Evaluation of Sovereign Risk Ratings in Consideration of European Sovereign Debt Crisis

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Abstract

The subprime crisis which emerged in the US at the end of 2007 turned to global financial crisis as of September 2008. Fiscal stimulus packages, nationalization of banks and private debt to alleviate the negative effects global financial crisis over national economies together with decreases in tax revenues as a consequence of economic contraction caused deterioration in public finances all over the world. The sharp deterioration in public finances raised investor concerns about sovereign risk and caused to question the sharp adjustments of sovereign risk ratings by the major world agencies, Fitch, Standard and Poor's and Moody's. The Eurozone sovereign debt crisis caused to raise questions about the credit rating agencies which failed to predict many crises such as Mexican and Asian currency crises one more time.
The purpose of this study is firstly to examine sovereign risk rating methodologies briefly and then evaluate the sovereign risk ratings as an early warning indicator for the investors in consideration of Eurozone sovereign debt crisis.

Key words:

Global financial crisis, Eurozone sovereign debt crisis, sovereign risk, sovereign risk rating.

JEL Classification: E32, E62, F34.

1. Introduction

National financial markets were becoming integrated as a result of financial liberalization, and deregulation of financial market from 1980s, advances in communication and information technologies. The integrated financial markets together with the globalization cause a financial or economic problem in any country or region to be spread quickly to the rest of world. As a matter of fact bursting of speculative bubble which occurred in US housing market between 1997–2006 firstly caused sub-prime crisis in US at the end of 2007 and then led to global financial crisis in the last quarter of 2008 by spreading all over the global financial markets in a short time. Global financial crisis caused policymakers, market participants and the agencies themselves to question the rating methods and corporate governance of credit rating agencies (CRAs). CRAs have been recognized as one of the main causes of global financial crisis by most of studies aimed at searching the causes of global financial crisis.

The Eurozone sovereign debt crisis burst out in the last quarter of 2009 while the negative effects of global financial crisis on world economies have been going on. Although the Eurozone debt crisis seems as a regional crisis, debt crisis in the European Union (EU), which is the world's largest economy, has affected the rest of world negatively. Many investors were misled by the sovereign risk assessments of the Eurozone by CRAs. And this crisis also

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verified that all optimistic assumptions about the public finance of Eurozone were wrong. The Eurozone debt crisis caused investors to direct their attention on sovereign credit risk one more time. The purpose of this study is firstly to examine sovereign risk rating methodologies briefly and then evaluate the sovereign risk ratings as an early warning indicator for the investors in consideration of Eurozone sovereign debt crisis.

2. Sovereign Risk Ratings Methodologies

Investments involve a number of risks such as the credit risk, funding risk, interest rate risk and foreign exchange risk. International investments also involve country risk. The main categories of country risk are sovereign risk, transfer risk, contagion risk, currency risk, indirect country risk and macroeconomic risk. Sovereign risk refers to the risk that a government may default on its debt obligations (Colonial First State Global Asset Management, 2010). In other words sovereign risk is the credit risk of a sovereign government as a borrower (Nath, 2004, p.2). Sovereign risk is direct when a foreign government is unwilling or unable to fulfill its overseas debt obligations. Indirect sovereign risk arises when a sovereign government influences the ability of the private borrowers in its territory to fulfill their debt obligations to foreign lenders/investors. In both cases the risk exposure of foreign lenders or investors is amply influenced by sovereign risk and therefore the assessment of sovereign risk is a very important component of country risk analysis (Nath, 2008, pp.2-3).

Sovereign risk rating estimates the future ability and willingness of the sovereign governments to service their commercial and financial obligations in full and on time (Iyengar, 2012, p.70). Sovereign credit ratings are important in three ways:

- Sovereign ratings are a key determinant of the interest rates that a country faces in the international financial market and therefore of its borrowing costs. Therefore sovereign risk ratings play a crucial role in determining the terms and the extent to which countries have access to international capital markets.
- Sovereign rating may have a constraining impact on the ratings assigned to domestic banks or companies. In other words sovereign ratings are important also for the assessment of other borrowers of the same nationality, because the ratings that are assigned to the non-sovereign entities are generally not greater than that assigned to their home countries.
- Some institutional investors have lower bounds for the risk they can assume in their investments and they will choose their bond portfolio composition taking into account the credit risk perceived via the rating notations (Afonso, Gomes and Rother, 2007, p.7).

