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ACCORDING THE CURRENT SITUATION, IS IT BENEFIT FOR GREECE TO REMAIN OR LEAVE FROM EUROZONE?: THE CASE OF THE FINANCIAL CRISIS IN GREECE

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Chapter 1 Introduction

1.1 General problem

Greece is a member of the European Union and the single currency area referred to as the eurozone area. The country was initially refused membership into the eurozone in 1999, due to its weak economy. But only two years later, Greece was accepted, and joined the eurozone on January 1st, 2001. The concern regarding the Greek economy remained, and when the global economic crisis hit in 2007, the political and macroeconomic shortcomings of the country became apparent. After many years of excessive spending, the country ran repeated budget deficits, and accumulated a large public debt. The government's gross debt as a percentage of GDP rose from 103.7 in 2001 to 177.0 in 2013 (Eurostat, 2013).

The accumulation of debt in Greece is a result of decades of spending and borrowing under different political regimes. During the administration of Prime Minister Andreas Papandreou from 1981-90 the government implemented an excessive expenditure program. This increased the public debt from 39.4 percent of GDP in 1980 to 111.6 percent in 1990, and did not result in any revenue increases. After almost a decade under the regime of Papandreou, inflation in Greece became ingrained. During the 1980's prices rose by an annual rate of 18.6 percent (Matziorinis, 1993).

In the following years, successive governments ran budget deficits and accumulated a large public debt. When Greece joined the eurozone in 2001 there were worries regarding their inflation rate, and economic output per head. In other countries, output per head was on average, 30 percent higher than in Greece (James, 2000).

From 2004 and up until the crisis the conservative governments of Kostas Karamanlis, and its successor led by George Papandreou, took measures to restore economic credibility. Karamanlis and Papandreou raised taxes, reformed the tax system and made cuts in the expenditure. When the crisis hit in 2007 these cuts were considered inadequate. The markets and Brussels demanded even deeper budget cuts. For ordinary Greeks life has become worse. Companies, shops, cafes and restaurants have been forced to close, or are half empty. It has become more difficult to get bank loans, and citizens have had to reduce their private spending. The cuts in public spending and deficit eventually led to a huge strike among Greek citizens in 2010 (Harding, 2012).

1.2 Macroeconomic problems resulting from fiscal mismanagement

Greece has had a government deficit in each year since 2000, which means the general government sector has spent more money than it collected in revenue. From 2000 until 2007 the deficit was around 5 percent of GDP (Eurostat, 2013). In 2009 it reached a peak at 15.6 percent of GDP, four times more than the eurozone's limit. Then it actually decreased to 9.4 percent from 2009 to 2011. The general government gross debt was around 100 percent of GDP in each year from 1995 to 2007, but experienced a large increase in the years since 2008. In addition, the unemployment rate increased each year since 2007, reaching 27.5 percent in 2013, an all-time high in the European Union (BBC News, 2013).

In 2010 it became clear that Greece could not handle their debt and that they needed help from the EU and IMF. But this help did not come for free. Additional austerity measures from Greece were requested. In times of recession, austerity measures that require cuts in public spending are tough for an economy. It is in "tight" economic times that the government should run an expansionary fiscal policy to promote growth (Steigum, 2004). Greece received two bailout packages, one in 2010 and another in 2012 and partially defaulted on their debt in 2011.

When the housing and financial crisis hit the US in 2007, the panic spread quickly. Big European economies started injecting money in to their banking systems. The global recession provoked liquidity constraints in the credit markets, and it seems as if this served as a catalyst for the concerns about the debt level in many of the countries in the eurozone. In Greece debt had grown to 107 percent of GDP in 2007, and it brought the validity and stability of the euro and the euro area into doubt. Since late 2009 there have been increasing fears of a sovereign debt crisis within the eurozone that will put the zone at a future risk. It is not only Greece that has struggled with a large government debt. Increases in the sovereign debt load have been a growing problem for the currency union as a whole. In April 2009, the EU ordered France, Spain, the Irish Republic and Greece to reduce their budget deficits (BBC News, 2012). Since April 2008 the global market has become ever more concerned about the size of the public debt in Greece, and how a Greek default might affect the wider eurozone. This uncertainty has a self-fulfilling effect, and continues to instill fear and distrust in Greece's financial legitimacy amongst the international community. Since Greece is part of a monetary union, the fear and distrust quickly spreads to other countries in the union with similar economic problems.

The purpose of this analysis is to review and analyze the financial crisis in Greece, with the aim of answering whether the country should stay within the eurozone or not. It is assumed that the alternative is leaving the eurozone, but still be a member of the EU. To make any conclusions on this matter the analysis intends to address the macroeconomic situation since the early 1990s during the first stage of the European Monetary Union up until 2007 and the period after the recession until 2013. The measures taken to solve the crisis also need to be analyzed to ascertain whether these have worked as intended, and/or to determine whether the effectiveness can be measured in their long-term effect. It is quite different to cope with an economic recession for a country that is part of a monetary union than one that "stands alone".

This paper will look at the theory behind a monetary union, focusing on conditions for an optimal currency area when the national monetary policy tool is lost, and the constraint on fiscal policy within this kind of union. This will allow an examination into how the eurozone fits in to this theoretical framework since the establishment of the euro in 1999 until 2013. Greece's macroeconomic situation is analyzed in terms of its effects on the currency area. Relevant questions to consider are: What are the costs and benefits for Greece by staying in the monetary union? What has been done to prevent a Greek exit from the eurozone? Many economists and analysts expected that Greece would default on their debt and leave the eurozone during 2012. In May 2012, economists at Bank of America said that Greece could potentially run out of money in June 2012 if the crisis intensified (The Telegraph, 2012). Other economists said Greece should not be allowed to leave. Mario Blejer in the Financial Times said Greece could not leave the eurozone, as this was bound to generate contagion throughout the eurozone and to raise the probability of a collapse, by proving Europe's unwillingness to pay for its political endeavor (Blejer, 2012).

This analysis draws upon lessons and experiences from the creation of what has been called "incomplete" monetary unions, like currency pegs, which have failed in the past. There are many examples of these kinds of regimes that have proven to be fragile. An interesting question is why some pegged exchange rate regimes turn out to be so fragile? Do some of these problems also exist for Greece and the eurozone? Understanding how these countries hands were tied, in terms of the policy options that were available when they experienced a recession, gives an interesting insight in to the macroeconomic situation facing Greece.

1.3 Organization of the analysis

This paper is organized into the following chapters. Chapter 2 provides background into Greece's macroeconomic performance before its membership of the eurozone and since 1990 until 2013. Some political historical context is given to highlight the development of the underlying crisis. Chapter 3 develops a framework by which to analyze the costs and benefits of Greece staying in the eurozone, and presents the eurozone's history and its fiscal policy. It also presents the actions taken to solve the crisis. Chapter 4 provides an analysis of whether it is beneficial for Greece to stay in the eurozone and the results of the bailout package in 2010. Chapter 5 is the conclusions and suggestions for the future.

Chapter 2 Background

2.1 Political history of Greece

Greece has a history of decades of economic hardship. Before the recession in 2007-08, they defaulted on their dept in 1826, 1843, 1860 and 1932 (Crozier, 2011). In the 1980s Prime Minister Andreas Papandreou increased the public dept from less than 40 percent of GDP to over 110 percent in a decade. This became a tendency for the Greek governments, which ran budget deficits and accumulated public dept.

Prime minister, Konstantinos Mitsotakis continued the borrowing during 1990-93, before Papandreou again became prime minister in 1993. Three years later, Costas Simitis become the leader of the country. During 1996-2004 the country's official macroeconomic statistical indicators were falsified. Table 2.1 shows selected macroeconomic data on general government deficit and gross dept during 1996-2004 are the revised indicators as the data initially reported were falsified. For 1997-99 the deficits were initially reported to be 4.0, 2.5 and 1.8 percent of GDP, respectively, while the dept levels were reported to be 108.2, 105.8 and 105.2 percent. The deficits notified to the commission for 2000, 2001 and 2002 were also revised upwards by more than two percentage points of GDP, stood at 4.6 percent of GDP after the September 2004 notification (Eurostat, 2004). In 2006 Eurostat concluded that the public deficit of the Greek economy amounted to a numper almost twice the size presented by the Simitis government (European Commision, 2004).

The revised numbers shows that Greece's incorporation to the euro zone in 2001 was based on a false foundation (Eurofound 2011). From 2004 to 2011, there was a change in how the prime ministers governed the country's economy. Prime ministers Kostas Karamanlis and George Papandreou reduced expenditures and raised taxes to restore economic credibility. For the citizens of Greece this meant increased unemployment and less spending. In the end of 2013 unemployment hit record levels with more than 27 percent out of work.

Table 2.1 Macroeconomic statistics in Greece. 1990-2013

Time	Real GDP Growth	General government deficit & of GDP	General government gross dept & of GDP	Average Inflation (CPI)	Maastricht bond yield	Unemployment rent
1990	0,0	-16,1	90,1	20,3	No data available	6,8
1991	3,1	-11,5	92,3	19,6	No data available	7,4
1992	0,7	-12,6	98,8	15,9	24,1	8,4
1993	-1,6	-13,8	111,6	14,5	23,3	9,3
1994	2,0	-10,0	109,3	10,9	20,7	9,3
1995	2,1	-10,3	110,1	9,0	17,0	9,1
1996	2,4	-7,5	111,6	8,2	14,4	9,8
1997	3,6	-6,6	114,0	5,6	9,9	9,8
1998	3,4	-4,3	112,4	4,8	8,5	11,1
1999	3,4	-3,4	112,3	2,6	6,3	12,0
2000	3,5	-3,7	103,4	3,2	6,1	11,2
2001	4,2	-4,5	103,7	3,4	5,3	10,7
2002	3,4	-4,8	101,7	3,6	5,1	10,3
2003	5,9	-5,6	97,4	3,5	4,3	9,7
2004	4,4	-7,5	98,9	2,9	4,3	10,6
2005	2,3	-5,2	101,2	3,6	3,6	10,0
2006	5,5	-5,7	107,5	3,2	4,1	9,0
2007	3,5	-6,5	107,2	2,9	4,5	8,4
2008	-0,2	-9,8	112,9	4,2	4,8	7,8
2009	-3,1	-15,6	129,7	1,2	5,2	9,6
2010	-4,9	-10,7	148,3	4,7	9,1	12,7
2011	-7,1	-9,4	170,6	3,3	15,8	17,9
2012	-6,4	-8,8	174,7	1,5	22,5	24,5
2013	-3,9	-12,4	177.0	-0,9	10.05	27,5

Sourse EMI Report, March 1998, IMF, Eurostat

2.2 History of Greece's membership in the EU

The objective of the progressive realization of EMU was confirmed already in June 1988 by the European Council. The President of the European Commission was together with a committee, set to study and propose concrete stages leading to this union. The formation of an economic monetary union was to be achieved in three stages. Stage one, set to begin on 1 July 1990, included four objectives: 1) the complete freedom for capital transactions; 2) increased co-operation between central banks; 3) the free use of the ECU, the European Currency Unit, forerunner of the euro; and 4) improvement of economic convergence. Stage 2 was started with the establishment of the European Monetary Institute (EMI) on 1 January 1994. The granting of central banks credits was banned, and co-ordination of monetary

policies was increased. Stage two also included strengthening of economic convergence and a process leading to the independence of the national central banks. The third and final stage began 1 January 1999 with the irrevocable fixing of the exchange rates of the currencies of the 11 Member States initially participating in Monetary Union and with the conduct of a single monetary policy under the responsibility of the ECB (European Central Bank, 2013).

