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### Sovereign Debt Crises: Domestically Engineered or Foreignly Influenced?

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## **Abstract**

Throughout the last half century, the world has seen its fair share of systemic banking crises covering every corner of the globe. Recently, the Eurozone crisis of 2010 and ongoing Argentinian debt crisis have continued to plague the global economy. The motivation behind this thesis is to examine what causes these sovereign debt crises. More specifically, it aims to examine whether these crises are caused by monetary and fiscal policy decisions implemented by central banks or if outside factors including the role of financial institutions are to blame. This thesis examines a number of individual case studies with regards to specific economic indicators and aims to see if there is any relationship between the nations being examined. Specifically, these case studies include the East Asia crisis of 1997, the Argentinian debt crisis of 2001, and the Eurozone crisis of 2010. It will examine individual nations in the years leading up to the crisis, the years in which the crisis took place, and the aftermath of the crisis.

To my parents for always being there and for the sacrifices you have made. To my siblings for always keeping me grounded and humble. Thank you for everything, you guys mean the world to me.

## **Acknowledgments**

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## **Introduction**

Sovereign Debt Crises are one of the most prevalent yet puzzling financial issues that have come to impact the global economy over the last half century. The impact of these crises are felt throughout all corners and regions of the globe. What is interesting about them is that even though there have been numerous different case studies, domestic and institutional economic policymakers are unsure how to best respond. Most recently, the Eurozone crisis of 2010 that continues today has led to widespread financial contagion across the continent. With no clear end in sight, high levels of unemployment, and stagnant GDP growth across many of the nations in the Eurozone, policymakers remain conflicted on how to best respond. Although the troika, the three-part commission composed of the European Commission, the European Central Bank, and the International Monetary Fund, have created a 750 billion euro war chest to provide loans and emergency bailout cash to the affected nations, many economists argue that they have further compounded and accelerated the crisis in a number of the nations. Although the IMF has witnessed these crises before, they have done little to help provide effective solutions and advice to the leaders of the ECB. To many economists and policymakers, it almost feels as if the blind are leading the blind.

What is interesting about these crises is that although they continue to take place, there is no clear understanding of what causes them. Although there are similarities in the domestic economies of the nations leading up to them, there are also clear fundamental differences. For example, when looking at the cases of Argentina and Greece, they were both classified as sovereign debt crises. However, Argentina had its currency pegged to the U.S. dollar and a strong export sector, while Greece had adopted a common currency and experienced steady GDP growth in the years leading up to the crash of its economy. This serves as the main motivation

for this thesis; what causes sovereign debt crises. More specifically, are these crises caused by the policy decisions of nations' central banks and monetary unions or are foreign actors such as the International Monetary Fund, external debt holders, and large banks to blame.

To understand the background of these crises and the differing views on what causes and accelerates them, a complete review of the literature pertaining to the topic was undertaken.

There are two main schools of thought that emerge. The first being that these crises were the result of underlying structural issues in the domestic economy. For example, in the case of the Eurozone crisis, much of the blame is placed on the implementation of the euro as a common currency and the underlying weaknesses in each nation's labor market. The second school of thought is that these crises are the result of foreign financial institutions who held large amounts of debt and through speculation and influence led the economies of these nations into turmoil.

With that being said, by the conclusion of this thesis it becomes clear that while foreign financial institutions played key roles in advancing these crises, they were not the fundamental underlying cause of them.

To examine these crises, a case study approach is utilized by examining common variables in each of the nations including: debt to GDP ratios, GDP growth, unemployment, levels of external debt, and 10-year government bond yields. This was done to examine the economic health of the nations in the years leading up, during, and following the crises. What proves to be important following this study is what policies the governments of each nation chose to implement in order to provide some sense of financial stability. This leads to an important question and one of the fundamental reasons why this thesis topic was chosen as a course of study; is there any relation between past sovereign debt crises and the ongoing one in the



Eurozone? If so, why haven't policymakers drawn on prior mistakes and implemented more successful measures in limiting and providing support to these struggling nations.

## **Chapter 1: Theory Review**

### **1.1 New Institutional Theories of Finance**

New Institutional Theories of Finance fall within a class of models known as New Keynesian models. They refer to a broad group of models focusing on the investigation of macroeconomic effects of imperfect competition and market failure. They particularly focus on how market failure can amplify small exogenous shocks into large business cycles. These new models that are put forward share the uniform goal of developing increasingly rigorous models with better microeconomic foundations. By adding a clear microeconomic foundation, we are able to see that in these New Keynesian theories, market failure occurs as a result of firms and households engaging in optimizing behavior (Knoop, 2008).

The New Institutional Theories of Finance place an emphasis on first studying the microeconomic behavior of banks, financial markets, firms and households before moving on to examine the implications they have at the macroeconomic level. Previously, the Keynesian and New Classical models have ignored the complexities of the interactions at the firm level. The reason being that these models assumed uniform representative agents on the macro and micro levels, leading to interactions between individuals in the financial system being ignored. In other words, by focusing on heterogeneity and microlevel financial fundamentals, these theories provide deeper insight into the process of financial intermediation and the overall macroeconomic impact it has (Knoop, 2008).

With that being said, the New Institutional Theories of Finance rely heavily on Irving Fisher's Debt-Deflation theory (1933) and focus on the process of macroeconomic impact and financial intermediation. The theory is summarized by the belief that the combination of high levels of debt and falling prices lead a nation's economy on a downward spiral. The theory itself assumes

that a country must hold vast amounts of debt and this debt must sound the alarm of either debtors or creditors. Once the alarm bells go off and the first domino falls through debt liquidation and distressed selling of assets, the spiral has begun. The end result is a reduction in output, trade and employment of labor followed by a loss of confidence and, finally, hoarding and slowing down the velocity and circulation of money (Fisher, 1933).

Another key idea related to the New Institutional Theories of Finance is that when examining financial activity, the primary focus should be placed on the provision of credit and not just on the total amount of liquidity or the money supply. Liquidity refers to the total amount of funds available to the lenders (this includes all financial institutions and the financial system as a whole). When a change in liquidity occurs, it has taken place because there has been a change in the funds available to lenders (in other words; it is measured by the money supply). On the other hand, credit refers to the total amount of loanable funds that either an institution or the system as a whole is willing to provide. This makes it harder to measure as it is based on both total liquidity and the willingness for an institution to make a loan. A final important distinction between the two is the idea of perceived default risk and the role it plays in determining credit. Perceived default risk can change following many things including: a change in the expected future performance of the macroeconomy and a change in the financial position of the lender. The evaluation of risk is a complex process that is subject to a great deal of volatility (Knoop, 2008).

The New Institutional Theories of Finance also place heavy emphasis on the belief that the reason that financial transactions are imperfectly competitive is because financial information is imperfect. Imperfect, or asymmetric, information refers to the idea that borrowers always have better information about their credit worthiness than lenders. If a borrower is able to convince the

lender they are unlikely to default, the loan will be made. On the other hand, if the borrower cannot do this, then credit will be denied (Knoop, 2008).

It is important to highlight the idea that imperfect information distorts the incentives that both lenders and borrowers face when making a transaction, leading to an increase in default risk in two important ways. The first problem is referred to as adverse selection. This is described by the idea that borrowers that have a higher chance of defaulting are more likely to search for loans because they want to take with risks with others' funds as well as their own. On the other hand, conservative borrowers are less likely to suffer a loss, and are less likely to need a loan (Knoop, 2008).

The second issue is known as moral hazard. The concept is that the borrower may not use the funds as intended or may choose to be unnecessarily risky with it. In other words, the lender assumes some of the downside risk of the projects the borrower undertakes, but does not receive any of the upside benefit if the project proves to be successful. Moral hazard is one of the fundamental and obvious problems in finance due to the fact that most financial institutions act as both borrowers and lenders.

The two problems outlined above are important factors in determining the supply of credit.

These problems lead to poorer quality of information available to the borrower. The result of this is smaller firms are at a major disadvantage because they may have not had the time to establish a credit history and, thus, are unable to provide the necessary amounts of financial information to lenders (this of course leads to them receiving less credit on costlier terms) (Knoop, 2008).

The final key idea that the New Institutional Theories of Finance put forward is the thought that there is no mechanism that ensures the supply of credit is equal to the demand of credit. The

result of this is that the credit market is almost always in disequilibrium. As discussed above, the supply of credit is not determined by interest, but, instead, relies on moral hazard and adverse selection (risk perceptions) (Knoop, 2008).

The two main models that are produced because of the four key ideas discussed above are: The Financial Accelerator Model and the Credit Rationing Model. However, only the Financial Accelerator Model proves to be valuable for this thesis and will be analyzed and discussed in detail.

## **1.2 The Financial Accelerator Model**

The financial accelerator model was first examined by Bernanke, Gertler and Gilchrist in their article on the topic titled, *The Financial Accelerator and the Flight to Quality* (1996). The model itself examines how asymmetric information due to imperfection in the financial market further aggravates a financial or economic downturn. In their seminal paper, Bernanke, Gertler and Gilchrist argue that the cost of credit intermediation of individuals, households and firms affect the overall level of credit within a specific economy. As a result, initial small demand shocks to the economic environment can lead to unforeseen and larger downturns within the economy itself (Bernanke, Gertler and Gilchrist, 1996).

The three further argue that the cost of credit intermediation is partly related to interest rates. Credit intermediation refers to the core banking function of taking money from savers and lending it to borrowers. It is important to note that the model holds three key assumptions relating to costs. The first two being that access to financial information and the cost of providing information are both very costly. The final assumption is that borrowers also take on both monitoring costs and opportunity cost of collateral in some cases. For example, when

looking at the case of a borrower's monitoring costs, one might refer to the fact that they must provide additional information to a lender over the life of a loan. The cost of collateral usually comes in the form of significant underwriting fees, if bond or stock is issued, that borrowers pay when these securities are sold to the public (Bernanke, Gertler and Gilchrist, 1996).

The result of this varies for both firms and individual economies. In the case of this thesis, what is most important is the idea that firms' actions within these individual economies lead to the acceleration of the problems previously outlined. With that being said, the previously established costs associated with credit will lead to firms seeking to finance their projects internally as oppose to externally. The reason for this being that external finance is more expensive than internal finance, with the only exception being when the external finance is fully collateralized. It is important to note that external finance refers to the idea of going out to the capital markets to either raise equity or issue debt. On the other hand, internal finance refers to financing projects internally through retained earnings (Bernanke, Gertler and Gilchrist, 1996).