They provide global investors with an informed analysis of the risk associated with debt securities such as government bonds, corporate bonds, certificates of deposit, preferred stock and collateralized securities. A credit rating, whether sovereign or not, is effectively the issue of an evaluation or informed judgment on the probability that a particular borrower may fail to meet its commitments with respect to the service of its debt. The determination of the coupon of the bonds or obligations and the subsequent yield demanded by investors will depend on the credit risk in respect of the issues that the rating agencies assign. (Valle and Marín, 2005, p.160). Afonso, Furceri and Gomes examined the effects of sovereign credit rating announcements of upgrades and downgrades (as well as changes in rating outlooks) on sovereign bond yield spreads in European Union countries between January 1995 and October 2010. Their findings showed that there were significant responses of government bond yield spreads to changes in rating notations and outlook, particularly in the case of negative announcements (Afonso, Furceri and Gomes, 2011, p.3)

While the first publicly available bond ratings were provided by Moody’s in 1909 and Poor’s Publishing company was established in 1916, the Standard Statistics Company in 1922 and the Fitch Publishing Company in 1924, the process of rating countries began only in the 1970s with the rating of the US, Canada and Australia by S&P and Moody's. The numbers of rated countries were risen rapidly in 1980s and 1990s. By the year 2000, the major companies were rating about 100 nations each (Klein, 2004). Many investors generally take the sovereign risk ratings by big three CRAs Standard & Poor's (S&P), Moody's and Fitch which have above 90% of market, as a measure of sovereign default risk.

The major CRAs S&P, Moody's and Fitch mainly use the similar criteria in order to assign a credit rating to a debtor or to a debt instrument as seen from the following table. But their rating quality based on the accuracy, timing and stability is different. Pennartz and Snoeij tried to assess the rating quality of S&P, Moody's and Fitch in their study. Their findings indicate that S&P's sovereign credit ratings are most accurate proximate to defaults and score best at rating timeliness, due to the aggressiveness of their rating changes. Moody's ratings are the most stable and also have the highest predictive power at time horizons longer than 1 year prior to default (Pennartz and Snoeij, 2012, p.2). The sovereign rating methodologies of big three CRAs are given in Table 1.

Table 1: Sovereign Rating Methodologies of Major CRAs

CRA	Sovereign Rating Methodology
S&P	Sovereign credit analysis are based on **- Political score:** *The effectiveness, stability, and predictability of the sovereign's policymaking and political institutions (primary factor). * The transparency and accountability of institutions, data, and processes, as well as the coverage and reliability of statistical information (secondary factor). *The government's payment culture (potential adjustment factor). *External security risks (potential adjustment factor). *The potential effect of external organizations on policy setting (potential adjustment factor). **- Economical score:** *Income levels, *Growth prospects, *Economic diversity and volatility. **- External score:** *The status of a sovereign's currency in international transactions, *The country's external liquidity, which provides an indication of the economy's ability to generate the foreign exchange necessary to meet its public- and private-sector obligations to nonresidents, *The country's external indebtedness, which shows residents' assets and liabilities (in both foreign and local currency) relative to the rest of the world, **- Fiscal score:** *Fiscal performance and flexibility, *Debt burden **- Monetary score:** *The sovereign's ability to use monetary policy to address domestic economic stresses particularly through its control of money supply and domestic liquidity conditions, *The credibility of monetary policy, as measured by inflation trends, *The effectiveness of mechanisms for transmitting the effect of monetary policy decisions to the real economy, largely a function of the depth and

CRA	Sovereign Rating Methodology
	diversification of the domestic financial system and capital markets.
Moody's	-**Country economic resiliency:** *Factor 1: the country's economic strength, captured in particular by the GDP per capita, *Factor 2: the institutional strength of the country. **-Government financial robustness:** *Factor 3: the financial strength of the government, *Factor 4: the susceptibility to event risk.
Fitch	- macroeconomic performance and prospects, - structural features of the economy that render it more or less vulnerable to shocks including the risks to macroeconomic stability and public finances posed by the financial sector, as well as "political risk" and governance factors, - public finances, including the structure and sustainability of public debt as well as fiscal financing; and - external finances, with a particular focus on the sustainability of international trade balances, current account funding and capital flows, as well as the level and structure of external debt (public and private).