EC treaty outlined the conditions that were required before a member state of the EU could take part in the eurozone. There was convergence criteria required to be met as prescribed by the EC Treaty, Article 140 TFEU, Articles 1-4 of the Protocol on Convergence Criteria. The criteria are that:

- government deficit must not exceed 3 percent of GDP
- government debt must not exceed 60 percent of GDP
- there must be a sustainable degree of price stability and an average inflation rate, observed over a period of one year before the examination, which does not exceed by more than 1.5% that of the three best performing Member States in terms of price stability
- there must be a long-term nominal interest rate, which does not exceed by more than 2% that of the three best performing Member States in terms of price stability
- the normal fluctuation margins provided for by the exchange rate mechanism on the European monetary system must have been respected without severe tensions for at least the last two years before the examination (Eurofound, 2011).

By the deadline of the last stage of EMU, 1 January 1999, Greece failed to meet the economic tests of low inflation and government debt and deficits (see table 2.1), and was rejected membership of the eurozone area. To qualify for euro membership, the Greek Government had to adopt a tough austerity program, making deep cuts in public spending. However, the government falsified their macroeconomic data on government deficits and debt between 1997 and- 2003, and on these falsified numbers they were approved for membership to the eurozone in 2001. At that time it seemed as if they met the deficit criteria, and that they were moving in the right direction by decreasing their government debt. Greece still had one of the highest inflation rates in Europe, and their government debt was also much higher than was normally permitted under the EU rules governing entry to the eurozone. This made investors worry about sending the wrong signals, suggesting that in the

future, other weaker economies might be allowed in without complying fully with membership conditions (BBC News, 2001).

Table 2.2 Macroeconomic indicators for the eurozone and selected countries in the eurozone, 1995-2013

	GDP Real growth rate						General government deficit/surplus in % of GDP					
TIME/GEO	Eurozone	Germany	Ireland	Spain	France	Italy	Eurozone	Germany	Ireland	Spain	France	Italy
1995	1,2	1,4	8,9	4,8	1,7	2,9		-9,5	-2,2	-7,2	-5,5	-7,4
1996	1,3	0,5	8,6	2,3	0,7	1,1	-4,3	-3,4	-0,3	-5,5	-4,0	-7,0
1997	2,3	1,5	10,4	3,6	1,8	1,8	-2,8	-2,8	1,0	-4,0	-3,3	-2,7
1998	2,6	1,9	7,2	4,1	3,0	1,4	-2,3	-2,3	2,2	-3,0	-2,6	-2,7
1999	2,6	1,8	9,9	4,2	2,8	1,4	-1,5	-1,5	2,6	-1,2	-1,8	-1,9
2000	3,4	2,9	9,3	4,2	3,0	3,6	-0,1	-0,1	4,7	-0,9	-1,5	-0,8
2001	1,5	1,3	3,7	2,5	1,1	1,8	-1,9	-1,9	0,9	-0,5	-1,5	-3,1
2002	0,4	-0,2	3,8	1,2	0,2	0,1	-2,6	-2,6	-0,4	-0,2	-3,1	-3,1
2003	0.7	-0.7	3.8	3.2	0.8	0.2	-3.2	-4.2	-3.9	-0.4	0.7	-3.4
2004	-2.2	1.2	4.4	3.2	2.8	1.6	-3.0	-3.7	-3.5	0.0	1.4	-3.6
2005	1.7	0.7	6.3	3.7	1.6	0.9	-2.6	-3.4	-3.2	1.2	1.3	-4.2
2006	3.2	3.7	6.3	4.2	2.4	2.0	-1.5	-1.7	-2.3	2.2	2.8	-3.6
2007	3.0	3.3	5.5	3.8	2.4	1.5	-0.6	0.2	-2.5	2.0	0.3	-1.5
2008	-0.2	1,3	-3,8	-0,7	-0,6	-1,9	-2.2	-0.2	-3.2	-4.4	-7.0	-2.7
2009	-4,7	-4,8	-6,0	-4,4	-3,7	-6,1	-6.3	-3.2	-13.8	-11.0	-7.2	-5.3
2010	1,7	4,3	-0,9	-0,6	1,1	1,2	-6.2	-4.2	-32.3	-9.4	-6.8	-4.2
2011	1,1	3,0	1,1	0,3	1,1	0,0	-4.2	-1.0	-12.5	-9.5	-5.1	-3.5
2012	-0.9	0,5	0,3	-1,5	-0,5	-2,6	-3.7	-0.1	-8.0	-10.4	-4.8	-3.0
2013	-0.3	0.3	1.4	-3.6	-2.9	-5.5	-3.0	-0.1	-5.7	-6.9	-4.1	-2.9

	General government gross debt as % of GDP						Inflation annual average rate of change					
TIME/GEO	Eurozone	Germany	Ireland	Spain	France	Italy	Eurozone	Germany	Ireland	Spain	France	Italy
1995	72,0	55,6	80,1	63,3	55,5	120,9	2,4	1,5	2,3	4,6	1,8	5,4
1996	73,7	58,5	72,3	67,4	58	120,2	2,4	1,2	2,2	3,6	2,1	4,0
1997	73,2	59,8	63,5	66,1	59,2	117,4	1,7	1,5	1,3	1,9	1,3	1,9
1998	72,8	60,5	53,0	64,1	59,4	114,2	1,2	0,6	2,1	1,8	0,7	2,0
1999	71,7	61,3	47,0	62,4	58,9	113,0	1,2	0,6	2,5	2,2	0,6	1,7
2000	69,2	60,2	35,1	59,4	57,3	108,5	2,2	1,4	5,3	3,5	1,8	2,6
2001	68,2	59,1	35,2	55,6	56,9	108,2	2,4	1,9	4,0	2,8	1,8	2,3
2002	68,0	60,7	32,0	52,6	58,8	105,1	2,3	1,4	4,7	3,6	1,9	2,6
2003	68.2	63.0	29.9	47.6	64.2	100.4	2,1	1,0	4,0	3,1	2,2	2,8
2004	68.5	64.7	28.2	45.3	65.7	100.0	2,2	1,8	2,3	3,1	2,3	2,3
2005	69.9	66.9	26.1	42.3	67.2	101.9	2,2	1,9	2,2	3,4	1,9	2,2
2006	67.4	66.4	23.6	38.9	64.4	102.5	2,2	1,8	2,7	3,6	1,9	2,2
2007	65.1	63.6	23.9	35.5	64.4	99.7	2,2	2,3	2,9	2,8	1,6	2,0
2008	68.7	65.0	42.4	39.4	68.1	102.3	3,3	2,8	3,1	4,1	3,2	3,5
2009	78.3	72.5	61.8	52.7	79.0	112.5	0,3	0,2	-1,7	-0,2	0,1	0,8
2010	83.8	81.0	86.8	60.1	81.7	115.3	1,6	1,2	-1,6	2,0	1,7	1,6
2011	86.0	78.4	109.3	69.5	85.2	116.4	2,7	2,5	1,2	3,1	2,3	2,9
2012	89.3	79.7	120.2	85.4	89.6	123.2	2,5	2,1	1,9	2,4	2,2	3,3
2013	91.1	77.4	120.0	93.7	92.3	128.8	1.3	1.6	0.5	1.5	1.0	1.3

Source: Eurostat

Table 2.2 shows the macroeconomic indicators for selected countries in the eurozone. It is divided into three periods. The first period shows convergence in the variables in the lead up to the introduction of the euro (in compliance with treaty requirements), the second shows the period of relative stability 2000-2007, and the last period is post -2007 when the financial crisis broke loose. To make congruent comparisons the same countries are employed all the way: Germany, Italy, France, Spain, and Ireland. Ireland is included because of its interesting economy, with respect to how it was affected by the financial crisis in 2007. The country experienced a collapse of the property bubble in 2008, and after 24 years of continuous growth Ireland experienced a recession. Narrowing the countries in the eurozone down to just six will give the information necessary, but in a clearer way than a showing table and figure with all the 17 countries.

Real GDP growth rates do not show any obvious sign of convergence in the first period. However, the general government deficit/surplus all moves in the same direction in this period. All countries reduced their deficit from 1995, and in 1999 they passed the criteria for eurozone approval. The same movement can be seen in the Greek indicators in Table 2.1, but as previously mentioned, they did not meet the criteria stating government deficit must not

exceed 3 percent of GDP. As for the government debt in this period, Germany, Ireland, Spain and France moved very close to the criteria of a maximum of 60 percent of GDP. In 2000, all four countries had reached the limit. Italy was in the same position as Greece, with government debt exceeding 100 percent of GDP. However, as the data show, Italy reduced their debt each year in this first period, while Greece approximately stayed at the same level. It is also worth noting that the eurozone average was actually above the 60 percent limit. When it comes to the inflation rate, the criteria say this needs to be stable. There was some fluctuation in inflation in the first three years in Table 2.2, but in the last three years of the period the fluctuations were stable and under one percent. Meanwhile, Greece experienced another trend. The country had inflation as high as 20 percent in 1990, but gradually moved downwards each year until the country reached 2.6 percent in 1999. Naturally Greece cannot be said to have a stable inflation rate, but it does show a stabilizing tendency.

In the next period there was more stability in the macroeconomic indicators. In Germany the GDP growth rate was stable even before the eurozone was created, and it continued this way in the second period. The other four countries and the eurozone average clearly showed a more stable GDP growth rate than in the first period. From 2000-01 the growth rate declined in all countries, Ireland had the largest decline where the growth rate moved from 9.3 to 3.9. For all countries the rate stayed around the 2001-level for the rest of the period. The rate in Greece was generally higher than in the countries represented in Table 2.2, but it was stable. The government deficit/surplus data showed the same tendency as the GDP growth rate. All five countries and the eurozone average lies on a stable level, between 4 percent surplus and 3 percent deficit. Greece however, did not follow this level. Their deficit was above 3 percent of GDP each year in this period, and in 2007 it exceeded 6 percent of GDP, double the accepted limit in the eurozone. Government debt in the second period showed a slightly different pattern. Ireland and Spain decreased their debt level whit 10 and 23 percent respectively, while the debt level in Germany and France increased by approximately 5 percent. In the eurozone the government debt experienced a small average decline during the period, while Italy and Greece both had increases and decreases in their debt level. Greece ended up with government debt of 107 percent of GDP, and Italy 99.7 percent. Inflation in these countries was fairly stable from 2000-07, except in Ireland where the rate increased a couple percent the first four years. However, the rate fell to a level of around 2 percent, and in 2007 all the countries in Table 2.2 had inflation near this level. This is also the case for the eurozone average. In Greece inflation was close to 1 percent higher than this.