It is important to note that raising equity in a secondary offering has serious consequences since it not only dilutes ownership, but also may send signals to the public that the stock of the firm is overvalued. On the other hand, although issuing debt may be cheaper because of the potential tax-shield being offered, it also has many disadvantages associated with it. One of these key risks is that it increases the company's risk level, making it increasingly sensitive to economic downturns, interest rate variability, and changing market conditions (Knoop, 2008).

Bernanke, Gertler and Gilchrist argue that the cost of credit intermediation falls on both the borrowers and lenders and that it does not necessarily depend on debt levels, as long as, the borrowers have assets that can be collateralized. This is better understood by the idea that

borrowers net worth is what the creditors look at (net worth = total assets – total liabilities)  
(Bernanke, Gertler and Gilchrist, 1996).

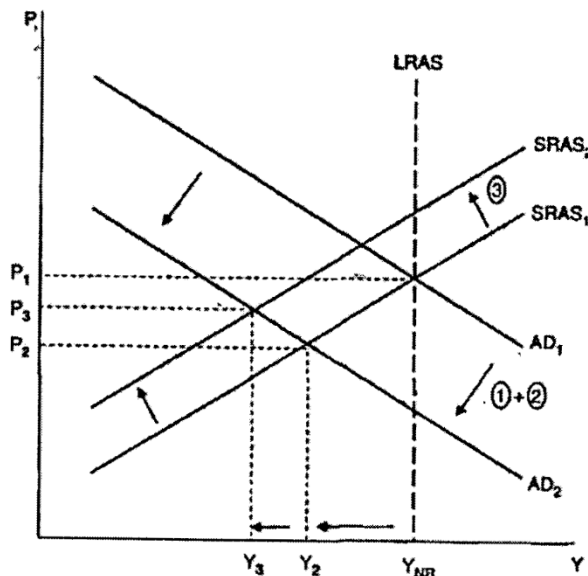


Fig 1.1: Impact of the Financial Accelerator Model on the Economy. (Source: Knoop, 2008)

To best understand this model at work, we must first assume that the economy is in an economic downturn or recession, which in-turn has led to a decrease in the profitability of the firm or a reduction of wealth in affected households. It can be assumed that because the overall net worth of the firm has decreased, lenders will be reluctant to provide the firm with credit, resulting in the cost of credit for the firm to increase. The firm is now not able to access credit in the same manor it had before, leading to a decrease in investment and consumption of firms. If this cycle continues throughout many firms in the economy, the downturn or recession will worsen overtime (Knoop, 2008).

From examining the Economic Model in Fig 1.1 we have again assumed that a recession has occurred. We see that the aggregate demand has shifted downwards from  $AD_1$  to  $AD_2$  due to a sudden decrease in the money supply, a decline in expectations, and an overall increase in perceived risk associated with the economy. A similar situation, in which the AD shifts downward, can also take place if both a housing bubble is present and following the burst of the bubble, when prices decline dramatically. These four shocks coupled with the higher cost of credit intermediation are responsible for the shift of the curve. It is important to also examine the impact on the aggregate supply curve, which shifts upwards to the left. This shift from  $AS_1$  to  $AS_2$  can be explained by the higher risk factor, along with the overall decrease in capacity as a result of the fall in investment. The result of these two shifts is the equilibrium output shifting from  $Y_{NR}$  to  $Y_3$ . This will be further examined in the case study section of the thesis when looking at the individual case of Portugal and the nation's response to the sovereign debt crisis it faced (Knoop, 2008).



## **Chapter 2: Literature Review**

### **2.1 Introduction**

The literature surrounding the topic of what causes systemic banking crises in Latin America, Europe, and Asia is both complete and thorough. The economists that examine this complex macroeconomic topic develop a number of differing theories using a wide range of data and cases to support their claims. With that being said, because there is so much literature surrounding the topic, we must identify what is important to the research pertaining to the topic at hand: whether or not these sovereign debt crises are caused by monetary or fiscal policy decisions put in place by central banks or if other outside impacts such as financial institutions played major roles. These financial institutions include the International Monetary Fund, large public and private commercial banks, hedge funds, and large sovereign wealth money managers. This review will examine the literature that pertains to the east Asian crisis of 1997 and 1998, the Argentinian crisis of 2001, and the Eurozone crisis of 2010 that has continued to this day. Additionally, there will be a focused placed on analyzing the data that is prevalent to these crises and the state of the economies leading up to the individual crisis both during and after the crisis. It is important to note that, although it is prevalent to understanding how financial crises unfold, the Great Recession of 2008 will not be thoroughly examined as it is not considered to be a debt crisis per se and because it was individual institutions and their actions that brought down the United States' economy rather than the country itself being unable to service its debt. However, it will be important when looking at the role that it had on the Eurozone, the impact that it had on the development of the debt crisis in the region, and its ensuing recovery efforts.

As previously mentioned, the viewpoints and beliefs surrounding these crises vary among economists and policymakers. Many place a heavy emphasis on the role of policies put in place by central banks and monetary unions, while others believe that external shocks through the role of various financial institutions are to blame. Within each of the regions being examined and the individual case studies, themes tend to vary, however, some underlying ideas remain constant including: the role of central banks and government institutions and the financial consequences following the initial crisis.

## **2.2 Theories and Causes**

One of the most important economic theories with regards to the causes of systemic banking crises is the financial accelerator model. The financial accelerator is best examined in two key pieces of literature; Todd Knoop's, *Modern Financial Macroeconomics: Panics, Crashes and Crises* (2008) and Ben Bernanke, Mark Gertler and Simon Gilchrist's article, *The Financial Accelerator and the Flight to Quality* (1996), which is the seminal piece on the topic. The accelerator model argues that following an adverse macroeconomic shock, borrowers will not have the ability to access high amounts of credit and, as a result, their overall economic activity will decline. These macroeconomic shocks include a sudden decrease in the money supply, a decline in expectations, an overall increase in perceived risk associated with the economy, or a bubble in housing prices that has burst. The model itself falls under the umbrella of the New Institutional Theories of Finance, which aim to offer solutions to some of the problems associated with the Keynesian and New Classical models.

Carmen Reinhart and Kenneth Rogoff offer a valuable opinion regarding the theoretical underpinnings of debt crises and place heavy blame on the lack of a super national legal framework for enforcing debt contracts across borders. A way of understanding this is if a

country borrows money from a foreign bank and then defaults, the bank's options for direct enforcement of its claims on the assets are limited. An example of this lack of regulation was seen in the case of the Argentinian debt crisis of 2001, which will be discussed in further detail when examining the region of Latin America (Reinhart & Rogoff, 2009).

With regards to sovereign lending, the question that is posed is what can foreign creditors actually hold over sovereign borrowers? This question was first put forward by Jonathan Eaton and Mark Gersovitz in their seminal paper on the topic, *Debt With Potential Repudiation: Theoretical and Empirical Analysis* (1981). The two argue that governments must worry about their reputation as borrowers and that any reneging on their previously owed debt may hurt their reputation, thus undermining their future credibility. The result being that governments will try and uphold their reputation so they can borrow even more in the future. With that being said, this reputational approach may be viewed as somewhat simplistic in today's lending markets along with global political and security arrangements between nations (Eaton & Gersovitz, 1981).

Partial default and rescheduling of debt is also an important underpinning behind sovereign debt crises. It is important to note that most defaults end up being partial as creditors may not have the leverage to enforce full repayment. One of the key players in these partial repayment negotiations are international lending institutions such as the IMF. These third-party organizations may be gamed into making side payments to facilitate a deal through dealings with governments and creditors. Reinhart and Rogoff argue that following the development of these organizations after WWII there have been shorter but more frequent episodes of sovereign debt crises because both lenders and borrowers are able to rely on subsidies from the IMF, along with governments of creditor countries. This is a fundamentally important point for understanding the

role that financial institutions play in these crises and why many economists place a substantial amount of blame on the decisions they choose to undertake (Reinhart & Rogoff, 2009).

The correlation between sovereign debt crises and other financial crises is critical in understanding the underlying causes that make a country more likely to default on their debt. This is especially the case in emerging markets where global financial turbulence can lead to harsher consequences. A key reason for this is the idea that weakening global growth can lead to declining commodity markets, thus reducing the export earnings of primary commodity producers. From Fig. 2.1, we are able to see the proportion of countries with banking and external debt crises. The graph itself plots the share of countries experiencing a banking crisis against the comparably calculated share of countries experiencing a default or restructuring in their external debt. It is important to note that from the graph we see a spike in banking crises following 1977. In the period leading up to this, it can be said that one of the reasons why there was a decline in crises was because of more intense supervision on financial institutions. This was highlighted by the Depository Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980. The DIDMCA hoped to increase the role of banks within the financial markets while also improving the control of monetary policy by the Federal Reserve. To do this, they aimed to phase out restrictions on interest rates that depository institutions could offer to their clients on the deposits they made. Furthermore, it was now required that all institutions that accepted deposits had to meet reserve requirements (Reinhart & Rogoff, 2009).

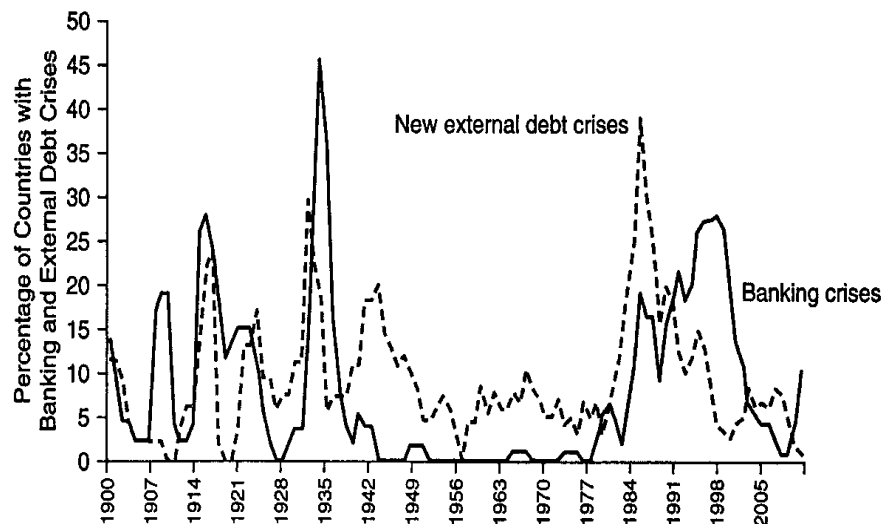


Fig 2.1: Proportion of countries with banking and external debt crises (Reinhart & Rogoff, 2009)

Another interesting correlation that deserves attention is the relation between default and inflation. It is important to note that periods of inflation are also likely to be compounded during times follow external default. As nations are shut out of international capital markets and face declining revenues, they are sometimes forced to put in place the dreaded inflation tax (a cost or penalty that people are forced to pay when they hold cash at a time of high inflation). From Fig. 2.2, we are further able to see the correlation when looking at shares of countries with inflation above 20 percent and shares of countries that experience external default. The causation of this is when countries default, whether it be for debt or other related reasons, their currency declines in value and, thus, inflation rises to extremely high levels (Reinhart & Rogoff, 2009).