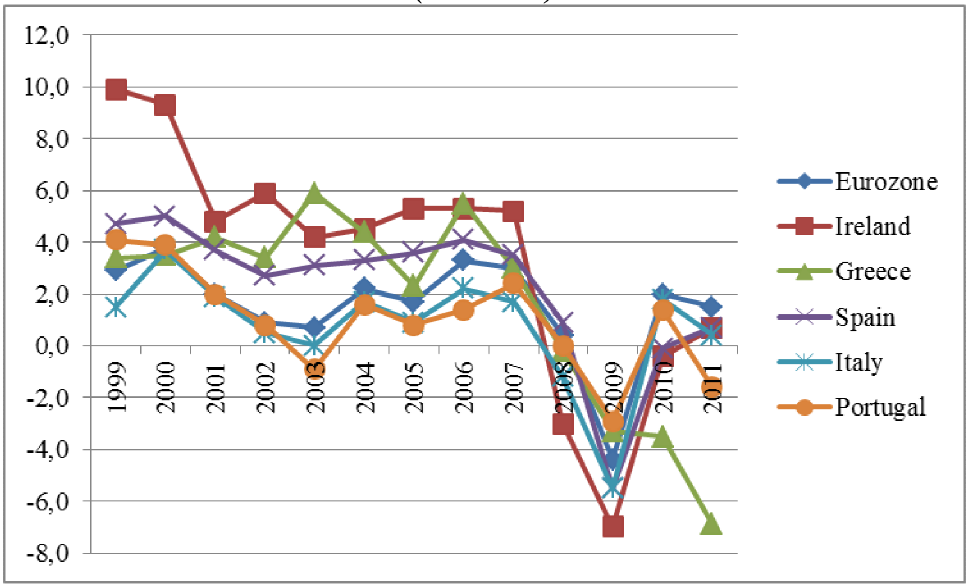
Source: Fitch, 2010; Moody's, 2008; S&P, 2011

3. Evaluation of Sovereign Risk Ratings in Consideration of Eurozone Sovereign Debt Crisis

CRAs like other market participants began to believe there would be an economically convergence among the Eurozone member countries after establishment of monetary union in other words Eurozone in 1999 by ignoring the main economic realities such as potential problems in coordination of economic policies, differences in development levels and competitiveness of economies of the Eurozone member countries. This optimism caused these countries to increase their debt burden easily due to decrease in the cost of borrowing as a result of upgrades and also increase the vulnerability of economies of some Eurozone member countries such as Greece, Ireland, Portugal, Spain and Italy. But the outburst of global financial crisis in September 2008 converted the optimism regarding the EU to pessimism. CRAs made upgrades and no downgrades among Eurozone countries during the period between 1999 and 2009. The downgrading process of CRAs has begun with S&P downgrade of Greece's sovereign credit ratings from A to A- on 14 January 2009 only five days after the country was put on credit watch.

The economic data belonging to Greece, Ireland, Portugal, Spain and Italy, which have been exposed to successive downgrades of major CRAs S&P, Moody's and Fitch between 2009 and 2012 showed that there have been problems in economies of these countries well in advance. The Eurozone member countries in debt crisis have experienced slow growth from 2008 (Portugal and Italy as of 2001) with negative effects of subprime crisis and global financial crisis. Decreases in GDP of these countries caused decreases in tax revenues. Decreases in tax revenues together with the increasing public expenditures due to global financial crisis aggravated the poor public finance.

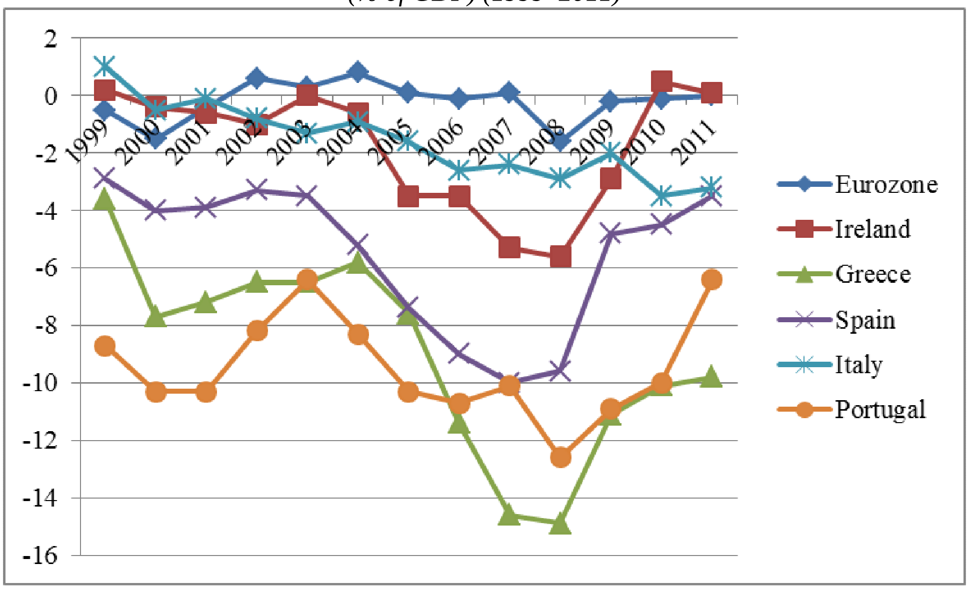
Chart 1: Real GDP Growth Rates of Selected Eurozone Member Countries (1999–2011)