The last period of Table 2.2 reflects the economic changes after the recession hit in 2007. All countries, except Germany, moved from a stable GDP growth rate to a negative rate in 2008. In 2009 Germany joined the other countries and had a negative GDP rate on 4.8 percent. The largest GDP decline was found in Italy with 6.1 percent. However, there were positive changes already the next year. In 2010 the eurozone average had a positive GDP growth rate, and the same were for Germany, France and Italy. Ireland and Spain still experienced a negative development, but a much smaller change than the year before. This was not the case in Greece. The GDP declined additionally each year from 2008, and reached 6.4 percent decline in 2012. The government deficit/surplus data clearly suggest a global recession. In 2008 each country had an increasing deficit compared to the year before, and in 2009 this was aggravated. The eurozone average government deficit was already twice the accepted size of 3 percent. Spain had reached a deficit of 11.0 percent of GDP and Ireland 13.8 percent. The highest deficit was in Greece where it reached 15.6 percent of GDP. In 2010 all the countries had reduced their deficits, except Ireland which exceeded a government deficit on 30 percent of GDP. In 2011 Germany had reduced its deficit to 1.0 percent and again fulfilled the eurozone criteria. All the other countries in Table 2.2, together with Greece, moved in the same direction, but continued to have a deficit above the 3 percent limit. The eurozone average was still above 4 percent of GDP, but on its way down. Spain, Greece and Ireland stood out with deficits of more than three times the accepted level. The general government debt indicator pointed out large changes after the recession broke out. Each country in Table 2.2 had increasing debt levels in the period after 2007, some to a higher degree than others. The eurozone average went from 68 percent of GDP to 86 percent in the years from 2007-11. Just as with the deficit level, Ireland experienced the largest increase in government debt, compared with the other countries. From a government debt of 42.4 percent of GDP in 2007, the debt increased to 109.3 percent in 2011. Greece moved even further away from the eurozone countries with a debt level of 107 percent in 2007 to 170 percent in 2011. With respect to the inflation rate, there was a clear movement away from the stable inflation experienced in 2000-07. There were larger fluctuations in all the countries, but in 2011 all the countries in Table 2.2 converged to 2 percent again. Greece also managed to slow down the inflation from 4.7 percent in 2010 to 3.3 percent in 2011.

An important part of a country's history within a membership in a union is its trade balance. Table 2.3, show Greece's intra-EU and extra-EU trade. These data prove that the country imports more than it exports in both markets.

Table 2.3 Greece's share of export and import in intra- and extra- EU trade

	Intra EU-trade		Extra EU-trade	
Time	Share of import	Share of export	Share of import	Share of export
1999	1,4	0,5	1,2	0,5
2000	1,4	0,4	1,3	0,6
2001	1,3	0,4	1,3	0,5
2002	1,0	0,4	1,6	0,5
2003	1,3	0,4	1,8	0,5
2004	1,3	0,4	1,6	0,5
2005	1,2	0,4	1,5	0,5
2006	1,2	0,4	1,6	0,5
2007	1,2	0,4	1,7	0,5
2008	1,3	0,4	1,8	0,5
2009	1,3	0,4	1,8	0,5
2010	1,0	0,4	1,5	0,5
2011	0,8	0,4	1,2	0,7

Source: Eurostat

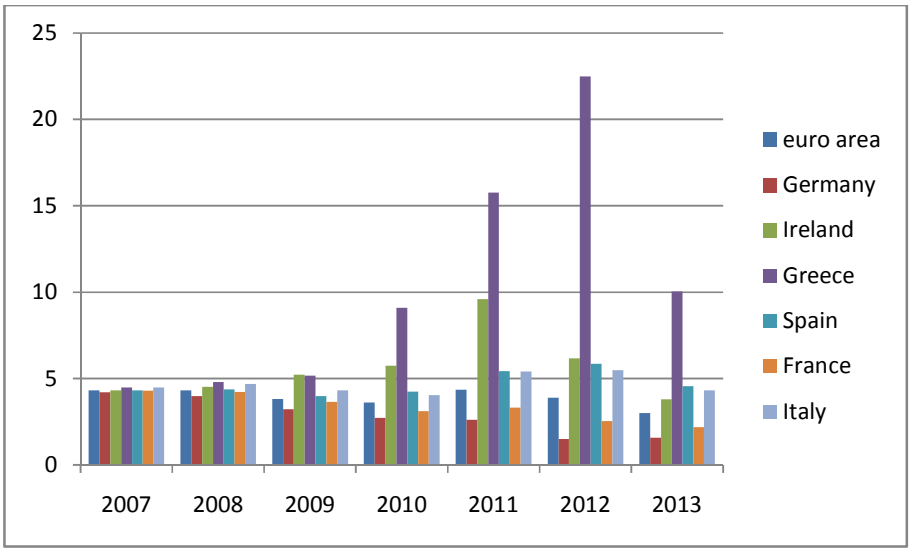
Each year since the eurozone implementation in 1999 and up until 2010, Greece's export to countries outside the EU has constituted 0.5 percent of the union's total export. The share has increased the two most recent years, but has not yet reached 1 percent. By comparison, Germany had the highest share of extra-EU trade of the eurozone countries at 27.8 percent in 2012. The share of import from extra-EU trade has since 2001 lied between 1.2 and 1.8 percent. When it comes to trade within the union, Greece's share is a bit smaller. In intra-EU trade Greece exports stands for 0.4 percent of the traded goods. This share has been the same each year since they joined the eurozone and up until 2011. Greece has imported around 1 percent of the goods traded within the EU each year since the eurozone implementation. The numbers shows the same trend as the numbers for exports to extra-EU trade, a little increase in 2007-08, but a decline in 2010-11. What seems to be clear, regardless extra- or intra-EU trade is that Greece imports approximately three times more than it exports.

It was in late 2009 that the Greek divergence from rest of the eurozone countries began creeping to the surface. A new government revealed that its predecessors had concealed enormous deficits. In November, the country's public debt was predicted to rise to 124.9 percent of GDP (€300 billion) during 2010, the highest predicted level in the EU, and double the eurozone limit on 60 percent (European Commission, 2009). The Greek government also announced that its 2009 budget deficit would be equivalent to 12.7 percent of its GDP, more

than four times higher than the maximum deficit allowed under the EU's Stability and Growth

Despite their situation, Papandreou insisted in 2009 that they would not need a bailout from eurozone states. He proposed large public spending cuts. At this point, Greece faced a critical financing problem, and in the beginning of 2010 it was clear that they needed to refinance more than €50 billion in debt during the year (BBC News, 2010). An insecurity regarding Greece's ability to pay their debt begun to spread. This made it worse for the country, which had to pay higher interest on their loans than other countries in the eurozone. This can be seen by the Maastricht bond yields, which are the convergence criterion for eurozone long-term interest rates (central government bond yields on the secondary market, gross of tax, with around 10 years residual maturity). The yields for Greece are reported in Table 2.1, but they are compared with the other eurozone countries and shown in Figure 2.1. The figure compares the countries in the period after the recession hit in 2007.

Figure 2.1 Maastricht bond yields, 2013

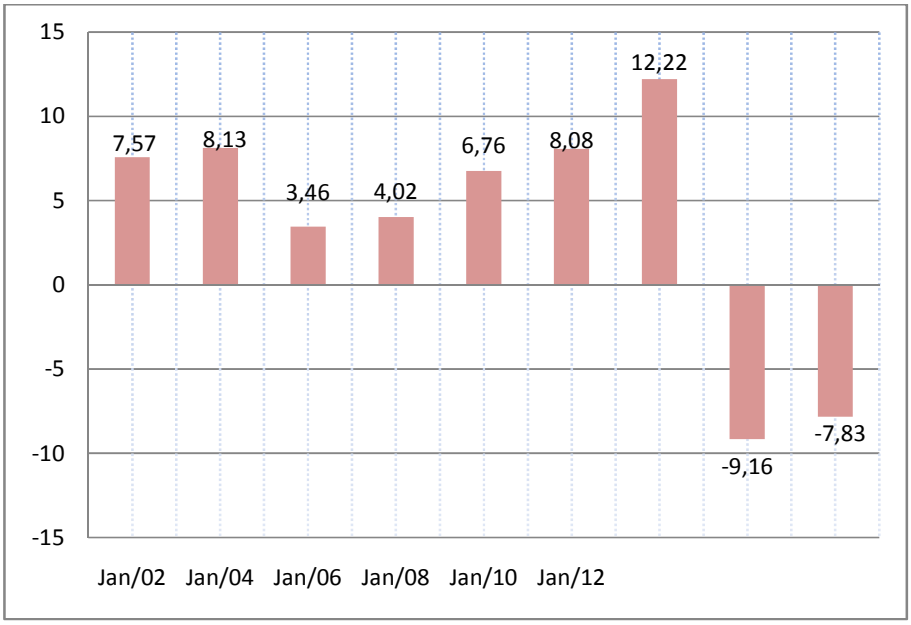


Source: Eurostat

The credit ratings continued to be downgraded, and in April 2010 it reached "junk-status"below 'BBB', the lowest ratings of Standard & Poor (The Independent, 2010). In addition, Greek banks experienced capital flight. In the years from 2001 until 2010 the private capital flow in the country had been positive, but from having a private capital inflow

of 12.22 percent of GDP in 2009, the banks experienced an outflow of 9.16 percent of GDP in 2010.

Figure 2.2 Private capital flow in % of GDP in Greece.



Source: tradingeconomics.com

Again the Greek Government wanted to cut deficit and public spending. The cuts eventually lead to a huge strike among Greek citizens, and it became clear that Greece needed help. The eurozone and the IMF agreed upon a bailout package for Greece, where they got loans with a lower interest rate than private bank loans.

With the Greek debt crisis came the fear of the other eurozone-countries with large budget deficit defaulting. The eurozone's single currency's credibility was undermined, and it weakened against the dollar to the lowest level in four years (Stephen & Daley, 2010).

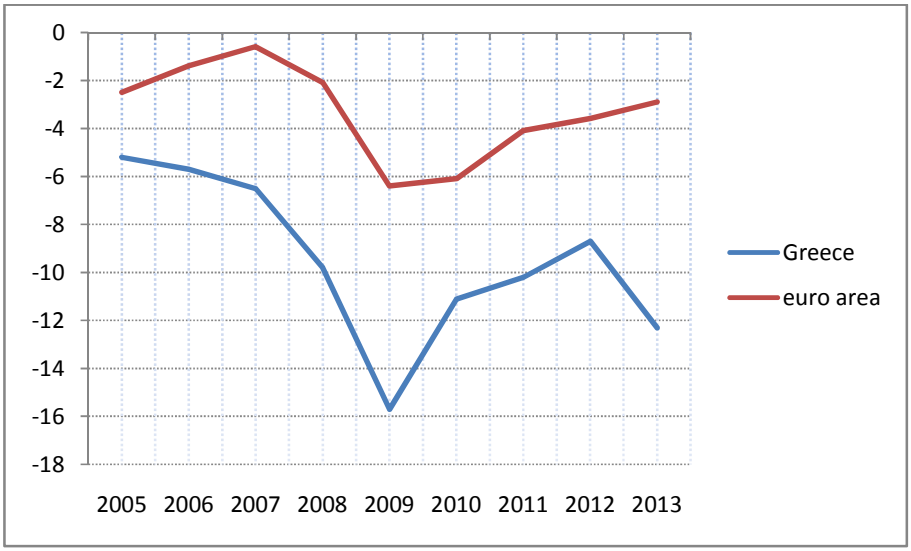
The bailout package in 2010 was not enough to save Greece. They needed a new bailout in the beginning of 2012 which included a partial default on some of their debt. They had to embark on another major austerity program with drastic spending cuts, tax rises, and labor market and pension reforms. At the end of 2012 eurozone ministers agreed to cut Greece's debt further, and extended the fiscal adjustment path by two years (BBC News, 2012).

2.3 Data showing divergence in important macro data.

The bailout package devised by the European Union, the International Monetary Fund and the European Central Bank in 2010 was not given Greece for free. In return, Greece was required to cut public spending (and to privatize national assets). Cutting public spending in a country that already is in economic trouble is a risky business, since the country need economic growth rather than contractionary fiscal policy. To get a picture of how the economic recession hit Greece, it could be a good start to take a closer look at some of the country's economic indicators before and after the recession.