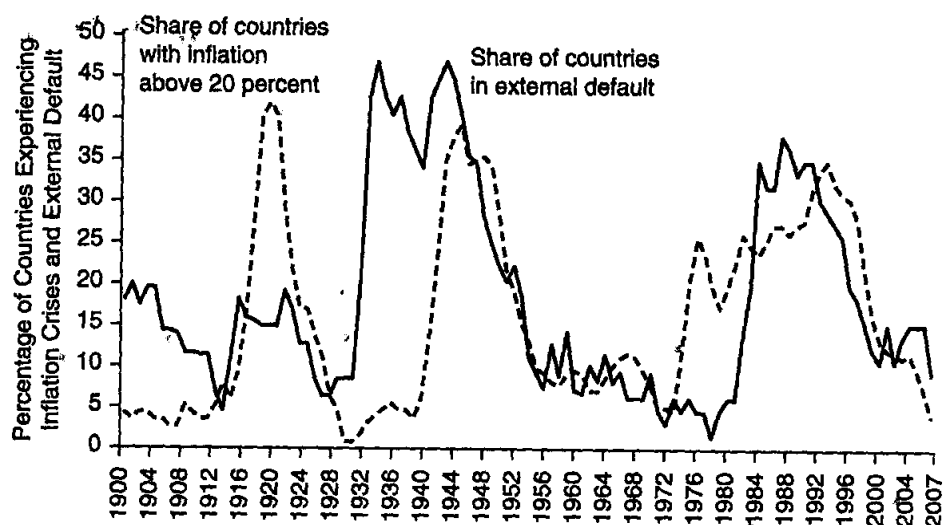


Fig 2.2 Inflation crises and external default. (Reinhart & Rogoff, 2009)

An important theory that relates to the potential path that Europe may continue down is the debt-deflation theory coined by Irving Fisher in 1933. The theory puts forward the notion that if a state is in a position of great indebtedness, a series of adverse events will unfold that will further impact the economy and lead to a mass liquidation through wide spread panic by debtors or creditors. Fisher believes that recessions and depressions in an economy are the result of rising real debt burdens stemming from deflation, leading consumers to default on loans they previously had taken. This theory put forth by Fisher is further examined in the theory review of the thesis. However, it is important to point out its significance when examining the potential scenarios that may unfold in Europe. Although this theory may not be of significance to the causes of the crises being examined because of its relation to consumer loans, it is important in understanding the potential situation in Europe that may unfold if economic activity continues to decline (Fisher, 1933).

## 2.3 Crises Characteristics

Manasse and Roubini also offer some crucial literature pertaining to the idea that global economic factors play a major role in precipitating sovereign debt crises. Their paper '*Rule of Thumb' for Sovereign Debt Crises* (2005), provides an empirical investigation of the set of economic and political conditions that are associated with a sovereign debt crisis taking place. By utilizing a number of predictor variables including: total external debt, short-term external debt, inflation and public external debt to revenue, countries are classified into three types of crises: i) episodes of insolvency; ii) episodes of illiquidity; and iii) episodes of macro and exchange rate weakness (Manasse & Roubini, 2005).

Reinhart and Rogoff also provide insight into the duration of each default episode. As previously mentioned, following WWII the time countries were in these crises declined from six to three years. Although the more charitable interpretation of this is the idea that crisis resolution mechanisms have improved, many economists argue that this is not the case. Instead, the opposing school of thought believes that because bailouts are facilitated by lending institutions, creditors are willing to provide lenient payment demands to defaulting borrowers (Reinhart & Rogoff, 2009).

While examining the aftermath of the crises in each region, it is important to understand what common characteristics each of them share. The seminal piece on this topic is also put forward by Reinhart and Rogoff. It discusses the similarities in a number of financial crises in developing and developed economies, something that previously had not been done. In their article, *The Aftermath of Financial Crises* (2009), Reinhart and Rogoff examine specific characteristics that are experienced by developed and emerging markets following financial crises. These characteristics include: housing prices, equity prices, unemployment rate, real GDP, and debt

levels. They argue that severe financial crises share three common characteristics: asset market collapses that are deep and prolonged, profound declines in output and unemployment, and a rapid increase in the real value of government debt. This proves to be valuable in helping understand what common patterns exist between these crises specifically with regards to several famous emerging market cases that will be examined, including the Asian crisis of 1997-1998 and the Argentinian crisis of 2001 (Reinhart & Rogoff, 2009).

Reinhart and Rogoff examine several interesting pieces of data when discussing the collapse of asset markets. They choose to analyze the declines in real house price cycles and real equity price cycles from their peak-to-trough by looking at the duration in years. However, what proves to be of importance for the topic being examined is their study of the cumulative increase in real public debt in the three years following the start of a banking crisis. This is shown in Figure 2.3, where the cumulative increase in public debt over a three-year period follows the onset of a banking crisis in a number of developing economies (Reinhart & Rogoff, 2009).

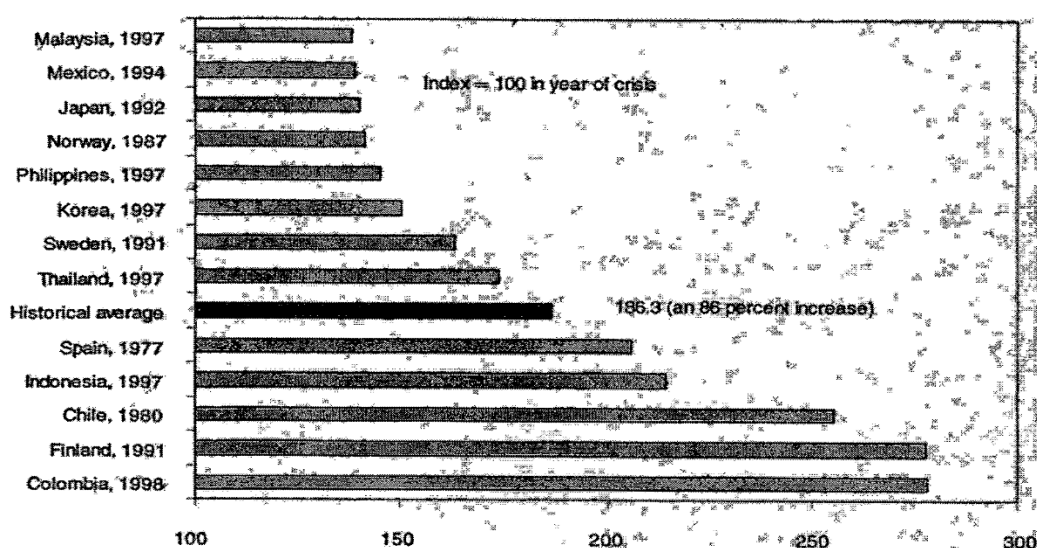


Fig 2.3: Cumulative Increase in Public Debt in the Three Years Following the Banking Crisis. (Reinhart and Rogoff, 2009)



This buildup of government debt proves to be a defining characteristic of the aftermath following financial crises. When examining these stylized facts, it is important to understand what some of the key reasons are for these sharp rises in debt. Some of the drivers of this include sharp falloffs in tax revenue along with surges in government spending to fight the recession. It is important to note that bank bailout costs prove to be only a relatively minor contributor to the increase in public debt (Reinhart & Rogoff, 2009).

Although the piece is helpful in providing an overall summary of many of the individual cases being examined in the thesis, the authors do not look at the specific data points that relate to the European debt crisis of 2010. While they provide a clear picture of some of the similar traits shared by developing and emerging countries throughout all stages of banking crises, they fail to examine the sovereign debt crises most of these countries are exposed to prior to the collapse of the banking system (Reinhart & Rogoff, 2009).

Weisbrot also offers a complete and thorough study of the aftermath of financial crises with a particular focus placed on the Eurozone crisis and Argentinian crisis of 2001. He acknowledges the ideas brought forward by Reinhart and Rogoff and agrees with them in the context that slow recovery and prolonged unemployment is an inevitable result of recessions brought about by financial crises. However, he believes that this pattern has more to do with governments pursuing the wrong policies in the aftermath of crisis and less to do with a clear correlation. Weisbrot points to the case of Argentina following its severe financial crisis of 2001-2002. This individual case study will be studied more in-depth throughout the thesis as it serves as a much needed example of economic recovery and progressive policy making (Weisbrot, 2009).

## 2.4 European Sovereign Debt Crisis

When examining the crisis that has developed throughout the Eurozone, one of the most important pieces of literature on the topic is put forth by Joseph Stiglitz and is titled *The Euro: How a Common Currency Threatens the Future of Europe* (2016). Stiglitz brings forth the argument that although there were many issues that contributed to Europe's problems, the underlying mistake that led to the crisis in the region was the adoption of the euro. More specifically, he believes that by adopting a uniform currency in the region before even creating a set of institutions that allowed Europe to function effectively, economic turmoil was inevitable (Stiglitz, 2016).

Stiglitz places an emphasis on the idea of why well-intentioned statesmen and politicians in the region created something that had the opposite effect. He believes the reason for this is that the euro itself was primarily a political project and not strong enough to create the economic and institutional conditions necessary to allow the currency to succeed. He also examines the key economic indicators of the crisis in comparison with the Great Depression. As previously mentioned, the thesis itself will not place a heavy focus on the Great Depression nor the Great Recession, as they were not sovereign debt crises; however, having this data proves to be important when analyzing each individual case study, as it serves as a baseline for the research. From the graph below we can see eleven members of the Eurozone and the Real GDP contractions from both the current Euro crisis and the Great Depression. These nations being examined in the thesis and shown in the graph have experienced greater GDP contractions during the eight-year period than in the Great Depression, with the exception of Spain (Stiglitz, 2016).

Another important piece of data that Stiglitz puts forward that proves to be helpful in supporting the argument that the Euro crisis was caused by the role of institutions is his comparison of the Real GDP per capita growth during the period of 2007-2015 in the United States, the European Union, and non-Eurozone Europe. He uses specific data to support this argument and states that non-Eurozone countries had a GDP of 8.1% higher in comparison to the 0.6% percent increase within the Eurozone (Stiglitz, 2016).