Source: Eurostat, (Online), http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00115, 16 June 2012.

The economically troubled Eurozone member countries also had substantial current account deficits. Especially current deficits of Greece, Portugal and Spain have been going above 4% of GDP. Current account deficits of Greece, Portugal, Spain, Ireland and Italy reached respectively 14,9%, 12,6%, 9,6%, 5,6% and 2,9% in 2008. These current deficits, which mostly arisen from sovereign debt and saving gap, were also signs of economic fragility in these countries.

Chart 2: Balance of Current Account of Selected Eurozone Member Countries (% of GDP) (1999–2011)

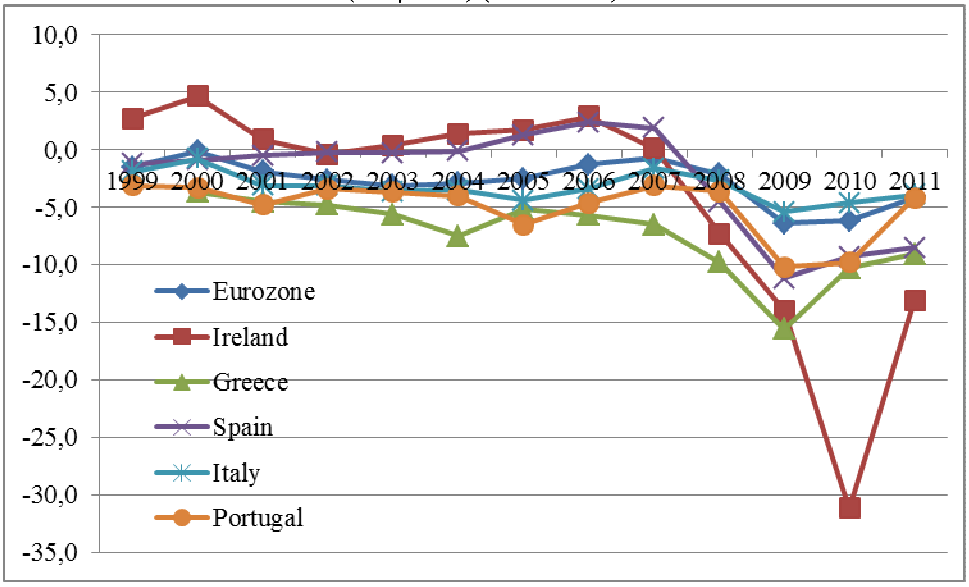


Source: Eurostat, (Online), http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00043, 16 June 2012.

Sovereign debt levels of economically troubled Eurozone countries exceeded the euro's stability criteria, with the yearly deficits exceeding the recommended maximum limit at 3,0%