Greece has had a budget deficit each year since 1990. The deficit has been larger than the eurozone's average the whole period Greece has been a eurozone member. As shown in Figure 2.3 Greece's budget deficit as a percentage of GDP diverged from the eurozone's average around 1999, and before the crisis hit in 2007 the country already had an almost 6 percent larger deficit than the eurozone average. Having in mind that the budget deficit limit of being a eurozone member is 3 percent, a 6 percent difference with the eurozone average is a large gap.

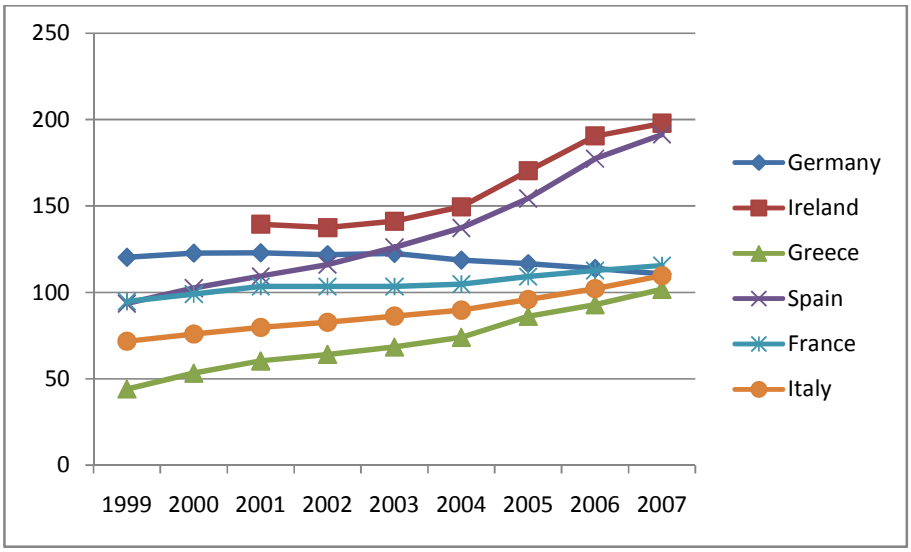
Figure 2.3 Budget deficit in Greece compared to the eurozone



Source: European central bank, Statistical Data Base

To service their deficit, Greece took on large amounts of debt. The general government debt was 90 percent of GDP in 1990, but has been around 100 percent each year from 1992 and up until 2007. But it is not just the government who has accumulated large debts; private debt in Greece also diverged from the other countries in the eurozone. In Figure 2.4 the private debt in Greece is compared to other eurozone members. It can be seen that Greece and Spain diverged from the other countries in the period around 2003. In Greece, the private debt has increased every single year from 1995 to the recession began. The rate of increase has been high, from 37.1 % of GDP in 1995 to almost 110% in 2007. This is a clear indication of Greek people borrowing and spending beyond their means.

Figure 2.4 Private debt in % of GDP in the years from the implementation of the eurozone up until the economic recession hit in 2007

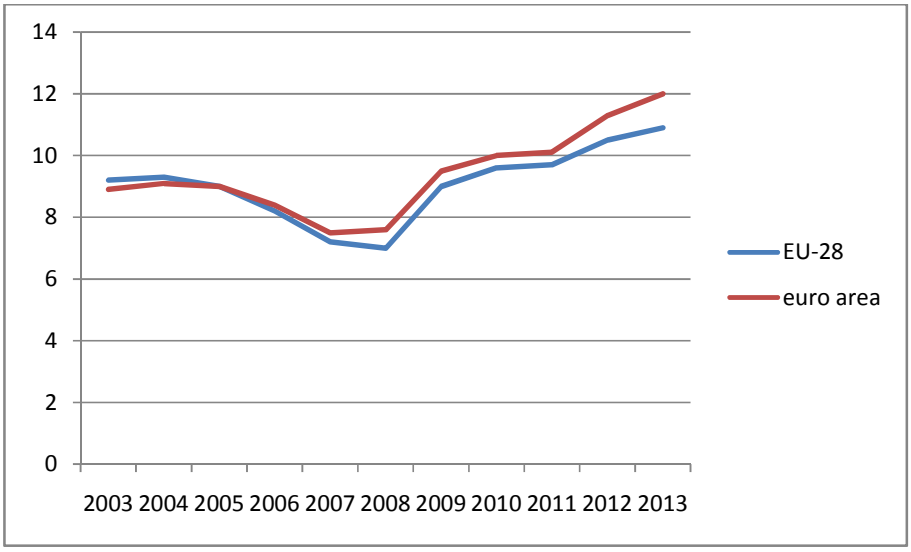


Source: Eurostat

With the country's large amounts of private debt, it is interesting to look at the unemployment rate. It is a connection between the two indicators, as private companies in Greece experience the accumulation of debt as a pressure on their profitability. If they experience rough times, this will influence their employees either by putting pressure on their wages, or being forced to cut someone loose. This again means an unstable economy for Greek citizens, and they too might be forced to take on more debt. After an increase in the unemployment rate from 6.8 percent in 1990 to 9.8 percent in 1995, the rate in Greece was fairly stable around 10 % since 2001 until 2010. In Figure 2.5 it is apparent that an

unemployment rate of 10% is not unique in the eurozone, but it is above the average, although the average has increased with the recession.

Figure 2.5 Unemployment rate in the EU and the eurozone



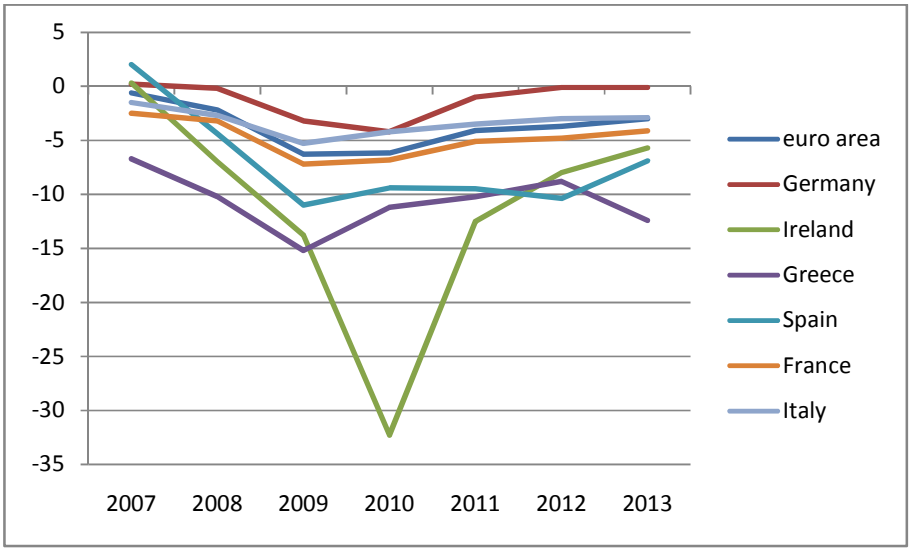
Source: European Commission 2014

The macroeconomic indicators from the period before the recession suggest that Greece is above the eurozone average when it comes to debt, deficit and unemployment. With that as a starting point, one might anticipate that a recession would put more pressure on the Greek economy than the rest of the member countries. This matter will be explored in the next section.

2.4 Divergence after the crisis

The macroeconomic indicators give a picture of how the financial crisis in 2007 hit Greece's economy, and how the situation was when the fight to stay in the eurozone began. Looking at changes in the budget balance after 2007, it is clear that the deficit increased after the first year. After many years with a deficit around 5 percent of GDP, it almost doubled and grew to Figure 2.5 Unemployment rate in EU and the eurozone around 10 percent in 2008. The next year it grew even further and landed above 15 percent of GDP. This was the largest deficit of all the countries, not just in the eurozone, but in the whole European Union in 2009. The deficit declined to approximately 10 percent in 2010, the year they received their first bailout package. There was also a further decline in the deficit the next year (European Commission, 2013).

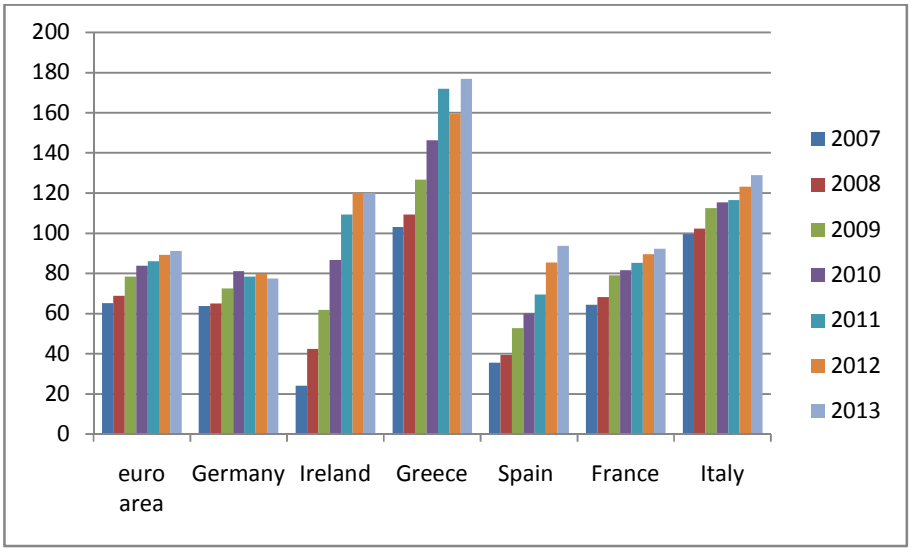
Figure 2.6 General government deficit/surplus in % of GDP, the period 2007-13



Source: Eurostat

Greece's debt is what has gotten most attention in the recession. The government debt as percentage of GDP reflects why. As previously mentioned, the government debt in Greece Figure 2.6 General government deficit/surplus in % of GDP, the period 2007-11 was around 100 percent of GDP each year since 1992 and until the recession hit in 2007. In 2008 the debt increased to 113 percent before it accelerated in 2009 to 130 percent. By 2012 it exceeded 170 percent. These last three years, Greece had the highest level of government gross debt in the whole European Union, by a large margin. In comparison, Italy had the second largest level, its debt as a percentage of GDP reaching 116.4 percent in 2011. It is also interesting to compare the debt and deficit level in Greece and Ireland. Figure 2.7 shows that Ireland had approximately the same amount general government debt as Greece in 2007 and 2008, but the countries diverged, and in 2011 there was a gap of 50 percent between them. Meanwhile, the deficit level in Greece and Ireland represents a development in the other direction in this period. In Figure 2.6 it is demonstrated that after Greece got their first bailout package in May 2010 they managed to decrease their deficit, while Ireland experienced a large increase from around 15 percent of GDP to 30 percent the same year. However, in November 2010 Ireland received a bailout package as well, and in 2011 their deficit was reduced to 15 percent of GDP again (European Commission, 2013).