In his article, *The European Sovereign Debt Crisis* (2012), Philip Lane puts forth the argument that the euro aimed to address the problem of over-borrowing in the region along with the free-rider problem in two ways. The first being through the stability and growth pact which aimed to limit the size of annual budget deficits at 3 percent of GDP and the stock of public debt of 60 percent of GDP. The second was to make sure no country was bailed out, with the implication that a sovereign default would occur if a national government failed to meet the debt obligations as stated above. However, Lane is quick to point to the fact that, even before the euro was implemented, the public debt to GDP ratio was 70 percent for the set of countries that would later form the Eurozone (Lane, 2012). This relationship is shown on the figure below:

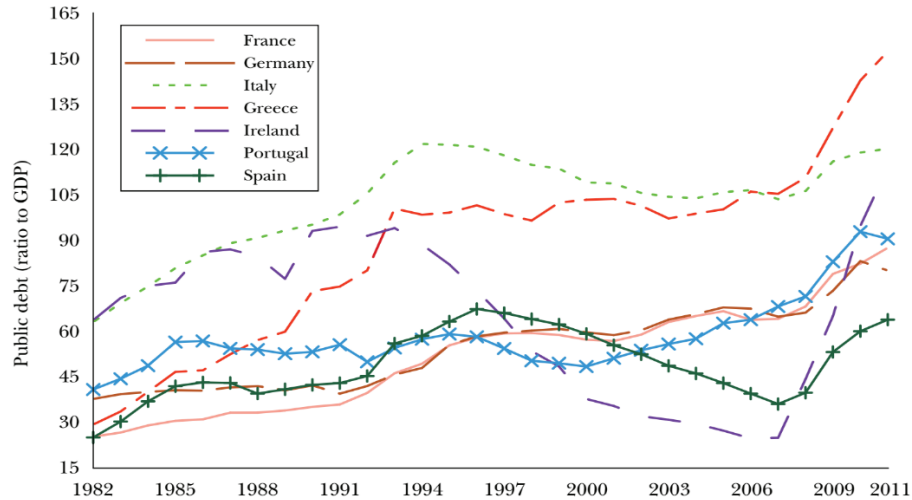


Fig 2.4: The Evolution of Public Debt, 1982-2011. (Lane, 2012)

Another critical factor that Lane believes policy makers failed to take into account when implementing the euro were the financial and external imbalances that plagued much of the region. After adopting the euro, many of the countries experienced large credit booms in anticipation of becoming members of the Eurozone. The reason for these credit booms was, in part, by joining the Eurozone the domestic banks within these nations could raise funds from international sources by using the euro rather than borrowing in a currency that wasn't their own with the hope that exchange rates wouldn't move against them. The other issue, as mentioned above, was the dispersion and persistence of current account imbalances within the region. These imbalances carry with them both short-term and medium-term growth implications. In the short-term, if there is a sudden stop in funding markets and a reversal of capital flows, there are immediate output contractions, rises in unemployment, and declines in asset prices. In the medium-term, an imbalance can be harmful if a rise in expenditure on non-tradeable goods squeezes the tradeable sector through higher wages and resources being shifted away from industries with higher growth prospects. This is somewhat similar to the Balassa-Samuelson

effect, which argues that an increase and wages in the tradeable goods sector of an emerging economy will, in turn, lead to an increase in wages in the non-tradeable sector (Lane, 2012).

It is important to note that Lane believes that the debt crisis was accelerated by the global financial crisis of 2007-2008. He argues that from 2008-2009 there was relatively little concern about European sovereign debt. However, as the crisis made its way across the Atlantic, cross-border financial flows began to dry up and countries, such as Ireland, that relied heavily on external funding (short term debt markets), were greatly affected. Other countries who were non-members of the Eurozone, such as Iceland, were also impacted. However, he argues the first event that really raised eyebrows was in October of 2009 when the newly elected Greek government announced a revised budget deficit of 12.7 percent of GDP, more than double the previous estimate of 6 percent. The result of this was rising spreads on sovereign bonds. From the graph below we are able to see the behavior of ten-year bond yields for the PIIGS nations along with France and Germany (Lane, 2012).

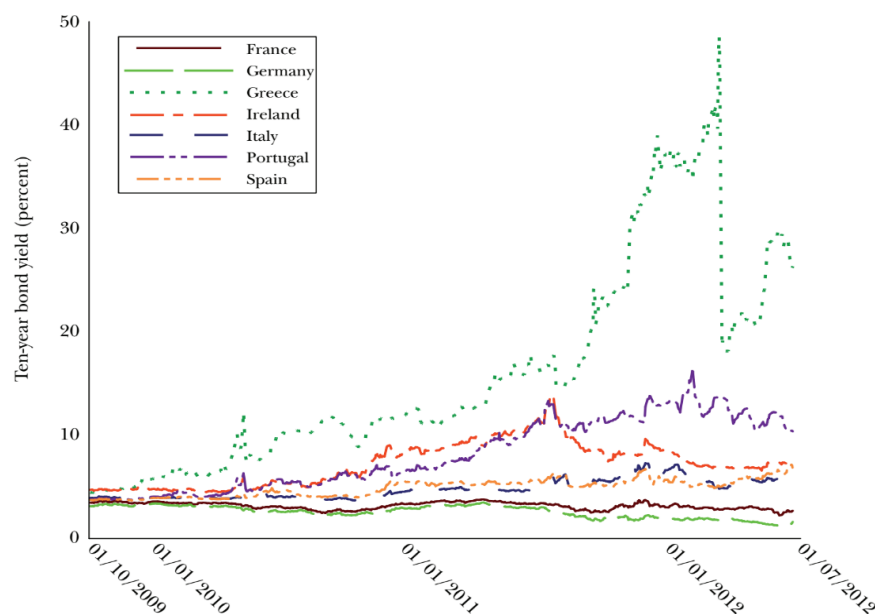


Fig 2.5: Yields on Ten-Year Sovereign Bonds, October 2009 to June 2012. (Lane, 2012)

From the graph, we are able to see that Greek yields began to diverge in early 2010, the relationship between the movement of Irish and Portuguese yields, and the relationship between the movement of Italian and Spanish yields. This relationship refers to the similar movements that the yields make in the period leading up to the crisis and during the crisis. These relationships will be critical when examining each individual case study.

When examining the programs put in place by the Troika (the triumvirate of the IMF, European Central Bank and the European Commission) the reception is met with criticism. The key principle being disagreed with is the idea that the conditionally imposed on these nations does not focus on loan repayment and is instead being directed, through threats and persuasion, by finance ministers of other Eurozone countries (specifically, Germany). The result of this an increase in debt, inequality and unemployment. (Stiglitz, 2016).

The two critical components of these programs are austerity and structural reforms. Austerity refers to the idea that a cutback in expenditure would lower the deficit. This strategy was most famously used by Herbert Hoover during the stock market crash of 1929 and has been used again in the cases of Argentina and East Asia (all of which failed). Stiglitz is blunt about his opinion of these policies and says that the greater the austerity, the greater the economic contraction will be. The structural reforms put in place by the Troika aimed to both lower wages and prices and restructure the individual countries in an effort to make them more efficient. Stiglitz believes that, although these reforms did lead to lower wages, they failed to accomplish their goal of lowering prices for exports (Stiglitz, 2016).

Stiglitz does offer some remarks on how to save the euro, but is quick to point out that this shouldn't be done at any costs. The first idea relates to the complete overhaul of the Eurozone's structure through a number of different reforms. These reforms include the implementation of a

common banking system (also referred to as a banking union), the mutualization of debt, a common framework for stability and a true convergence strategy. These potential policy measures will be examined in detail in the policy and discussion chapter. Overall, he believes that through structural reforms Europe should strive for full employment and growth for the entire region. These structural reforms are most necessary for the long-run success of the Eurozone, but only if they are coupled with reforms that also relate to the crisis policies that the Troika originally tried to utilize. A specific focus should be placed on utilizing fiscal policy while also working towards restructuring individual nations debt (Stiglitz, 2016).

This idea of counter-productive policies put in place by the troika is shared by a number of other economies as well. Mark Weisbrot further builds on this belief that, although the crisis in Europe was a result of the adoption of a common currency, it was further magnified by the procyclical actions of the troika. Although the crisis has been labeled as a debt crisis by the media and international financial institutions, Weisbrot believes that the use of that term is highly inaccurate. Instead, he shares a similar belief with Stiglitz that the crisis itself was fundamentally caused and deepened by bad policy measures put in place. When Greece first entered negotiations with the IMF and ECB in May 2010, the nation had a debt of 130% of GDP. Seventeen months later, following the introduction of the suggested policies, the nation's debt had increased to 170% of GDP. It can be argued that this idea of pro-cyclical macroeconomic policy (shrinking the economy when it was already weak or in a recession) had no place in the Eurozone in 2010 (Weisbrot, 2015).

The case against financial institutions and the ECB is further pursued by Weisbrot who argues that the organizations allowed the region to slip to the edge of a financial meltdown to force the weaker Eurozone nations into making larger concessions. This idea of walking on thin-ice or

participating in a game of brinkmanship caused repeated crises in Europe, with the most notable one taking place in September of 2011 when the IMF refused to release an 8-billion-euro installment on a loan to Greece unless the Greek government implemented further budget tightening. What Weisbrot finds most shocking is the fact that the European officials in charge were willing to put the entire economy at risk for a relatively small amount of money (it was a tiny fraction of the hundreds of billions that they had saved up to prevent financial contagion). One of the popular and most prevalent theories of why they chose to do this is the belief that they wanted to make Greece an example for other nations in the region (Weisbrot, 2015).

It is important to note that although many of the authors briefly examine the institutions that came to define the region, they do not provide a detailed history of the euro itself nor do they provide a detailed description of the regions institutions including the European Monetary Union and the European Union. For example, Stiglitz states that he is more interested in the outcomes of the history of how the institutions came to shape the crisis. In other words, how did the European Union transition from strictly a political union into an economic one with its own currency? This proves to be important for my research as it allows for the examination of the role of these institutions in each individual country being examined.

In the case of Greece, their debt situation was transformed from something that could have been resolved relatively simply and with few resources into a contagious mess that affected the whole region. This case of contagion is best described as one that was ‘fast and furious’ marked by rapid cross-border transmission. The idea of a fast and furious ‘contagion’ was coined by Kaminsky, Reinhart and Vegh who said these episodes were defined by significant and immediate effects in a number of countries following an event. Fears that Greek bondholders



would end up taking huge losses made worldwide news and greatly concerned those who owned Portuguese, Irish, Italian and Spanish debt (Kaminsky, Reinhart & Vegh, 2004).