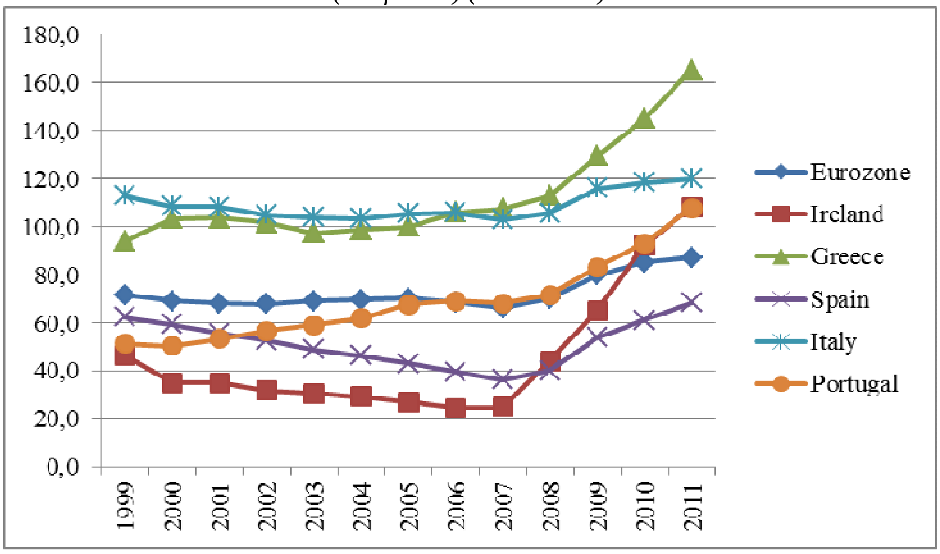
of GDP, and also the debt level clearly exceeding the recommended limit at 60% of GDP. Public debt level to GDP in Greece, Ireland, Spain, Italy and Portugal respectively increased to 15,6%, 14%, 11,2%,5,4% and 10,2% in 2009. On the other hand gross debt level of Greece, Ireland, Spain, Italy and Portugal reached respectively 129,4%, 65,1%, 53,9%, 116%, and 83,1% of the GDP in 2009. The sovereign debt has accumulated especially in Greece, Italy and Portugal since 2000.

Chart 3: General Government Deficits of Selected Eurozone Member Countries (% of GDP) (1999–2011)



Source: Eurostat, (Online), http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb080&plugin=1 16 June 2012.

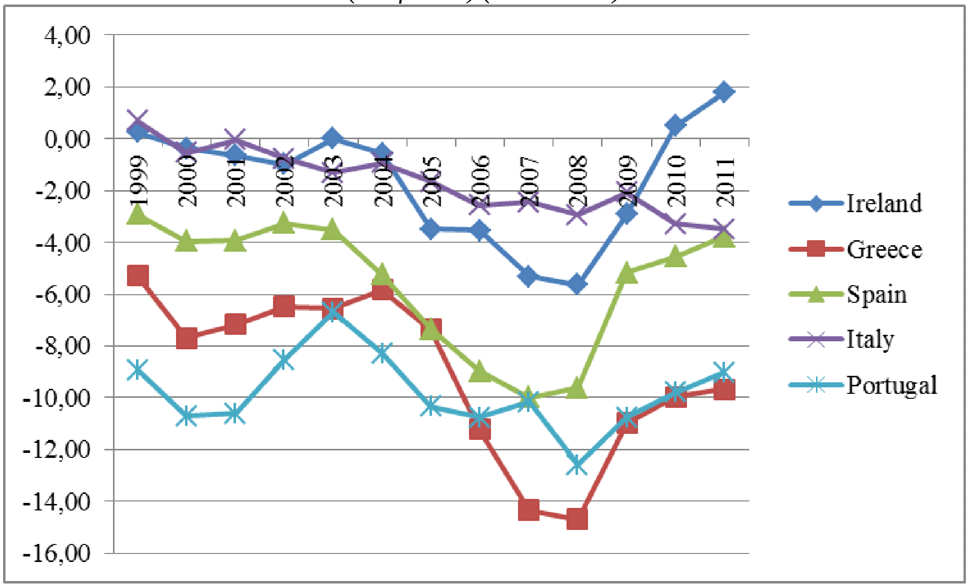
Chart 4: General Government Gross Debt of Selected Eurozone Member Countries (% of GDP) (1999–2011)



Source: Eurostat, (Online), http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tsieb090&plugin=1 16 June 2012.

The Eurozone member countries in debt crisis also didn't have enough savings in order to meet investments. The savings gap reached 14,69% in Greece, 12,6% in Portugal, 9,62% Spain, 5,65% in Ireland and 2,93 in Italy in 2008.

Chart 5:Savings Gap of Selected Eurozone Member Countries (% of GDP) (1999–2011)



Source: World Economic Outlook (IMF), (Online), http://world-economic-outlook.findthebest.com/?, 18 June 2012.

