning on programs that blamed the GIPSI countries for being fiscally irresponsible. These programs relied on austerity measures that depressed the GDP growth and fueled the unemployment rate. As a result of this inaccurate diagnosis of the crisis, a prolonged recession prevailed.

To provide the needed cures and to avoid the recurrence of these crisis, we have to understand real causes. This study aims to inquire these causes. According to the descriptive analyzes put forth in this paper, the foundations of the crisis had their roots at the start of the monetary integration. The structural differences of the countries were inclined to diverging competitiveness trends and this led to huge imbalances in the Euro Area. GFC was the first wave of the storm and created a sudden stop effect. These imbalances could no longer be financed accordingly. The banks were bailed out by governments and the risks of banks were transferred to sovereigns. The second wave was the revelation of the Greek statistics fraud. This caused a sudden stop effect in sovereign debt markets and induced a full-fledged sovereign debt crisis in the Euro Area. In sum, the study argues that the countries that lost competitiveness due to rising unit labor costs before the financial crisis –which occurred as a result of pursuing a single monetary policy in structurally different countries- faced with higher sovereign debt spread during the SDC.

[21] This intra-euro area funds financed the government spending in Greece, financial sector in Spain and Ireland or combination of both in Portugal and Italy (Chen et.al, 2012:5).

[22] For sudden stop effect see Calvo (1998).

In this framework, Euro Area members should conduct structural reforms to converge on this ground. Especially, they should increase labor market flexibility and reorganize the industrial relations in order to relieve wage-setting process. But, these reforms could take time as these would be confronted by political resistance. Thus, structural reforms could be achieved only in the long-run. In the short-run, an adjustment of these imbalances should be provided. Naturally, the adjustment should be symmetrical: while the deficit countries should take measures to avoid further deficits, surplus countries should pursue expansionary policies to induce demand. However, these measures could lead to protests from the public in the deficit countries as these countries could only regain competitiveness via internal devaluation which means restraining prices and wages. The only way to overcome the social unrest is to be transparent in pursuing these policies and express the consequences to the public openly. In similar vein, to avoid macroeconomic imbalances, Euro Area also established certain procedures. The macroeconomic imbalance procedure was introduced on December 2011. The procedure aimed to alert the members and impose sanctions before the deficits mounted. Thus, the imbalances are handled in both deficit and surplus members within the context of this procedure. However, like Stability and Growth Pack, this procedure could also be diluted.

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