Lane also provides some important insights on the reforms put in place that aim to address sovereign debt concerns. He argues that, although the new system of reforms focuses on the structural budget balance, the implementation of it faces many severe problems. The first, he highlights, is the measurement problem associated with the reform as it requires macroeconomic forecasters to differentiate between cyclical fluctuations and trend fluctuations in output in almost real time. Furthermore, he highlights the idea that because the primary source of fiscal discipline under the new reforms is expected to come at the national level, many of the countries may not choose to include these rules in their domestic legislation and thus, external sanctions may be utilized (Lane, 2012).

Some of the solutions that Lane puts forward will be examined further in-depth during the review of each individual nation, including a number of more extensive reforms. The first solution he offers is the creation of a banking union. He believes the banking union must include European-level regulatory responsibility, deposit insurance, a joint fiscal back-drop and bank resolution policies. It is important to note that Stiglitz also supports these reforms and believes they are necessary in the region for a successful recovery. A second and unique idea he offers is that of common areawide 'Eurobonds'. The goal of these bonds is to avoid the disruptive impact of destabilizing speculative attacks on sovereign debt markets in individual countries. Lane also believes that members of the Eurozone may seek a deeper level of fiscal union. This will allow them to share certain tax streams or spending programs in a way that would be delinked from fluctuations in individual nations output levels. However, he does highlight that for this to take

place changes would have to be made to the treaties that govern the European Union along with an increase in the level of political integration throughout the region (Lane, 2012).

When reviewing the individual case studies within the Eurozone, a complete examination of the countries labor markets must also be examined. Although many of the economists above offer solutions on how to deal with the crisis, they do not focus on the idea of reforms within the private sector and the labor market. In his paper, *The Microeconomic Dimensions of the Eurozone Crisis and Why European Politics Cannot Solve them* (2015), Christian Thimann argues that the microeconomic dimensions of the crisis and private-sector issues typically get far less attention than the macroeconomic and public sector considerations and policies. Thimann argues that there are two main problems that need to be fixed with regards to the labor market and the private sector if the crisis is to end. The first being the underlying competitiveness problem due to high labor costs relative to underlying productivity. The second being the widespread structural barriers that make job creation in these countries far more difficult than other economies in the western world and even emerging economies. The relationship between these two problems will be examined with respect to each individual case study in the Eurozone (Thimann, 2015).

## **2.5 Argentinian Debt Crisis of 2001-2002**

One of the key reasons why the Argentinian Debt Crisis is a focus of this thesis is due in part to the robust recovery the country experienced from its devastating crisis. Although the crisis itself was fundamentally different than what was seen in European and East Asian nations, it is important to examine its causes and the ensuing aftermath.

One of the most important pieces of literature that directly relates to the Argentinian Debt Crisis is an article put together by the International Monetary Fund and Timothy Geithner. In the

article, *Lessons from the Crisis in Argentina* (2003), the authors are quick to identify the crisis itself as the result of significant price deflation through the actions of the currency board regime precluding direct money financing of fiscal deficits. The IMF and Geithner further highlight the idea that the currency board was to blame for the crisis when they argue that the board itself was a very risky enterprise as its policies changed over time to a ‘fiscal-dominant’ regime as coined in the article. Furthermore, as the country entered into a recession, the buildup of foreign-currency denominated public debt was a major issue as the Argentinian peso had lost much of its value (Geithner, 2003).

In addition, the paper also examines the policies put in place by the IMF prior to the crisis and during the years of 2001 and 2002. They begin by highlighting the fact that the country was engaged in a number of IMF-supported programs in the years leading up to the crisis and acknowledge the fact that they overestimated the nation’s potential growth while also underestimating its overall vulnerabilities. With the benefit of hindsight, the article acknowledges that a potentially better policy measure that could have been implemented following the nation entering a recession would have been to restructure the nation’s debt combined with the release of the currency board and pegged exchange rate (Geithner, 2003).

It is important to note there are other differing schools of thought regarding what caused the Argentinian crisis such as the lack of fiscal tightening (Mussa, 2002), the currency board and exchange rate regime (Feldstein, 2002) and the reversal of capital flows to Latin America in late 1998 (Calvo & Reinhart, 2002). Another important belief is brought forward by Weisbrot (2015), who argues that the crisis had a lot to do with misguided procyclical policies promoted by the IMF. The use of these pieces and opinions of the authors were helpful in the examination of Argentina as an individual case study.

## **2.6 East Asian Crisis of 1997-1998**

The East Asian Crisis was unique in its form for a number of reasons. One of these key reasons being that it affected some of the most rapidly developing economies in the world and many economists, rating agencies and governments didn't see it coming. A common view of why the crisis took place is that the structural and political decisions in the nations created weak economic conditions. However, these issues were further plagued by market overreaction and speculation that caused major declines in asset prices, exchange rates, and overall economic activity. Although much of the literature differs with regards to what started the crisis, there is a common view point that the role of the IMF added both to the panic and further contraction of economic activity in the region. The crisis itself proves to be of significance to the development of this thesis as it was greatly affected by the response of the IMF and the overall structure of the nations prior to the crisis.

One of the seminal pieces on the topic was put forward by Corsetti, Pesenti and Roubini titled *What caused the Asian currency and financial crisis?* (1998). They believe that there are two schools of thinking into what caused the crisis. The first being that sudden shifts in market expectations and confidence were the key sources of the initial financial turmoil. In other words, the reason why the crisis was so prolonged and spread from nation-to-nation was because of panic displayed by domestic and international investors, along with the response of the International Monetary Fund. The other view of why the crisis took place is that the crisis reflected structural and polity distortions in the countries of the region such as lax regulation and supervision. In other words, the authors believe that fundamental imbalances triggered the crisis (Corsetti, Pesenti & Roubini, 1998).

One of the main problems that is believed to have affected the countries was the moral hazard problem at both the domestic and international level. This problem can better be understood as the structure of incentives under which the corporate and financial sectors operated in the region and the close links between both public and private institutions. Other issues they put forward include a long list of structural distortions in the regions' pre-crisis banking sector. For example, lax supervision and weak regulation, low capital adequacy ratios, and insufficient expertise in the regulatory institutions are all highlighted (Corsetti, Pesenti & Roubini, 1998).

There is no doubting the significance of the current account imbalances in the crisis as well. The authors put forward the belief, as outlined by Lawrence Summers, the US Deputy Treasury Secretary at the time, that close attention should be paid to any current account deficit that is in excess of 5 percent of GDP. With that being said, many of the nations in the region, including the Philippines, Malaysia and Thailand all, had deficits of greater than 5 percent of GDP. This will be an important statistic to examine when comparing these individual nations to the European case studies (Corsetti, Pesenti & Roubini, 1998).

A second seminal piece on the crisis was put forward by Paul Krugman titled *What Happened to Asia?* (1998). Krugman believes that one of the key reasons the crisis took place was because investors knew that their investments were to weak borrowers, but they felt protected by explicit and implicit guarantees. In other words, Krugman greatly believes the crisis was a result of the role of financial intermediaries and the moral hazard associated with these intermediaries when they are exposed to a lax regulatory framework. He believes that this idea of moral hazard along with the artificially high prices of real assets such as capital and land were the two main causes of the crisis in the region (Krugman, 1998).

These ideas are in sharp contrast with Steven Radelet and Jeffrey Sachs who argue in their paper, *The Onset of the East Asian Financial Crisis* (1998), that the main reason for the crisis was the role of financial panic across the region. They place a large focus on the massive foreign capital inflows into the financial systems that were already susceptible to speculation and panic. To highlight this, they state that in the five Asian countries hit hardest by the crisis, net private inflows dropped from \$93 billion to -\$12.1 billion from the onset of the crisis to the end of 1998. A number of international and domestic reasons are stated as to why there was a surge in capital inflows including: capital market liberalization, new bond and equity mutual funds, increasing economic growth within the region and wide-ranging financial deregulation (Radelet & Sachs, 1998).

Radelet and Sachs also put forward the argument that one of the reasons why the crisis was so different from others, including the Latin American crises of the 1980s, was because it went almost undetected. In other words, many of the signals that market observers look for when identifying potential crises showed no issues. For example, domestic savings and investment rates were high throughout the region and world market conditions were favorable throughout the early part of the decade. It is important to note that the only warning signs that the authors believe should have been flagged were in Thailand, where expectations of currency depreciation grew and short-term debts to international banks had risen to high levels of foreign exchange reserves in Indonesia, Thailand and Korea (Radelet & Sachs, 1998).

The authors conclude that the crisis itself arose from certain, but limited, emerging weaknesses, along with a series of negative policy decisions that triggered widespread financial panic in the region. It is important to note they also take a direct stance against Krugman's approach, as they

believe much of the lending that was taking place was directed to private firms that did not have the same explicit and implicit guarantees as other investors (Radelet & Sachs, 1998).

## **Chapter 3: Case Studies**

### **3.1 Greece**

When examining the situation in Greece, many are quick to point to one idea they believe was the reason for the crisis: debt. The belief that private and government debt was the underlying cause is one that is widely debated and analyzed. The accumulation of debt in the country can be blamed on many actions and actors. In the case of Greece, there were a number of underlying economic conditions that greatly contributed to the country becoming the first domino to fall in the European sovereign debt crisis.