Although there was sovereign debt accumulation which has exceeded the debt-to-GDP ratios set by the EU's founding Maastricht Criteria, increases in current account deficit and savings gap in time, the first downgrade of CRAs realized in January 2009. But then CRAs made successive unmeasured downgrades after October 2009. Long term foreign currency sovereign credit ratings of Greece and Ireland by majors CRAs verify that credit ratings are generally deprived of giving early signs to the investors for the possible crises like the other Eurozone member countries in crisis, global financial crisis and earlier financial crises. Most of the downgrades of CRAs were made after the outburst of crises as seen in case of Greece and Ireland as seen in Table 2 and Table 3.

Table 2: Long Term Foreign Currency Sovereign Credit Ratings of Greece by S&P, Moody's and Fitch

Date	S&P (notch)	Moody's (notch)	Fitch (notch)
14 Jan 2009	A→A- (1↓)	-	-
12 May 2009	-	-	A (stable)→A (negative)
22 Oct 2009	-	-	A→A- (1↓)
29 Oct 2009	-	On watch	-
8 Dec 2009	-	-	A-→BBB+ (1↓)
16 Dec 2009	A-→BBB+ (1↓)	-	-
22 Dec 2009	-	A1→A2 (1↓)	-
9 Apr 2010	-	-	BBB+→BBB- (2↓)
22 Apr 2010	-	A2→A3 (1↓)	-
27 Apr 2010	BBB+→BB+ (3↓)	-	-
14 Jun 2010	-	A3→Ba1 (4↓)	-
14 Jan 2011	-	-	BBB-→BB+ (1↓)
7 Mar 2011	-	Ba1→B1 (3↓)	-

29 Mar 2011	BB+→BB-(2↓)		
9 May 2011	BB-→B (2↓)	-	-
20 May 2011	-	-	BB+→B+ (3↓)
1 Jun 2011	-	B1→Caa1 (3↓)	-
13 Jun 2011	B→CCC (3↓)	-	B+→CCC (3↓)
25 Jul 2011	-	Caa1→Ca (3↓)	-
27 Jul 2011	CCC→CC (2↓)	-	-
22 Feb 2012	-	-	CCC→C (2↓)
27 Feb 2012	CC→SD (1↓)	-	-
2 Mar 2012	-	Ca→C (1↓)	-
9 Mar 2012	-	-	C→RD (1↓)
13 Mar 2012	-	-	RD→B- (4↑)
2 May 2012	SD→CCC (3↑)	-	-
17 May 2012	-	-	B-→CCC (1↓)
7 Aug 2012	CCC (stable→negative)	-	-

Source: S&P, Moody's and Fitch, (online)
www.standardandpoors.com/ratings
http://v2.moodys.com/moodys/cust/content/loadcontent.aspx?source=StaticContent/BusinessLines/Sovereign-SubSovereign/RatingsListGBR.htm&Param=ALL
http://www.fitchratings.com/web_content/ratings/sovereign_ratings_history.xls, 20 June 2012.

Table 3: Long Term Foreign Currency Sovereign Credit Ratings of Ireland by S&P, Moody's and Fitch

Date	S&P (notch)	Moody's (notch)	Fitch (notch)
9 Jan 2009	AAA (stable→negative)	-	-
6 Mar 2009	-	-	AAA (stable→negative)
30 Mar 2009	AAA→ AA+ (1)	-	-
8 Apr 2009	-	-	AAA→ AA+ (1↓)
17 Apr 2009	-	Aaa (on watch)	-
8 Jun 2009	AA+→AA (1↓)	-	-
2 Jul 2009	-	Aaa→ Aa1 (1↓)	-
4 Nov 2009	-	-	AA+→AA- (2↓)
19 July 2010	-	Aa1→ Aa2 (2↓)	-
24 Aug 2010	AA→AA- (1↓)	-	-
6 Oct 2010			AA-→A+ (1↓)
23 Nov 2010	AA-→A (2↓)	-	
9 Dec 2010	-	-	A+→BBB+(3↓)
17 Dec 2010	-	Aa2→ Baa1 (5↓)	-
2 Feb 2011	A→A- (1↓)	-	-
1 Apr 2011	A-→ BBB+ (stable)(1↓)	-	BBB+ (stable→negative)
15 Apr 2011	-	Baa1→ Baa3 (2↓)	-
12 Jul 2011	-	Baa3→Ba1 (2↑)	-
13 Jan 2012	BBB+ (stable→negative)	-	-

Source: S&P, Moody's and Fitch, (online)
www.standardandpoors.com/ratings
http://v2.moodys.com/moodys/cust/content/loadcontent.aspx?source=StaticContent/BusinessLines/Sovereign-SubSovereign/RatingsListGBR.htm&Param=ALL
http://www.fitchratings.com/web_content/ratings/sovereign_ratings_history.xls, 20 June 2012.