Figure 2.7 General government gross debt in % of GDP, in the period 2007-13

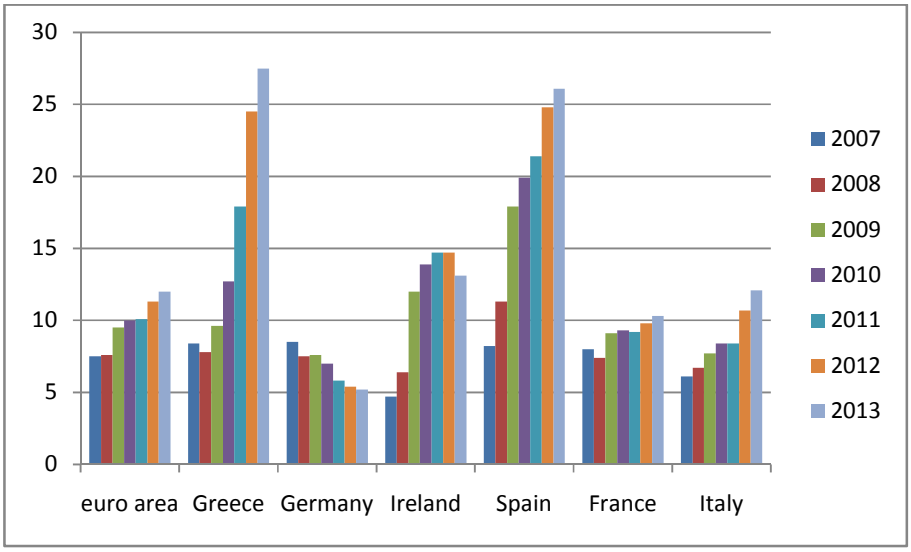


Source: Eurostat

When it comes to paying their accelerating debt, the development of the interest rate is important. When the extent of Greece's debt problem was revealed in late 2009, the market responded by sending interest rates up. After the bailout packages for Greece were put together, the hope was that investors would be calmed. But in the fall of 2010 interest rates began creeping up again, as countries that reduced their spending to meet tough deficit targets found themselves falling further behind, as their economies slowed and revenue intake Figure 2.7 General government gross debt in % of GDP, in the period 2007-11 declined. An example is the Maastricht bond yield, which is the central government bond yield in the secondary market, previously reported in Table 2.1, and shown graphically in Figure 2.1. In 2008 this was 4.80 percent and 5.17 in 2009. The next three years the yield had exceptional large increases (to 9.1, 15.8 and 22.5 respectively), and the levels in Greece diverged from the rest of the eurozone (European Commission, 2013).

When it comes to the unemployment rate in Greece, it can be seen that after having a quite stable rate around 10 percent, and a small decline the latest years up until the recession, unemployment increased after 2007. When the austerity measures were implemented in 2010 the increase in unemployment went from 9.6 percent in 2009 to 27.5 percent in 2013, the second highest rate in the European Union, only surpassed by Spain.

Figure 2.8 Unemployment rate, annual data, 2007-13



Source: Eurostat

Figure 2.8 shows the countries annual average rate, and it points out that Spain still had the highest average unemployment rate in 2012. However, the unemployment rate in Greece rose to 27.5 percent in 2013, and thereby overtook Spain as the country with the highest unemployment rate in Europe.

In addition to the high unemployment, Greek has a history of undeclared work. A report from the inspectors of the special agency of insurance control of the country's Social Insurances Foundation (IKA) revealed that undeclared work rose to 36 percent in Greece in 2012 (phantis, 2013). With undeclared work constituting a third of the Greek economy, the government loses large amounts of tax revenues. In the media, the Greeks have announced they do not have any confidence in the government, and that they do not see the point of paying taxes.

Chapter 3 Theory

3.1 Monetary union: an extreme form of fixed exchange rate

A monetary union is a union between countries that use the same currency which is managed by one common central bank. When a country joins a monetary union the national central bank either ceases to exist or will have no real power. The country no longer has the ability to determine the quantity of the national money in circulation, or to change the short term interest rate (Grauwe, 2009).

There are many designs of a monetary union. In the strict term a monetary union means complete abandonment of separate national currencies and full centralization of monetary authority in a single joint institution. But in reality there are many variations along two key dimensions; 1) institutional provisions for the issuing of currency and 2) institutional provisions for the management of decisions. In political terms a monetary union can be divided into two groups, a shared monetary sovereignty or surrendered monetary sovereignty to a supranational institution (Economic History Association, 2010).

The theory of monetary union is largely congruent with fixed exchange regimes. A monetary union is an extreme version of fixed exchange rate, but there are at least two distinctions. First, because the countries switch to a new currency, the cost of abandoning the new system is much higher than for a typical fixed exchange rate regime, giving people more confidence that the system will last. Also, a monetary union eliminates the transactions costs people incur when they need to exchange currencies in carrying out international transactions. Meanwhile, both under a monetary union and a fixed exchange regime, the ability to use the exchange rate as a policy tool is lost. With a fixed exchange regime the country instead have to use their policy tools to keep their exchange fixed to the anchor country. There are mainly three theories about exchange rate determination; 1) purchasing power parity (PPP) links spot exchange rates to nations price level; 2) the interest rate parity (IRP) links spot exchange rates, forward exchange rates and nominal interest rates; and 3) the international Fischer effect (IFE) links exchange rates to nation's nominal interest rate level. The PPP states that the spot rate of one currency with respect to another will change in reaction to the differential in inflation rates between the two countries. Consequently, the purchasing power for consumers when purchasing goods in their own country will be similar to their purchasing

power when importing goods from the foreign country. IRP means the forward rate of one currency with respect to another will contain a premium (or discount) that is determined by the differential in interest rates between the two countries. As a result, covered interest arbitrage will provide a return that is no higher than a domestic return. The IFE involves that the spot rate of one currency with respect to another will change in accordance with the differential in interest rates between the two countries. Consequently, the return on uncovered foreign money market securities will, on an average, be no higher than the return on domestic money market securities from the perspective of investors in the home country. These parity theories are more likely to hold under a single currency than other currency regimes, because of higher flexibility in labor and capital markets.

The macroeconomic objective of a fixed exchange regime is naturally stability in the exchange rate. But there are also objectives related to domestic macroeconomic balances, such as stability in external balance, price stability or low inflation, stable money supply growth, stable interest rates and prevention of asset price bubbles. Under a fixed exchange regime a country surrenders its fiscal policy in the sense that the government cannot independently use public spending to pursue objectives other than to help keep the exchange rate at its targeted rate. The public spending cannot be used such that it creates interest rate differentials, but can only be used as a means to ensure that domestic price changes over time are kept in synch with foreign price changes. Under a strict fix, also the monetary policy is affected. The monetary policy is no longer independent with respect to the rate of money supply growth.

3.1.1 Costs/benefits of a monetary union

The benefits of a monetary union membership are mainly tied to advantages from intra-union trade. The costs derive from the fact that when a country relinquishes its national currency, it also relinquishes an instrument of economic policy, i.e. it loses the ability to conduct a national monetary policy and the use of the exchange rate vis-à-vis other member states of the monetary union. There are many situations where use of independent monetary policy is useful, because nations are different in some important senses. These differences can lead to imbalances, which in a monetary union need to be adjusted without using monetary policy. In which grade the countries have the ability to make adjustments depends on different characteristics.

3.1.2 The history of EU and its monetary union

The eurozone area consisted in the end of 2013 of 17 countries (joined Latvia 2014, Lithuania 2015) despite the European Union being comprised of 27 countries. The formation of the European Union began in 1951 when the Treaty of Paris was signed by Belgium, France, West Germany, Italy, Luxembourg and the Netherlands. This treaty dealt with the European Coal and Steel Community. In 1957 two new treaties were signed and formed the European Community. From 1993 the European Community has been officially called the European Union. In 2007 the Union totaled 27 countries. The objective of the Union was an integrated market of the free movement of goods, services, capital and people (Appleyard, Field jr, & Cobb, 2010)

For the Union to achieve these goals it was important to obtain grater political cohesion, which was done by establishing various supranational institutions. The leadership lays with the executive body the European Commission, while The Council of Ministers is the decision making unit on community wide matters. Broad Policy guidelines are set by The European Council, which consists of member countries' political leaders. The European Parliament is elected by voters from the member countries, and the parliament makes proposals to the Commission. Dispute settlements and interpretations of constitutions are exercised by the Court of Justice (Appleyard, Field jr, & Cobb, 2010).

In the 1960s the European Community experienced a rapid growth among their member countries after adopting a common external tariff and eliminating internal tariffs. The GNP growth rate within the Community was higher than the growth rate in the US, and some believed the establishment of the EC itself was the reason for growth. However, the next decade gave way to disappointments. Two oil crises in 1973-1974 and 1979-1980, accompanied by periods of simultaneous recession and inflation, led to slow growth and increasing unemployment in Europe. The slow growth continued in the first half of the 80s. Annual EC real GNP growth fell to 1.4 percent, while the US had a growth on 2.3 percent, and Japan grew at a rate of 3.7 percent (Appleyard, Field jr, & Cobb, 2010).

The next important step in the European integration process was to move towards the goal of full monetary union by January 1, 1999. 11 nations qualified for an adoption of the euro on this date. Greece was a late qualifier and adopted the euro in 2001, just in time to be among

the first wave of countries to launch euro banknotes and coins on 1 January 2002 (Appleyard, Field jr, & Cobb, 2010).

Within the eurozone, goods, services and people can move freely. Furthermore, the previous national frontiers between EU member nations have been dismantled; this has opened up economic free trade and working opportunities (European Commision, 2002).

The European Central Bank (ECB) is the institution responsible for the monetary system of the countries in the eurozone. The national banks in each member country work together with the ECB to formulate monetary policy that helps maintain price stability. Primary responsibilities of the ECB is to formulate monetary policy, conduct foreign exchange, hold currency reserves, authorize the issuance of bank notes, and promote the smooth operation of the financial market infrastructure for securities in Europe. In the institutional framework for the single monetary policy it is laid down that the ECB is independent. Neither the ECB nor the national central banks, nor any member of their decision-making bodies, are allowed to seek or take instructions from EU institutions or bodies, from any government of an EU member state or from any other body. All ECBs financial arrangements are kept separate from those of the EU, and the central bank is prohibited from granting loans to EU bodies or national public sector entities. In addition, the ECB is directly responsible for overseeing financial markets infrastructures. This involves the flow of funds, securities and other financial instruments among buyers and sellers, borrowers and lenders (The European Central Bank).

The euro was created because of the advantages and benefits a single currency offered over the previous situation where each member of the EU had its own currency (European Commission, 2011). The Commission notes that a single currency eliminates fluctuation risks and exchange costs, and strengthens the single market. In amendment, the Commission states that the euro means closer co-operation among member states for a stable currency and economy to benefit them all. The ECB sums up the benefits of the euro as: 1) low interest rates due to a high degree of price stability; 2) greater price transparency; 3) removal of transaction costs; and 4) elimination of exchange rate fluctuations. The elimination of costs, risks and lack of the transparency connected with the need to exchange currencies in cross border transactions is one of the beneficial factors emphasized by the ECB. This makes doing business in the euro area more cost-effective and less risky. Increase in price transparency encourages cross-border trade and investment of all types.

3.2 Fiscal policy and its importance in the EU

Fiscal and monetary policies are the tools used by a state to achieve its macroeconomic objectives. Fiscal policy means using government spending and taxing to impact the economy. Monetary policy can be used to boost or slow the economy by controlling the supply of money. In the eurozone, the responsibility over monetary policy is assigned to the ECB, while the fiscal policy remains the remit of each individual member state. To keep the values of the single currency stable it was necessary to provide conditions over national fiscal policy. This was covered under the Treaty on the Functioning of the European Union together with provisions on monetary and fiscal policy interactions (The European Central Bank, 2012).