However, the first important idea to look at is the increase in fiscal deficits run by the Greek government. This coupled with their continued goal to increase public sector employment and wages destabilized the structure of the monetary union in the nation. In other words, when Greece joined the European Monetary Union they believed they could increase their borrowing limit and reduce savings because of the idea that they had a safety net to fall back on. This access to easy credit and belief that they could rely on Eurozone members for support allowed the Greek government to further expand their previous deficit. On the graph below we can see the Greek Government's budget deficit in percentage of the nation's GDP:



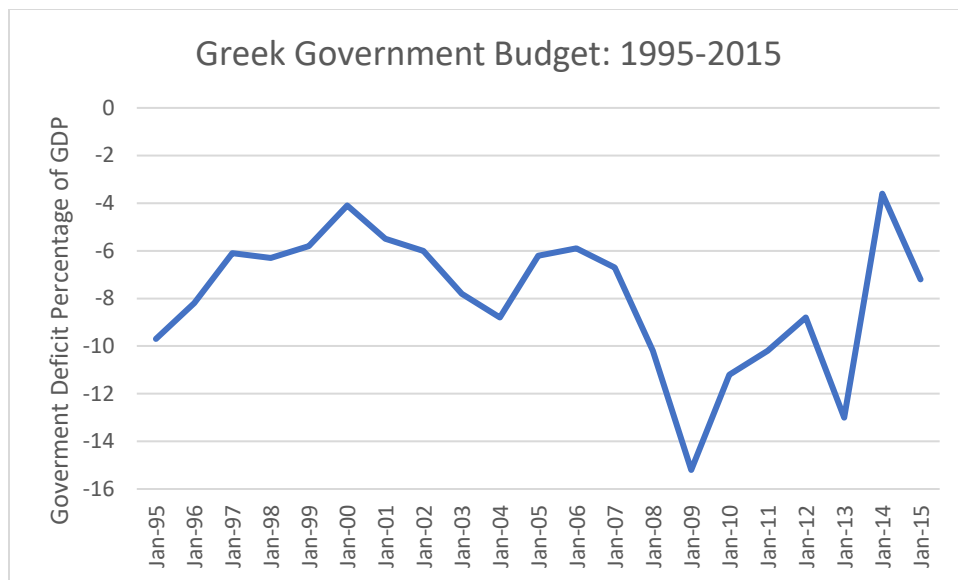


Figure 3.1: Eurostat, 1995 – 2015.

In Figure 3.1, we are able to see the clear increase in the countries deficit to its GDP following the adoption of the Euro in 2002 and the eventual low point of -15.2 percent of the GDP in 2009. The improvement seen from 2009 to 2012 is related to the strict measures put in place by the EMU and the European Central Bank. However, we see the rise in the deficit again from 2012 to 2013 and 2014 to 2015. The key reason behind the deficit increasing in these years was because of a steep fall in economic activity, which sharply reduced tax revenues. These inconsistencies are one of the many reasons for the animosity towards the policy measures put in place by the group known as the Troika (the ECB, EMU and IMF). These measures will be examined in detail in the next chapter.

It is important to note that following the adoption of the euro, Greece also experienced sustained GDP growth (a theme that appears to be common throughout the examination of other case studies as well). This growth can be attributed to a number of reasons, including access to new trading partners who had also adopted the euro in 2001, a growing shipping sector, and increased

tourism and construction as a result of the Olympics in 2004. The steady growth in the nation's Real GDP and eventual decline in 2008 is shown graphically below:

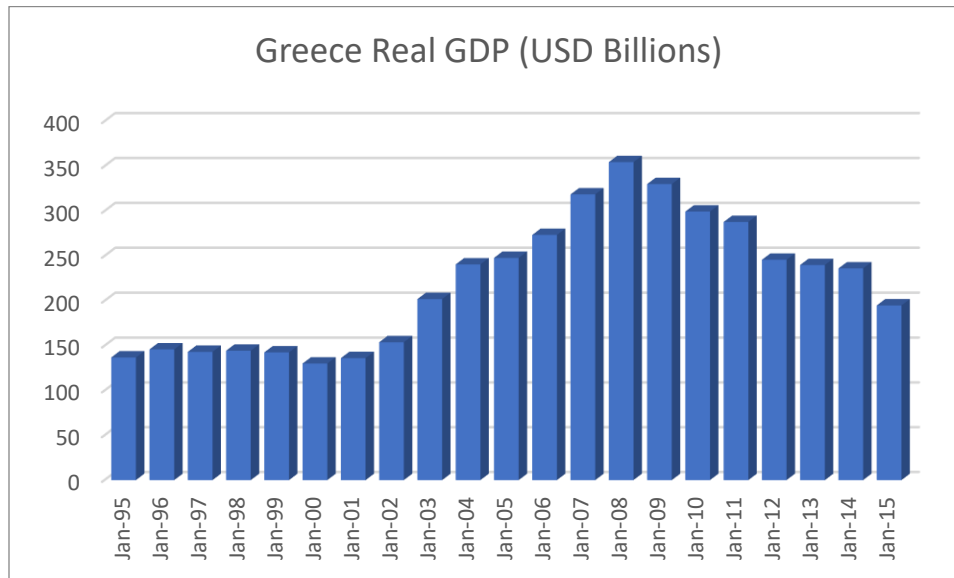


Figure 3.2: World Bank, 1995 – 2015.

As previously mentioned, one of the key reasons for the increase in the country's deficit was because of the steady rise in wages (this will further be examined when looking at the rigidity of the Greek labor market). This rise in wages is graphically represented in Figure 3. below:

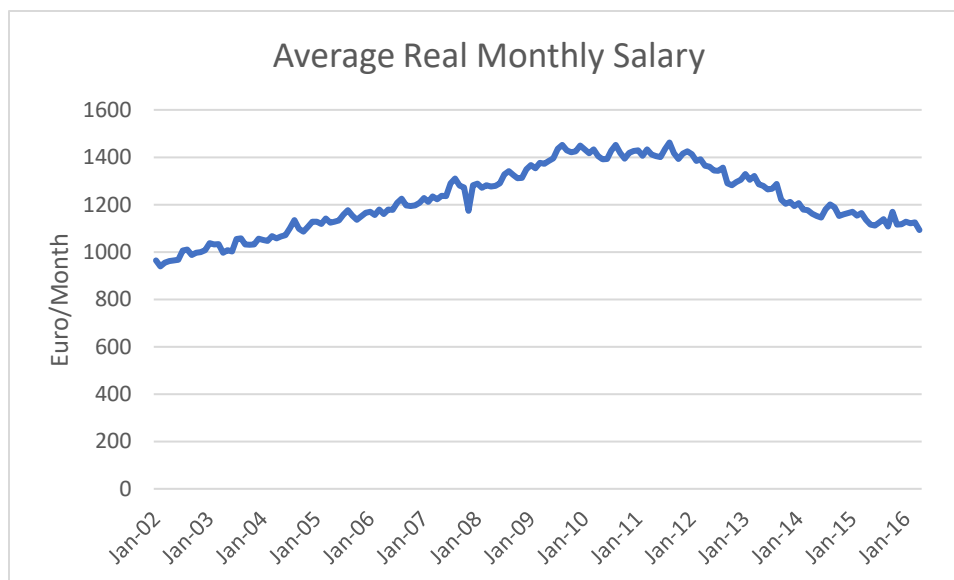


Figure 3.3: IKA Greece, 2002 – 2016.

This quickly rose to a level of around 1460 Euro/Month. It is important to note that this examines workers in both the public and private sector, with the public sector making up 30 percent of all Greek employment (one of the highest in the Eurozone).

This increase in average monthly salary is one of the underpinnings of the rigidity of the Greek labor market. As previously mentioned, the Greek public sector was one of the largest in Europe, with each member being granted a very generous pension and granted impressive unemployment benefits. Furthermore, members of the private sector were mostly unionized, which meant there were strict employment guidelines and minimum wage laws that had to be followed, regardless of productivity and efficiency.

This steady increase in wages, along with the decrease in unemployment, led the nation down a slippery slope with regards to their budget deficit as seen on the previous page. From the graph below we can see the unemployment rate in Greece from 1998 until 2016:

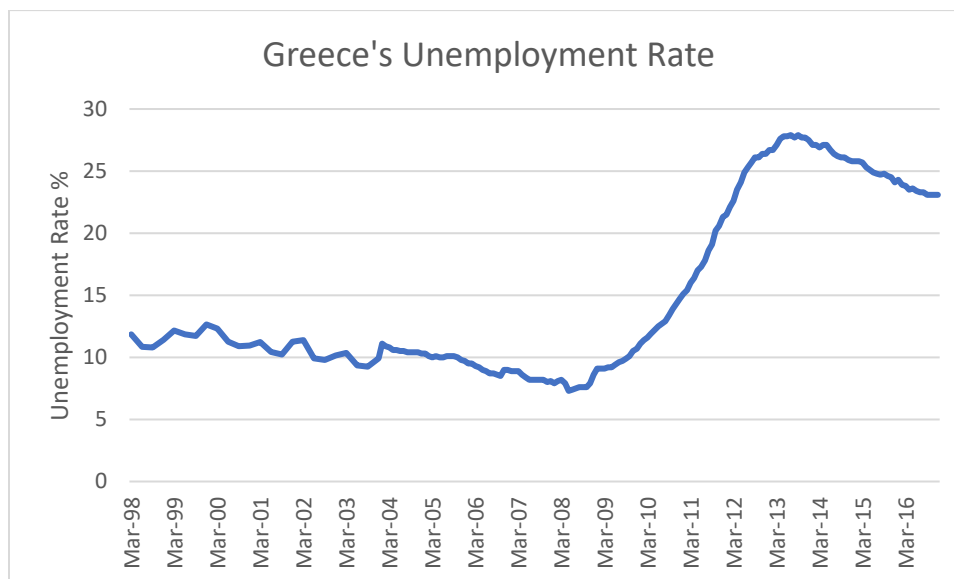


Figure 3.4: National Statistical Service of Greece, 1998 – 2016.

From Figure 3.4 we see the initial decrease in unemployment following Greece adopting the common currency in 2002. One of the more telling observations from the graph is the fact that

the lowest level of unemployment at around 7 percent was in May of 2008, right before the U.S. centered crisis began. However, we see that by July of 2013, the unemployment rate was at an all-time high around 28 percent. One of the reasons why these unemployment numbers rose is because many people decided to leave the labor market all together. A contributing factor to this, as previously mentioned, can be attributed to the very generous unemployment benefits workers received.