It can be easily seen from the main macroeconomic data of Eurozone member countries in debt crisis that the big three CRAs didn‘t assess the developments in the economies of Eurozone correctly and so they didn’t give right sovereign credit ratings on time and later they have made successive unmeasured downgrades in order to compensate the past undone downgrades. Therefore they contributed to the ongoing sovereign debt crisis turning so bad partly firstly by the belated rating action and then by successive unmeasured downgrades for adjustment. On the other hand many investors who made investments in these countries by taking account their misleading sovereign ratings have made loss. Downgrades caused increases in cost of borrowing, these in turn affected risk perceptions for these countries negatively, increasing risk lead further downgrades. CRAs have thusly created a downgrade spiral. Consequently CRAs have harmed to both the Eurozone member countries in crisis and the investors with this downgrade spiral.

Reinhart reached finding that the CRAs systematically failed to predict banking and currency crises and the downward adjustments in sovereign credit ratings came after the crisis in Asia during Asian crisis and Mexico was upgraded shortly before the December 1994 crisis (Reinhart, 2001, pp.27-28). The Eurozone debt crisis verified this reality which also appeared in the global financial crisis one more time. The CRAs failed to predict crisis and the downward adjustments in sovereign credit ratings came after the outburst of crisis. On the other hand sovereign rating process is not a one way process. CRAs get some information from governmental authorities during credit rating. Therefore the accuracy of the information obtained from governments is very important for the right credit rating. One of the main reasons in sharp downgrading of Greece was based on the revision of debt burden in October 2009.

The last two crises have shown that there are deficiencies in the process of credit rating by CRAs. The US, EU and international agencies have made some regulations to overcome these deficiencies. The major regulations are as follows:

-The International Organization of Securities Commissions (IOSCO) revised the Code of Conduct Fundamentals for Credit Rating Agencies in 2008 to address issues of independence, and competition.

- The Financial Stability Board, which is an international body that monitors and makes recommendations about the global financial system, was founded by the G20 in 2009.

- The United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act, which created an Office of Credit Ratings at the Securities and Exchange Commission to hold rating agencies accountable and protect investors and businesses in July 2010.

- The EU established an independent authority known as the European Securities and Markets Authority (ESMA) on 1 January 2011 which carries out ongoing surveillance of credit rating agencies, particularly of their rating methodologies.

4. Conclusion

Greece, Ireland, Portugal, Spain and Italy, which have had non-competitive economies, have experienced a decreasing economic growth and increasing sovereign debt accumulation, current deficits and savings gap by taking advantage of the decreases in cost of borrowing after launching of euro. The macroeconomic developments in question increased the fragility of these countries ‘economies and caused these countries vulnerable in a case of crisis. Consequently the global financial crisis of 2008 aggravated the public finances of these countries and thusly Eurozone sovereign debt crisis burst out when investors worried that a Greek default would have started a chain reaction across Eurozone following Greece's debt admission in October 2009 and then crisis spread Ireland, Portugal, Italy and Spain in 2 years.

CRAs didn't assess the course of the economies of Eurozone member countries in crisis correctly, so their unreal sovereign risk ratings contributed to the increase in sovereign debt accumulation of these countries by easing these countries borrowing due to assigned good credit ratings. Moreover their excessively downgrading the ratings resulted in aggravating the Eurozone sovereign debt crisis by causing a downgrade spiral. Since they rated the Eurozone member countries in debt crisis wrongly and then they have made too fast downgrades after outburst of the crisis, they have begun to be seen a part of crisis.

The Eurozone sovereign debt crisis verified that the CRAs are not capable of predicting financial crises as the downgrades are never preceded by a crisis and the sovereign risk rating is not a good signal for investors who are investing in sovereign bonds as in global financial crisis, Asian earlier crises. Consequently investors should not follow credit ratings blindly, verify them with other market indicators.

International organizations and many countries, especially the United States and the European Union, have made new regulations for CRAs after the global financial crisis and the Eurozone debt crisis. But these new regulations are mostly one way. Since the credit rating process is a two way process, it also should be taken measures for the central governments to give right information about their economies on time.

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