In the Treaty it is clearly stated that the main objective is to maintain price stability in the eurozone. A formal framework was created regarding requirements for fiscal policy across nations in the area, but it is each country's responsibility to ensure a commitment to sound public finances. Even though fiscal policy is decided in each member state while the monetary policy is governed by the ECB, they interact in various ways. A monetary policy that ensures stable inflation expectations and low inflation risk premium helps to limit the level and volatility of long-term interest rates. A more stable interest rate is beneficial to the governments financing cost. It also works the other way around. Fiscal policy affects the monetary policy through both demand-side effects and by shaping the supply-side of the economy. This is done by tax-regimes or by influencing long-term interest rates via the issuance of public debt. However, the debt crisis has shown that the two policies do not mutually reinforce. Unsustainable public finances and high levels of debt have made the stability oriented monetary policy difficult to conduct. In recent years it seems as if weak public finances can lead a country into a vicious circle that puts the financial system under strain. If the fiscal positions are worsened, the sovereign debt are reprised, which has an adverse impact on the financial system via banks exposure to government bonds. This has a negative effect on the macro economy, and the financial markets and public finances are weakened even further. Then the operation of the monetary policy gets riskier, through more volatile and illiquid sovereign bond markets, and a more unstable banking system (The European Central Bank, 2012).

When the eurozone was founded, it was clear that unsustainable fiscal positions could interfere with the smooth conduct of a single monetary policy. In the Delors Report 2 it was

stated that a single currency would assume a common monetary policy and require a high degree of compatibility of economic policies, particularly in the fiscal field. The report also said that uncoordinated and divergent nation budgetary policies would undermine monetary stability. It mentions that the access to large capital market may for some time even facilitate the financing of economic imbalances. If a currency union has fully integrated capital markets, governments and private agents can draw on a larger pool of savings to cover their borrowing. This means that an individual country can increase their borrowing, and only raise funding costs moderately. However, the overall policy framework of EMU was designed to safeguard the value of the single currency, and at the same time oppose any adverse side effects on incentives to keep sound public finances.

Grauwe (2009) points out two factors that are important as to whether a monetary union increases or reduces the degree of fiscal discipline of countries joining the union. One factor leads to incentives for larger budget deficits, and one which tends to reduce the incentives. The first one can be explained by the example of a sovereign country which issues debt denominated in the domestic currency. The interest rate it will have to pay reflects a risk premium consisting of two components, the risk of default and the risk that the country will devalue its currency in the future. For most countries the latter is most likely. As a result, when a sovereign country issues too much debt, it is a quickly increasing risk of future devaluation, which again makes the interest rate at which the authorities have to issue new debt also increase. Hence, the market is quick to penalize the authorities, reducing their incentives to issue excessive debt. In a monetary union however, this mechanism will be weaker. The currency in which the debt is issued cannot be affected by devaluation. Thus, there is no longer any devaluation risk for the holder of this debt. As a result, when the authorities of a member state issue too much debt they do not face a quick increase in interest rate on their new debt issues. The component of default risk is still there, and this will increase when the country accumulates debt. However, the other members in the union extend an implicit bail-out guarantee, and this gives an incentive to member states to issue unsustainable amounts of debt. Grauwe (2009) argues that even a no-bailout provision may not solve this problem because it is not likely to be credible. In the EU it is agreed upon a “no-bail-out clause” (Article 125 of the Treaty on the Functioning of the European Union). However, if a country in the European Union would be unable to service its debt, it was uncertain whether the member states of the union would stick to this clause. This has now been proven not credible trough the partial default in Greece. When it comes to the factor

which tends to reduce the incentive of member states of a monetary union to run excessive deficits, this is the country's ability to finance deficits by money creation. When a country joins a monetary union this ability is reduced, and the governments of member states face a "tougher" budget constraint than sovereign nations that maintain their own currency. Sovereign nations have easier access to the local national bank which can be pressured to alleviate the burden of financing budget deficits. For sovereign nations this creates incentives for having larger budget deficits. Which one of these two factors -the moral hazard or the no-monetization one- prevails is essentially an empirical question in that it depends on institutional features and on the incentives governments face (Grauwe, 2009).

3.3 Indicators of costs and benefits of being a eurozone member

The indicators to draw conclusions on whether Greece should stay or leave the eurozone can be indentified from the monetary union policy as members have given up the possibility to allow their currency to float against the anchor currency, and hence given up their national monetary policy as a tool for economic adjustments. Not fulfilling the necessary characteristics would indicate that Greece should not be part of the eurozone, or at least that the country most likely experiences that the costs of being a member exceed the benefits. This section will look at how to analyze Greece's trade policy, flexibility, labor mobility, openness, fiscal policy and the eurozone fiscal mechanism. How to discuss the effects of the bailout packages will also be presented here.

The point of having no trade barriers is to promote trade between member countries. A relevant measure of the effect of the trade policy is thereby Greece's degree of openness. It is likely to think that a country with a low trade share gains less benefit from being a member of a monetary union, as many of the gains of being a monetary union member are attached to trade benefits and integration. This is in accordance to what the ECB has stressed as one of the beneficial factors of the eurozone. The elimination of costs, risks and lack of the transparency connected with the need to exchange currencies in crossborder, makes doing business in the euro area more cost-effective and less risky. However, if a country is relatively closed, these benefits will not be particularly relevant in a cost/benefit analysis. In addition, an open country can more easily adjust to asymmetries in the economy than a closed one as it would be more integrated. McKinnon (1963) argues that a country that is highly

integrated through openness and factor mobility will gain the most from forming a monetary union.

Flexibility is a difficult concept to quantify, but a comparison of the development in different macroeconomic indicators can give a helpful indication. Heinz and Rusinova (2011) used the response of wages to cyclical unemployment to measure wage flexibility for the ECB. The flexibility is defined through a negative correlation between the level of unemployment and the level of wages. If unemployment rises, wages should drop in the case of wage flexibility. Price flexibility can be measured by changes in the CPI index with respect to changes in wages. If prices are flexible, there should be possible to see a positive correlation between the changes; an increase in wages should result in an increase in the CPI index.

Net migration shows the difference between the numbers of people who arrived and left Greece during one year. While not giving actual figures on how many people that left or arrived, it does show if the country attracted more people or if it saw more people leave. A significant negative link between the unemployment rate and net migration would imply some labor mobility. If unemployment rises and there is a negative net migration it indicates that people who do not have work in Greece move to another country. It has to be noted that this indicator, however, covers the entire population, rather than just those of working age, and it includes movements in and out of the EU, instead of just movements within the EU. Nevertheless, as most people who move are of working age and as three quarters of the people who move to an EU region come from another region within the EU, net migration is a good source of information for identifying regions losing or gaining working age populations from within the EU (European Commission, Regional Policy, 2008).

There are many indicators that can provide information on whether it is optimal for Greece to be in a currency area with the rest of the eurozone, but it can also be asked whether the eurozone itself is vital in the long term. The fiscal mechanism in the eurozone is one of the issues that are argued to be problematic for the monetary union's survival. Grauwe (2006) argues that the absence of a common fiscal policy is a serious flaw that has to be fixed if EMU is to survive in the long run. Tsoukalis (2012) supports this and states that EMU needs to move further towards a fiscal union. Rockoff (2000) argues that it took the US a minimum of 150 years to meet the criteria for an optimal currency region and that this did not happened until the country implemented a system of fiscal transfers and deposit insurance in the 1930s. Kenen (1969) argues that it is desirable to centralize a significant part of the national budgets

to the European level. A centralized budget allows countries that are hit by negative shocks to enjoy automatic transfers, thereby reducing the social costs of a monetary union. Under a centralized system Greece would automatically experience a redistribution of income from member countries in good economic state, while under a decentralized system Greece would increase its external debt by receiving fiscal transfers from these countries. In the eurozone the ECB have the responsibility for the monetary policy, the Treaty gives a formal framework regarding requirements for fiscal policy across nations in the area, but it is each country's responsibility to ensure a commitment to sound public finances. The relevant fiscal mechanism is the centralization of budgetary systems in the whole European Union. There is no straightforward answer to what degree of centralization that is optimal, but the level of centralization can be measured with respect to what is considered to be total centralization and total decentralization. This can be measured by comparing how much the European budget amounts of EU GDP relative to how much national budget normally amounts of GDP.

Another indicator that can represent a cost or a benefit in a monetary union is connected to the preferred inflation rate. This is not one of the characteristics necessary to form an optimal currency area, but it is an indicator that can represent a cost or a benefit. If Greece had to give up their preferred rate to stay in the eurozone this would represent a cost, while it is a benefit if the membership helped them keep the rate stable. Historically, countries with high inflation have been enthusiastic to join the monetary union, because an entry was seen as a way to import stability (Grauwe, 2009). To measure the benefits/costs associated with the inflation rate in Greece, the data from the price index in Table 2.1 will form the basis. The ECB defines price stability as a year-on-year increase in the CPI for the euro area of below 2 percent. The Governing Council has also clarified that, in the pursuit of price stability, it aims to maintain inflation rates below, but close to, 2 percent over the medium term (The European Central Bank). Since there are always some fluctuations in the inflation rate it would not be realistic to not allow any fluctuations when considering whether the rate is stable. Fluctuations like this, more than one year in a row, will represent an unstable inflation rate. Another cost/benefit indicator from the optimal currency area theory that is not directly one of the necessary characteristic, but can represent a cost of fixing its currency, is the growth rate. If Greece was a fast growing country, they would experience trade balance problems, as its imports would tend to grow faster than its exports.

The last indicator that can be used to discuss whether Greece should stay or leave the eurozone is the effects of the economic aid they have received from the ECB, the IMF and

the EU. Greece has received bailout packages and partly defaulted on their debt. The actions taken to solve the crisis will be presented below. Owing to the fact that the first bailout package was given in 2010, it is now possible to look at how effective this package was and get an indication of whether the actions taken to solve the crisis will fulfill their purpose. This can be done by comparing the macroeconomic indicators showed in Table 2.1, before and after the implementation of the first package.

3.4 Actions taken to solve the crisis

The leaders of the European Union, the IMF, and the ECB have undertaken substantial measures to avoid an uncontrolled and disorderly Greek default. Nelson et.al. (2011) note that these leaders feared that a default would generate contagion and financial turmoil, and that they wanted to avoid this at all cost. Other eurozone countries with high debt levels might experience a major sell-off of bonds, while European banks exposed to Greece and other eurozone governments might not be able to endure losses on those investments.

Chapter 4 Framework

4.1 Greece's costs and benefits of being a eurozone member

The economic situation in Greece after the recession stroke in 2007 has made the country depended on bailout packages from EU, the ECB and the IMF to stay in the eurozone. The main purpose of this study is to analyze whether Greece should keep fighting to stay in the eurozone, or if the country should leave. There are both benefits and costs attached to being part of a monetary union.

4.1.1 No barriers to trade

As pointed out in the history of EU and its monetary union, the member countries adopted a common external tariff and eliminated internal tariffs in the 1960s. All internal market restrictions were removed in December 31,1992, and the term EC92 came into existence to indicate the target for complete integration of the Community. Today goods, services and people can move freely within the eurozone, so there is no doubt that the barriers to trade with respect to customs and boarder laws are eliminated. But there can still be cultural and linguistic differences that can act as barriers to trade and mobility. This cannot be changed by eliminating tariffs and imposing a single currency. Greece's degree of openness and flexibility can be an interesting indicator in that case.

4.1.2 Openness

Greece's degree of openness to the other eurozone members, it is valued from the country's exports of goods and services as percentage of GDP.