The issue of debt is one that cannot be overlooked. In the case of Greece, debt will be examined by analyzing total public debt and external public debt. More specifically, it is important to focus on the composition of public debt in the nation. It is important to note that public debt is another term for government debt, while external public debt refers to the government debt that was borrowed from foreign lenders (commercial banks, governments or international financial institutions). From the graph below we can see the percentage of public debt in comparison to the country's GDP:

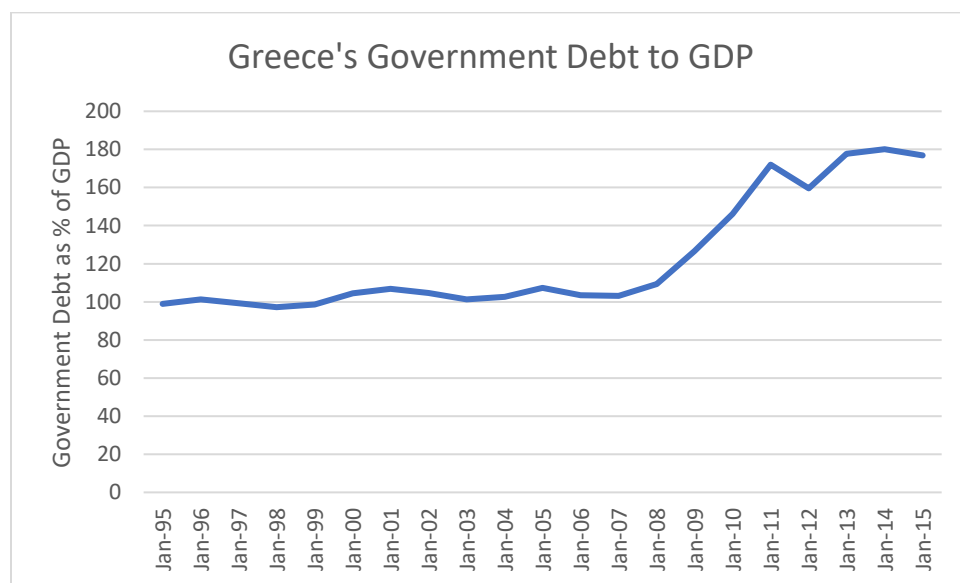


Figure 3.5: Eurostat, 1995 – 2015.

We see that Greece's government debt to GDP comparison was consistently around 100 percent from 1995 to 2008. It is important to note that this was considerably above the European average of 75.12 percent during the same time.

Another important piece of data that is important to examine is Greece's external debt in comparison with the entire Euro Area. This is shown below on the graph:

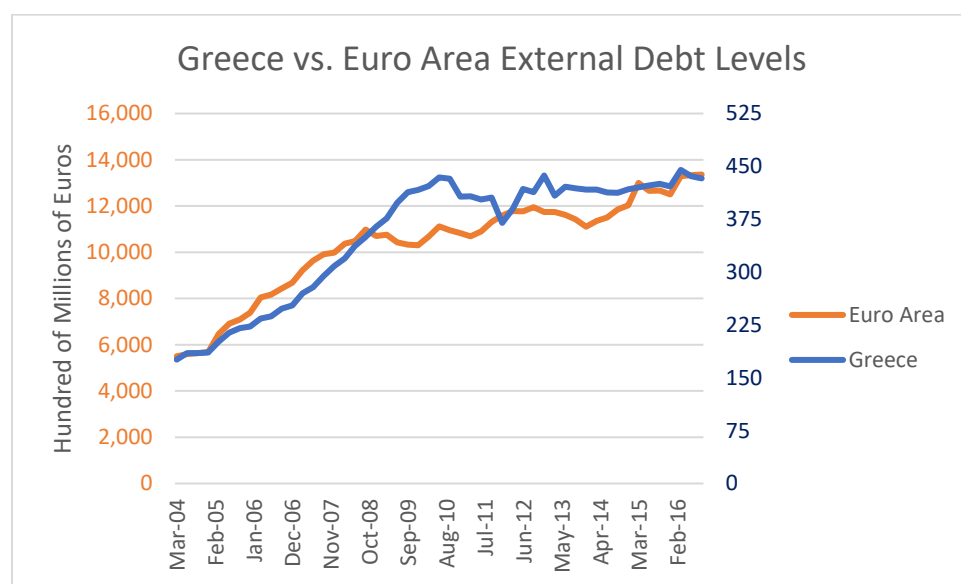


Figure 3.6: European Central Bank, 2004 – 2016.

From the graph, we see external debt levels of Greece in comparison with the entire Euro Area in hundreds of millions of euros. It is important to observe that the graph is constructed to show the growth of external debt by putting in place two y-axes. The growth of external debt is roughly the same with the exception of a larger rise in Greek debt from 2008-2009. This external debt played a key role in the advancement of the crisis in Greece, but cannot be blamed as one of the key underlying causes. Where it did impact the nation was following the announcement in 2009 that the country had been running a larger deficit than previously announced. The result of this was rising spreads on sovereign bonds, with much of them being held externally. Bond yields are

the amount a return an investor realizes on a bond. The key reason for bond yields to rise is because investors now view them as riskier investments. We can see this on the graph below:

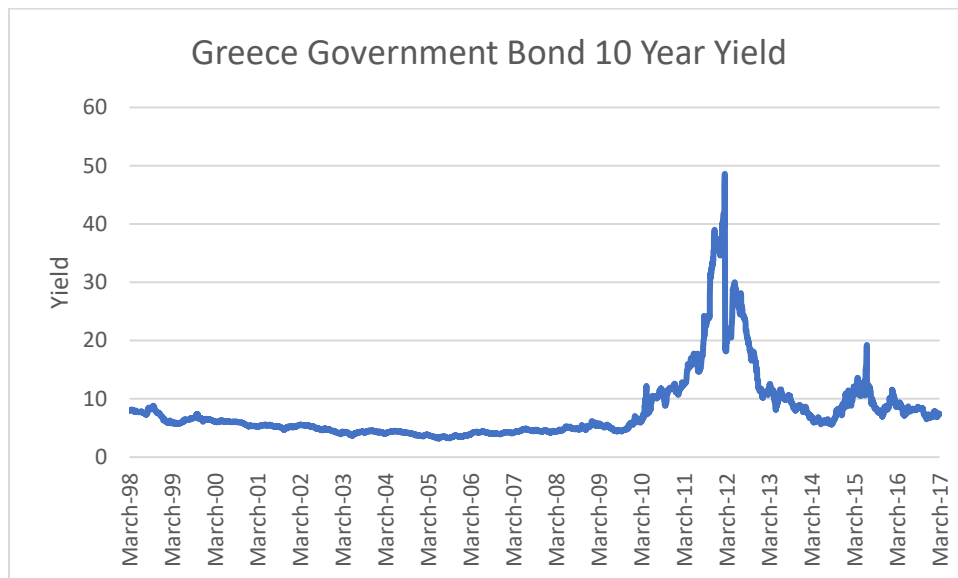


Figure 3.7: Public Debt Management Agency, 1998 – 2017.

From the graph, we see the initial rise in bond's yield in 2010 that continues through 2011 as a result of the crisis continuing to expand through the government's inability to repay prior loans. We can also see the decline in the yields in 2012 after the repayment plan was constructed and administered. It is important to note that the ECB's initial Securities Market Program (SMP) was put in place in May 2010. The objective of this plan was to have EU banks buy Greek bonds to help provide stability. However, this was short lived and by July 2011, EU policy makers were forcing EU banks to accept voluntary 50 percent haircuts on Greek bonds. A 'haircut' refers to the difference between prices at which a market maker can buy and sell a security. In other words, Greek bonds were being discounted by half of their previous value. We can see the effect of this on the graph above with the sharp rise in the yield in mid-2011.

From looking at the data above it's clear that Greece had major domestic economic issues in the years and decades leading up to the start of the crisis in 2009. To say that these issues were the

cause of foreign actors would be inaccurate and unfair. Greece's policy makers and politicians have to take serious responsibility for allowing reckless government spending that led to a major budget deficit. However, the actions of the troika following the crisis did not have the intended effects and have further prolonged the economic downturn in Greece. These policy implications and potential solutions will be examined in detail in the next chapter.

### **3.2 Italy**

When examining Italy, a similar emphasis must also be placed on the issue of public debt within the economy. Italy proves to be an interesting and important case study because of its close geographical proximity to Greece, along with the common belief that the two nations share similar socio-economic policies and labor market structures including: a large public work force, large government pensions, and lax vacation policies. In the view of Italian nationals, this labor market structure is widely accepted, but in the view of other Eurozone countries, such as France and Germany, this is by no means the case. Furthermore, the cause of the crisis in Italy seems to be a two-pronged approach, as the country was also greatly affected by the collapse of Lehman Brothers in 2008.

Similar to Greece, Italy ran a government deficit for many of the years leading up to the start of the crisis. However, one of the other underlying issues that impacted the nation was the fact that it had experienced little economic growth in the years leading up to the crisis. From the graph below we are able to see the deficit the government ran from 1996 to 2006:

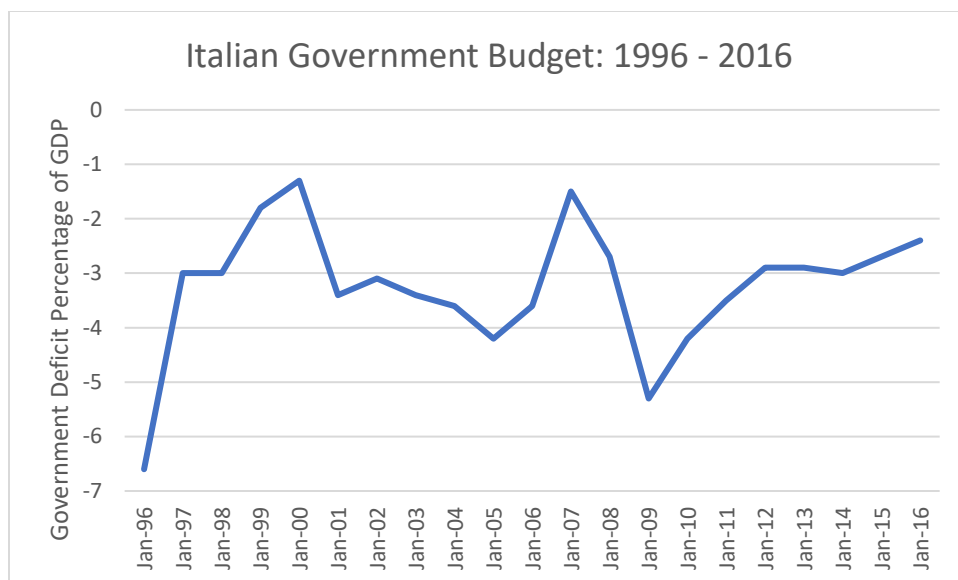


Figure 3.8: Eurostat, 1996 – 2016.

From the graph, we see a somewhat similar pattern to Greece following the country adopting the Euro as a common currency. The Italians adopted the currency at the start of 2002, and following that we see an increase in the deficit from 3 percent to 4 percent. However, we do see the government was able to improve the deficit from 2005 through 2007, as a result of the nation's stability program that was implemented in 2004. However, as Italy's GDP growth fell from around .5 percent from 2007 to 2008 to -7 percent from 2008-2009, the budget took a major hit as a result of falling tax revenues.