Table 4.1 Intra-union exports of goods, % of GDP, 2008-12

Year	Germany	Ireland	Spain	France	Italy	Greece	EU average
2008	25,2	36,4	12,2	13,8	13,8	5,0	21,8
2009	21,1	32,6	10,9	11,5	11,1	4,0	18,7
2010	23,1	41,9	12,5	12,4	12,5	4,5	20,7
2011	24,4	49,8	13,0	13,1	13,3	5,3	22,1
2012	24,9	49,5	13,5	12,4	13,7	6,0	22,3

Source: European Commission

In Table 4.1 is shown Greece's share of intra-union exports and compared to the other eurozone countries and the eurozone average. Greece stands out as the country with the

lowest degree of openness in terms of intra-union exports over the five years 2008-12. Cyprus is actually the only country in EU with a lower degree of openness than Greece in this period (European Commission, 2012).The degree of openness in Greece is also a great deal lower than the EU average which approximately lies on a rate four times higher than the rate in Greece. Since these data show that intra-EU trade is relatively unimportant in Greece, it is less clear that the country belongs to an optimal currency area with the rest of the EU than if the trade was important. The benefits of being in a monetary union are much smaller for a country with a small fraction of their goods being exported to other member countries than countries with a large fraction of intra-union export. With a small share of their trade being within the union they do not earn the benefits connected to the elimination of costs that comes with the need to exchange currencies in cross-border transactions. They would naturally not have these benefits if they left the eurozone either, but in a cost/benefit analysis the lack of benefits will give the costs a larger weight. As previously mentioned, a small degree of openness to the EU means Greece is less integrated with the rest of the units. In addition, the degree of openness to the rest of the world has a direct impact on the economic situation in Greece. If there was an increase in Greece's exports, this could partially compensate for the contractionary impact of fiscal consolidation. If Greece would experience increased openness, this could be an argument of leaving the eurozone. With the low degree of openness in Greece it is more difficult for exports to provide an offset to the fiscal tightening. Alcidi & Gros (2012) states that if Greece had been able to increase the volume of its total exports similarly to that of Spain or Portugal, i.e. by around 3 percentage points in the period from 2008-12, this would have given a boost of around 5 percentage points to the country's GDP. This would not have been sufficient to offset the negative impact of fiscal consolidation, but it would still have provided some stabilization effect. Greece had a negative change in exports in this period (Alcidi & Gros, 2012).

4.1.3 Mobility and Flexibility

There are no strong indications of wage- and price flexibility, but there seem to be some labor mobility in Greece. With flexible labor markets, one could have expected rising unemployment to result in a decline in wages. This would mean cheaper labor for companies, and a more competitive industry. However, the observable labor mobility in Greece does not seem to be strong enough when prices and wages are rigid. The unemployment keeps increasing. Krugman and Obstfeld (2006) stated that differences in culture and language in

Europe results in greater barriers to mobility across European borders than between states in the United States. They also argued that the low mobility within Europe is due to government regulations. The lack of wage and price flexibility is a disadvantage that points in the direction of Greece not being in an optimal currency area with the rest of the eurozone, and that the country experiences more problems than countries with higher flexibility in the labor markets.

The following question is thereby whether or not a labor market reform will be more likely to occur within the monetary union or whether Greece can manage this better as a non-eurozone EU member. This is a difficult question to answer. One could argue that this could be more productive and effective for Greek employment but it is important to remember that Greece has a tremendously higher debt and budget deficit level. Even if Greece leaves the eurozone, there still needs to be austerity measures which would make economic growth difficult. However, the country would get their own currency back, which could have helped their competitiveness. Reforms were also typically deeper while at the same time more comprehensive in the eurozone. However, reform intensity was not greater in the eurozone than in non-eurozone EU countries.

Furthermore, the advent of the eurozone did not coincide with an acceleration of reforms: intensity was lower in the period 1999-2004, compared with 1994-98. No such slowdown was observed in non-eurozone EU countries. Finally, there is evidence that reform patterns have been less responsive to needs for reform in the eurozone than in other OECD countries. This does not mean that a labor market reform in Greece is more likely to occur if the country leaves the eurozone, but it does indicate that the chances of a reform are at least as high as a non-eurozone EU country.

4.1.4 Fiscal policy

As previously mentioned, Greece has a history of running budget deficit and accumulating debt. Greece has had large amounts of government debt. Greece has run an irresponsible fiscal policy for years, they have especially spent beyond their means in the public sector and pension systems. The high level of debt has been a concern in Greece, and did cause some troubles when the country tried to join the eurozone the first time, but it has not been a major problem in modern times. It was first when the recession stroke that the many years of running a fiscal policy like this gave results through a rapidly growing budget deficit and an

accumulating debt load showed in Table 2.1. When the debt started accumulating and the deficit started growing, the international investors began losing confidence in the Greek government's ability to keep the debt under control. The interest rates increased, which increased the cost of refinancing the debt. This is an ever growing circle. More debt leads to less confidence, which results in higher interest rates, that again results in increased cost of refinancing debt. In this way, a growing market concern has a self-fulfilling effect. Now the fiscal policy has been changed, and the country has been forced to implement many rounds of austerity measures.

4.1.5 Fiscal Mechanism

In the European Union, the member states maintain most of their budgetary powers. The operation of the EU has an agreed budget of €141 billion for the year 2011, and €862 billion for the period 2007–2013, this represents around 1% of the EU's GDP. The national budgets typically absorb 40 to 50 percent of GDP. The EU represents an almost complete decentralized budgetary system. This creates the possibility that large asymmetric shocks may occur in the Union without the automatic transfers to smooth out the differences. The situation in the eurozone would be easier with more political integration which would make it possible to centralize a significant part of national budgets at the level of the union. Today spending and taxation in the eurozone remain in the hands of national governments and parliaments. As a result, unilateral decisions to lower (or increase) taxes can create an asymmetric shock.

Similarly, social security and wage policies are decided at the national level. Wage bargaining systems, for instance, differ widely between countries, creating the possibility of asymmetric disturbances. Decisions like cutting the working week in one of the countries in the eurozone, which has obvious implications for the eurozone as a whole, should be a matter of common concern, and should not be allowed to be decided by individual countries without consultation with other member countries. Similarly, national wage policies will have to be coordinated to avoid asymmetric developments in competitive positions of the member countries. In addition, differences in legal systems and customs generate significant differences in the workings of financial markets. These differences also lead to divergent effects of the same interest rate shocks. From this perspective it can be argued that the eurozone can only function satisfactorily if further steps towards political unification are

taken, and that there needs to be one budgetary power for the whole area, and not a national budgetary power in each country.

4.1.6 Inflation and growth

Stability in inflation is, according to Grauwe (2009), one of the reasons why Greece joined the eurozone. Greece did not pursue any inflation target before they started the process of being a eurozone member, but followed other macroeconomic objectives. In the 1980s the government drove and expansionary policy that led to an inflation rate as high as 25 percent. In Table 2.1 it is clear that Greece stabilized their inflation towards their entrance in the eurozone. After having a CPI of 20 percent in 1990, the index was stabilized bit by bit each year until it reached a level of 2 percent in 1999. Although the inflation was stabilized after the country became a eurozone member, the CPI index has been approximately above 3 percent each year, which is above the target of just below 2 percent, and also above the fluctuation of ± 1 percent from the inflation target. In the years after the recession the fluctuations have been even larger. Compared to the situation in the early 1990s, the rate has been stabilized, but this was done in a process during the 1990s, and not after the entrance to the eurozone. This might imply that the country is able to stabilize their inflation on their own, and that they do not benefit from the eurozone with respect to the inflation.

When it comes to Greece's growth rate in terms the average yearly growth rates of GDP compared to the eurozone, this is shown in Table 4.2.

Table 4.2 Average yearly growth rates of GDP in the eurozone 1996-2013

Area	%	Area	%
Eurozone	1,04	Cyprus	0,48
Germany	1,32	Luxembourg	1,7
Ireland	3,04	Netherlands	1,34
Greece	0,72	Austria	1,58
Spain	1,26	Portugal	0,87
France	0,89	Slovenia	2,26
Italy	0,18	Slovakia	3,88
Belgium	1,13	Finland	2,07
Estonia	5,24		

Source: Eurostat

The data shows that the average GDP growth in the eurozone over the period has been 1.04 percent. There are large fluctuations between the different member countries, with Estonia on the highest rate of 5.24 in the period. The country with the lowest growth rate is Italy. The growth rate in Greece has been 0.72, which is the third lowest rate of all the member countries. This means that Greece is not one of the countries that grows faster than others, and that they do not experience any trade balance problems where imports tend to grow faster than exports. This can be seen in Table 4.3 where Greece's total exports are shown in proportion to the total imports in the same period as the GDP growth rate in Table 4.2.

Table 4.3 Export in proportion to import in Greece, 1996-2011

Year	Imports of goods and services (% of GDP)	Exports of goods and services (% of GDP)	Export/ Import
1996	28	18	0,64
1997	30	20	0,67
1998	31	20	0,65
1999	34	23	0,68
2000	40	26	0,65
2001	38	25	0,66
2002	36	22	0,61
2003	33	21	0,64
2004	33	23	0,70
2005	32	23	0,72
2006	35	23	0,66
2007	38	24	0,63
2008	39	24	0,62
2009	31	19	0,61
2010	32	22	0,69
2011	33	25	0,76

Table 4.3 shows that the relationship between Greece's imports and exports has been fairly stable in the period. There are some fluctuations in the rate in the years after Greece became a member of the eurozone, but these are both increasing and decreasing compared to the period before they got included. This means that there is no clear indication of a change in the relationship because of the eurozone membership, which supports the statement of Greece not having any costs of being in a monetary union with respect to growth rates.

4.1.7 Macroeconomic development after first bailout package

The developments in the macroeconomic indicators in Greece after they received their first bailout package in 2010 can give a picture of the effects the package has had. There were primarily three targets when granting Greece the package. First, the intention was to prevent Greece from defaulting on their debt. Second, prevent contagion, and third, reducing public deficit to less than 3 percent of GDP by 2014. The developments in the macroeconomic indicators were both positive and negative.

The GDP growth rate was negative in 2010, and decreased further in 2011. In 2012 the rate was still negative, and still worse than in 2010, but better than in 2011. The 2013 the rate was still negative but better from the latest years. That the country did not experience any growth, only a shrink in the economy, is not very surprising. Austerity measures tighten the economy, but are demanded of Greece to lead to recovery for the economy. In other words austerity, which deals only with the symptoms rather than the causes, must somehow fix all the structural flaws of a collapsing edifice, ironically by putting more pressure on it, thus accelerating its destruction. Cuts in public spending can have large effects on the economy, especially in long term. Public spending includes taxes, use of revenues from public fortune and business management, borrowing in the financial markets and borrowing in the central bank. Higher taxes will naturally mean less money to the people, as they would have to give a larger part of their revenues to the government. As mentioned earlier, Greece struggles with undeclared work. For these people higher taxes will not have an impact on their money holdings. But higher taxes could mean that undeclared work will be an even bigger problem, because more people would want to avoid paying taxes. The austerity demanded from the EU and the International Monetary Fund has meant cuts in public spending, and this has not helped the reliance between the people and the government. For the people who are paying taxes, their holdings will lessen, and they will have to cut their own spending. This led to continually increasing unemployment. This is supported by the unemployment rates in Greece which accelerated after the bailout package with the following austerity measures were received in 2010. From a rate of 12 percent in 2010, the unemployment in Greece reached 27.5 percent in 2013. That means more than 1 in 4 people in Greece do not have a job. High unemployment leads to considerable losses in the domestic product and a lower standard of living. Long-term unemployment also means a loss of employment skills and competence. The unemployment in Greece is an example of cyclical unemployment on top of

a fairly high structural unemployment which applies for the European Union as a whole for the last 20 years. The high increase in real wages is one of the reasons for the high structural unemployment in the EU (Steigum, 2004). But the unemployment rate in Greece is higher than in the other countries in the Union, and can partly be seen as a result of the austerity in times with acute depression. A country in this situation, would want to lead an expansive financial policy, by either increasing public spending or reducing taxes. What Greece's government has been forced to do is the exact opposite.

In addition to the higher taxes, the government had to make cuts in their government budget. They had to cut wages for the public employees, cut their retirement pension and also resign many of the staff in the public sector. The changes have led to increasing displeasure with the government and political instability. This has, together with increasing unemployment and higher taxes, led to fear and concerns in the banking system market. The fear of Greece defaulting on their debt has disturbed investors and people who held money in Greek banks. It has caused them to lower their valuation of the assets in the country and lose faith in its economic strength. In the first half of 2012 there was a growing uncertainty as to whether Greece could keep the euro or had to return to their old exchange in the wake of the election in June. Savers where concerned over the failure of political leaders to form a coalition government and the prospect of an inconclusive election. All these factors led to large capital flight from the country, especially in 2012, when the capital flight was of such a size that economists was afraid Greece would be forced out of the eurozone before the important summer elections. This kind of insecurity has a self-fulfilling effect, since the capital flight only make the economic situation worse.

One indicator that shows a positive development after the receipt of the first bailout package is the general government deficit. This was as high as 15 percent of GDP in 2009, but after receiving the bailout package it decreased to 10 percent in 2010, and further down to 9.4 percent in 2011. It is worth noticing that the decline from 2010 to 2011 is small, considering that after the increase in 2012 the main goal to have a deficit near 3 percent of GDP by 2014 was succeeded. When it comes to their general government gross debt this started to accumulate already in 2007. What is interesting with respect to the bailout packages is that the debt level was almost 150 percent of GDP in 2010, and after the bailout package was provided that year, the debt actually kept increasing. In 2011 it was on 170 percent of GDP. The rapid growth did however diminish in 2012, and peaked at 175 percent and continued increasing 177.0 in 2013. This could partially be a result of the lenders of Greek debt cutting

interest rates on Greece's already existing loans, but also a result of reluctance of borrowing more money to Greece in the market.

Moving to the inflation rate, it is hard to draw any conclusion out of the last year's development. The rate was 4.7 percent in 2010, a little lower in 2011 with 3.3 percent, while it was a fairly small 1.5 percent in 2012. It is a little surprising that the inflation grew this much in 2010 and 2011. With the tough austerity measures, higher unemployment and cuts in public spending the result was obvious for the last two years with higher rate of 2013 with -0.9. This could be a result of the rigid prices that seem to be the case in Greece. The Maastricht bond yield gives a clear indication that the bailout package in 2010 has not given the market any more faith in the Greek economy. From 9 percent in 2010 it increased to almost 16 percent in 2011 and above 22 percent in 2012. There was a hope that the aid would help restore faith in the market, and calm the growing fears, but the development in this yield shows that this did not happen.

4.2 Summary and discussion

The chosen indicators of costs and benefits of Greece being part of the eurozone point in the direction of Greece not forming an optimal currency area with the rest of the member countries. Greece have the euro tied 1:1 to the rest of the monetary union and increased its debt load after fixing its currency, and was forced to reduce their budget deficit. This problem was made worse when neighbor countries were hit by a recession. The situation in Greece was worsening with the recession that stroke in 2007 since a recession with origin in another country led to an increase in budget deficits. Greece experienced fears and doubts about the ability of the government to service its debts, which depressed the financial markets and further deepened the recession. The weakness of the country to have the possibility of using monetary policy as a tool to improve the situation or to fulfill the necessary characteristics forced to solution of using financial policy to increase taxes.

When it comes to the analysis of whether Greece has more costs than benefits of staying in the eurozone, the answer is complicated. The divergence in macroeconomic indicators after the recession stroke may be a result of Greece being in a monetary union without the necessary characteristics to benefit from it. The asymmetric effects can mainly be connected to three characteristics; Greece's flexibility, openness and fiscal policy. With budget deficits and large amounts of government debt, the financial crisis in 2007 led to imbalances in

Greece that needed adjustment. These adjustments did not happen, most likely because the country is relatively closed and not sufficient integrated with other member countries, and because the labor markets are not flexible enough. The indicators discussed in this section indicate that Greece in many ways is not in an optimal currency area with the rest of the eurozone countries, and that the country would probably had been better off not being a member of the eurozone when the recession stroke Europe. However, the reality is that Greece was a eurozone member at the time, and even though this might have resulted in the recession hitting them this hard, there cannot be proven that leaving the eurozone at this point will help the situation. One point is the budget deficits and government debt. If Greece leaves the eurozone, the country would most likely reviving its traditional currency, the drachma.

With the drachma back, salaries and prices within Greece would be converted from euro to drachma, and to make the Greek economy more competitive the drachma would be allowed to depreciate. This is however where the problems would start, especially with debts that are denominated in euro. If lenders are outside of Greece, they would naturally resist being repaid with less valuable drachmas. If Greek borrowers have to repay the loans with euro, the debt would become more expensive for them to pay off after the drachma is devalued. Another point to the discussion is the unemployment. The unemployment rate for the youth under 25 is around 60 percent. The problem is that even though Greece would leave the eurozone, there is no prove that the unemployment will improved. However, a massive devaluation of the new currency would lead to inflation, decline in domestic demand, and unemployment would be likely rise even further. Michael Arghyrou, a senior economics lecturer at Cardiff Business School, has stated that the drachma would be devalued by 50 percent, causing inflation. He believes interest rates will have to double and all mortgages, business loans and other borrowing will become much more expensive. In addition he states that there will be no credit for Greek banks or the Greek state. That could mean a shortage of basic commodities, like oil or medicine or even foodstuffs. A lot of Greek firms rely on foreign suppliers, who may cut off Greek customers. Greek companies could be driven out of business. To sum up his statement, a Greek exit would lead to a deeper economic breakdown and higher unemployment (BBC News, 2012). Another side of the story is the long term effects of staying in the eurozone. Considering the lack of necessary characteristics and Greece's history of fiscal policy, what would happen if a new global financial crisis hits? Given that nothing changes, they would probably end up in the same situation. If they ought

to stay in the eurozone, there need to be done some changes to prevent a new recession, both by Greece and the eurozone.

Another interesting side of the discussion is whether it even is possible for Greece to stay in the eurozone. The development in the macroeconomic indicators in Greece after they received the first bailout package, together with the fact that there has been given out many more bailout packages in the eurozone area afterwards, points in the direction of the actions taken to solve the crises not being effective. Given the indicators discussed above, the long-term effects of the bailouts do not look to good either. The new package to Greece might seem as a way to postpone the inevitable. Among other factors, it included Greece's partial default. By agreeing on a default one of the main targets of the first package was failed. In addition, the bailouts of Ireland, Spain and Portugal have shown that the second target of the first package has also failed, there has been contagion. The fact that the targets and time limits in the first package have been adjusted several times when it has become clear that Greece would not be able to meet them, and that there had to come another bailout package after just two years, indicates that the actions taken have not had the effect as hoped.

This is also the case in the whole South Europe. Even though Greece has experienced the deepest recession of the eurozone countries, they are not alone. Large economies as Spain and Italia have struggled for some years, and now France is sinking deeper down in the recession. Some argue that the actions taken to solve the crisis in the eurozone have only made things worse. The IMF has admitted that they underestimated the negative effects of the austerity they have demanded of the countries in trouble (Bloomberg, 2013). It has also been revealed that two world famous economists, Kenneth Roghoff and Carmen Reinhart, have done incorrect calculations regarding economic growth of a decline in debt. Their calculations have been used by the European Commission to defend austerity measures in countries with high debt (Financial Post, 2013). It can be argued that the countries in the eurozone are too dissimilar, and that they might have jumped into a monetary union to early. The lack of a fiscal mechanism that can provide automatic adjustments is in my point of view a weakness of the union. A more centralized budget and a step closer towards a political union, like the US, would have secured a more cooperative fiscal policy and have stabilizing effects in the eurozone. It seems that there is no easy or good solution to the financial crisis in Greece. The indicators above tell us that the country most likely has more costs of being a eurozone member than benefits, but with the recession ravaging they do not have any good

alternatives. In addition, the eurozone itself does not know how to solve the crisis, and the contagion is still ravaging, more than five years after the recession set in.

Chapter 5

5.1Conclusions and suggestions for the future

This paper has analyzing whether Greece should stay or leave the eurozone with respect to the costs and benefits being a eurozone member. It has studied the history of Greece and the eurozone and present the impact of the indicators in economy. A broad theoretical discussion and historical context of the fragility of incomplete monetary unions,

The background of Greece's political history has shown that there has been decades of excessive spending. In addition to accumulating government debt and running budget deficits, the country also cheated on their numbers to achieve a eurozone membership. When Greece became a eurozone member in 2001 it got easier for the country to borrow money, and when the recession began in 2007, the country's weak economy became evident. The macroeconomic indicators in Greece shows a divergence from the other eurozone countries after 2007, the country is now in a deep recession.

Through a discussion of in which grade Greece fulfill the necessary characteristics for an optimal currency area and experience from earlier currency boards, the costs and benefits of Greece being a eurozone member has been analyzed. The conclusion is that Greece does not seem to have the necessary characteristics to net benefit from being a eurozone member. The country is relatively closed, does not seem to have flexible wages or prices, and the mobility of labor cannot proven to be strong. In addition they seem to be exposed to asymmetric shocks in a large degree compared to the rest of the eurozone, and the effects of an external shock has proven to be asymmetric through the financial crisis in 2007. The cost of not being able to use their own monetary policy in this situation is according to the analysis larger than the benefits Greece has of being a eurozone member.

Within the eurozone, goods, services and people can move freely, and the national frontiers are eliminated. This would indicate a high degree of flexibility in the factor market and a high degree of openness. This would help Greece adjust to changes in the economy without the ability to use monetary policy. This does however not seem to be the case in Greece, where the unemployment rate has increased each year since 2007, prices are rigid and the share of intra-union export is low.

The eurozone have a fiscal stabilizing mechanism called EFM, which is a lending facility set to provide support for countries that need economic aid. However, there is no automatic fiscal stabilization that provides transfers between the countries in the eurozone. The result is, as in Greece, that countries in economic trouble get bailout packages. This means they mainly get loans that are supposed to be paid back; hence, they increase their debt. In addition the countries have to impose austerity measures which further tighten the economy. This has become evident in Greece through accumulated debt and unemployment rates reaching record high levels after the bailouts were handed out.

With all these arguments of why Greece does not benefit from being a eurozone member, why has the country not left the monetary union yet? The problem is that Greece is in a deep sovereign government debt crisis. This will not disappear if they leave the eurozone either. They still have to pay back large amounts of debt, and still have to impose austerity measures. In addition, they will probably lose the access to financing from the ECB, and because of their small size and openness they risk not being considered important enough to save. This thesis conclusion is that Greece should not have been part of the eurozone in the first place, but with the situation they experience now, the best option is to stay within the monetary union. The leaders of the EU will do everything in their powers to save Greece as an exit could have tremendous effects in terms of a weakened euro, uncertainty in the market and contagion to other member countries. However, if Greece's economy continues to contract sharply, the country may not be able to cut its overspending as much as planned, and they might ultimately be unable to pay back their debt. In that case, Greece's future will depend on how long the rest of Europe is willing to provide help before they force them to leave the eurozone. The aid provided so far has not been proven effective and maybe it is time to consider if a change in the conductive policy is required by improving the growth and give a start to economy.

There are many limitations of this conclusion. The analysis only considers Greece's perspective. For future work, the EU's costs of both keeping and forcing Greece out of the eurozone should be analyzed. There should in addition be explored what can be done to prevent a new recession from striking Greece this hard, given that they are not forced out of the eurozone. A broader analyze of what would happen in Greece if they were to leave the eurozone, should also be explored.

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