The key reasons for this significant drop in GDP growth can be attributed to the lack of productivity in the Italian economy along with widespread government corruption, in other words overall economic growth in the country was at a standstill. With regards to lack of productivity, Italy is one of the nations that spends the least on research and development in the Eurozone. They also have a marginal labor market that needs serious structural reforms (this will be examined in the policy and discussion chapter). As well it the Bank of Italy estimated that as of 2014 10 percent of the nation's economic activity is run by the mafia and black market,



costing the government roughly 100 billion euros a year (The Independent, 2014). The fluctuation in the nations GDP growth is shown graphically below:

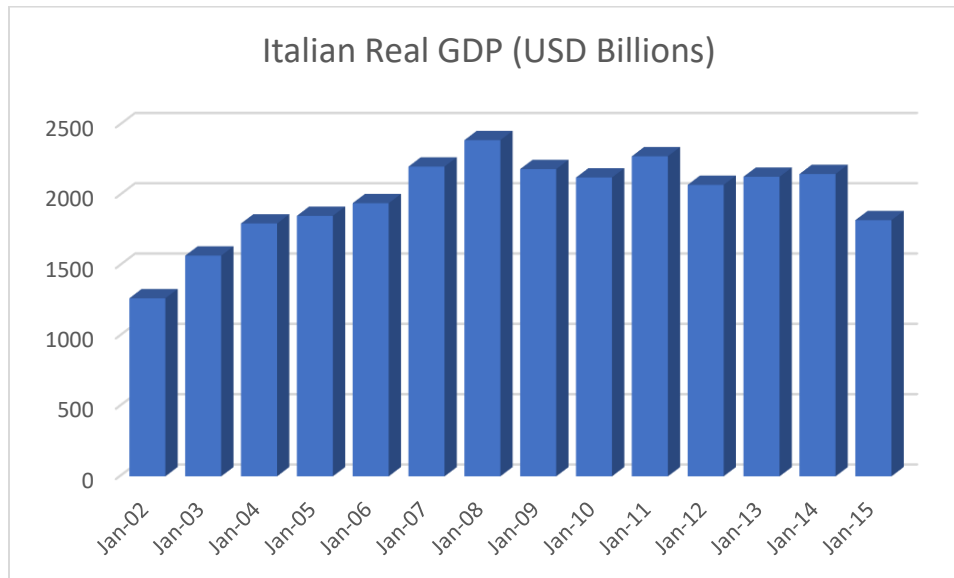


Figure 3.9: World Bank, 2002-2015.

The Italian government's budget was not the only thing that led to the crisis. Another major contributing factor was the amount of debt the government held. Italy's debt ratio is the second worst in the Eurozone behind Greece. From the graph below we can see the nation's debt in comparison to its GDP:

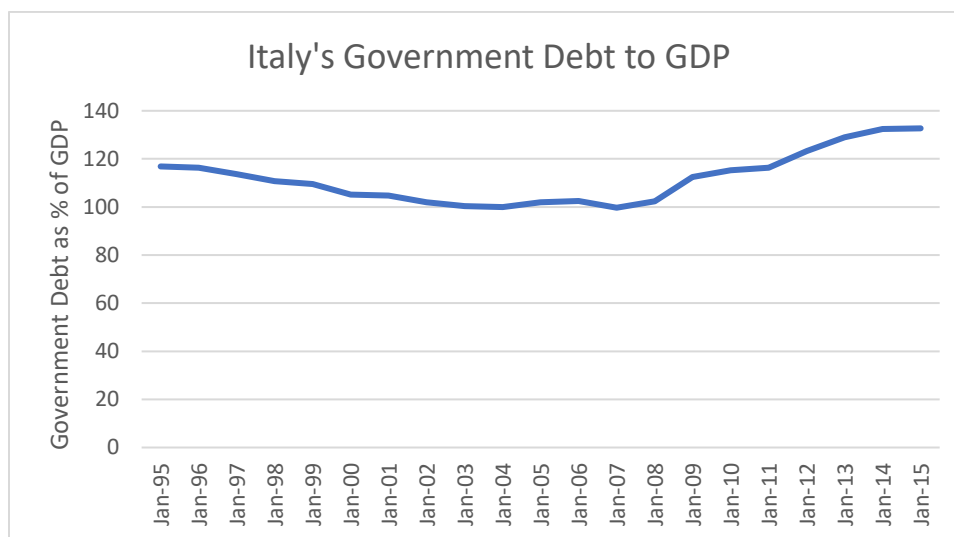


Figure 3.10: Eurostat, 1995 – 2015.

We are able to see that Italian government debt to GDP levels were consistently above 100 percent from 1995 to 2015. These levels reached an all-time of 132.7 percent in January of 2015. This is significant because, unlike Greece, whose ratio seems to be evening out, the Italians keep growing. This may suggest that the worst has yet to come for the nation.

It is also important to examine the extremely high levels of the Italian government's external debt. Italy as a nation has the highest amounts of external debt within the Eurozone. This is shown graphically below:

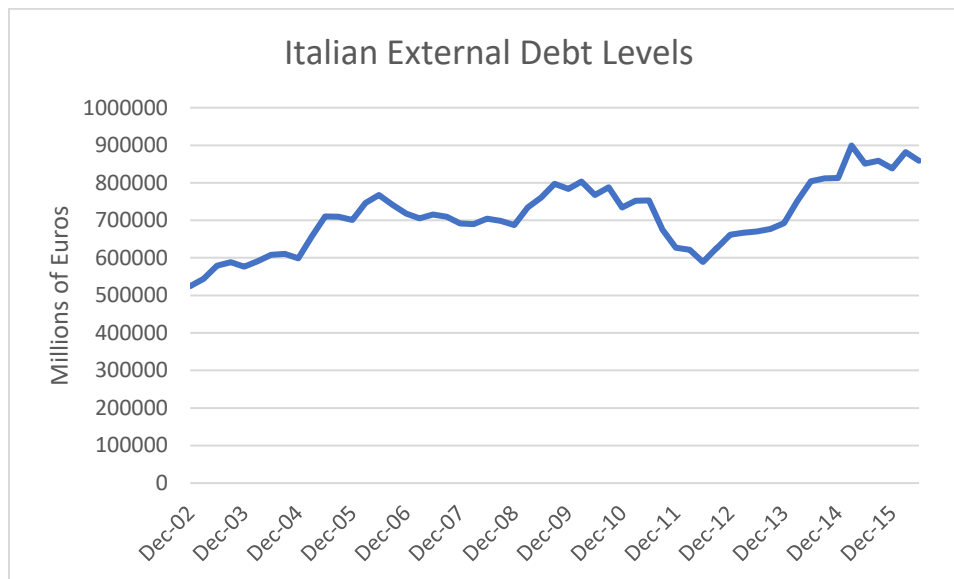


Figure 3.11: Banca D'Italia, 2002 – 2015.

From the graph above we can see the consistently high levels of external debt in the Italian economy from 2002 to 2015. These levels of debt are high, but do not make up the majority the nation's overall debt. However, over the last year there has been a sharp increase in the external debt levels of the country. One of the key reasons for this is because of the Italian government recapitalizing and deleveraging the country's largest banks with 21 billion euros. However, many foreign institutions, including Qatar's sovereign-wealth fund, have held off on investing thus far. This policy decision will be examined more in depth in the next chapter.

With that being said, Italy also suffered from the crash of the American Banking sector, specifically the fall of Lehman Brothers in 2008. Following the collapse of Lehman Brothers there was major pressure on the interbank loan market, where banks refused to lend money to each other because of a lack of liquidity and confidence about the stability of borrowers. Banks reduced the availability of credit to clients in order to buildup liquidity that was previously lost. What was unique about Italian banks, was that they had links with central and eastern European nations in previous decades that extended their network of branches to candidate countries. These links led to questions about the financial stability of this network, and, as a result led, to many banks taking precautions. Two of the key policies that were implemented were reducing credit to clients and consumers and raising the amount of collateral that was required for loans. The result of this was a decrease in spending by customers and a collapse of a number of individual sectors within the economy including real manufacturing and construction. Data taken from the Italian government shows a decline in Real GDP from the construction sector from approximately 23,850 million euro in May of 2008 to a low of approximately 15,960 million euro in December of 2016 (ISTAT, 2016). With that being said, it is clear that this decrease in credit during an economic downturn is one of the fundamental points of the financial accelerator model. As credit becomes more expensive, due to the fact that lenders are less likely to give it out, firms are unable to access it in the same manner as before and, thus, there is a clear decrease in investment and consumption.

As in Greece, it is important to examine the impact the crisis had on unemployment in the nation. From the graph below we are able to disarm the unemployment rate from 1997 to 2017:

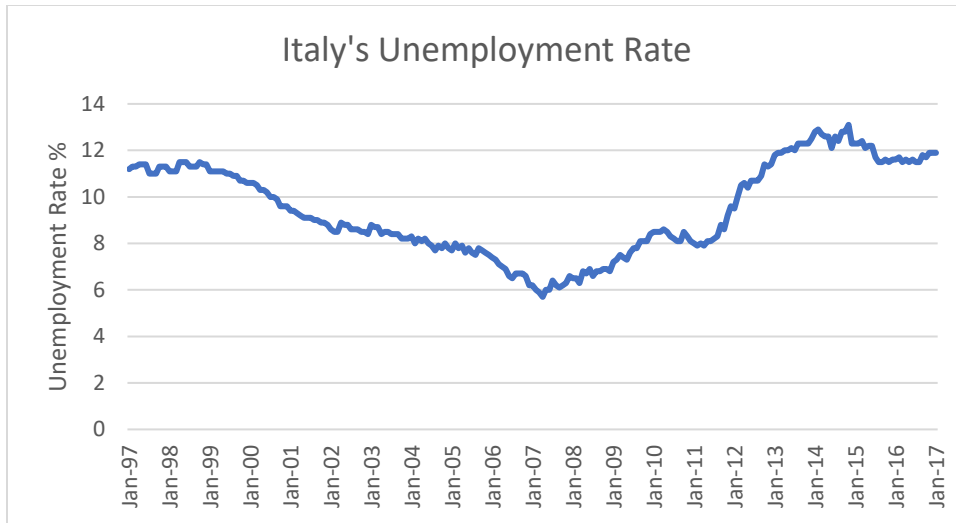


Figure 3.12: National Institute of Statistics, 1997-2017.

From the graph above we observe a similar pattern to that of Greece. Following the adoption of the common currency in 2002, Italy experienced five years of a continuous decline in the unemployment rate reaching a twenty-year low in April of 2007 at 5.7 percent. However, it sharply increased and reached a twenty-year high of 13.1 percent in November of 2014.

Another important piece of data to examine is the yield curve of the Italian 10Y government bond:

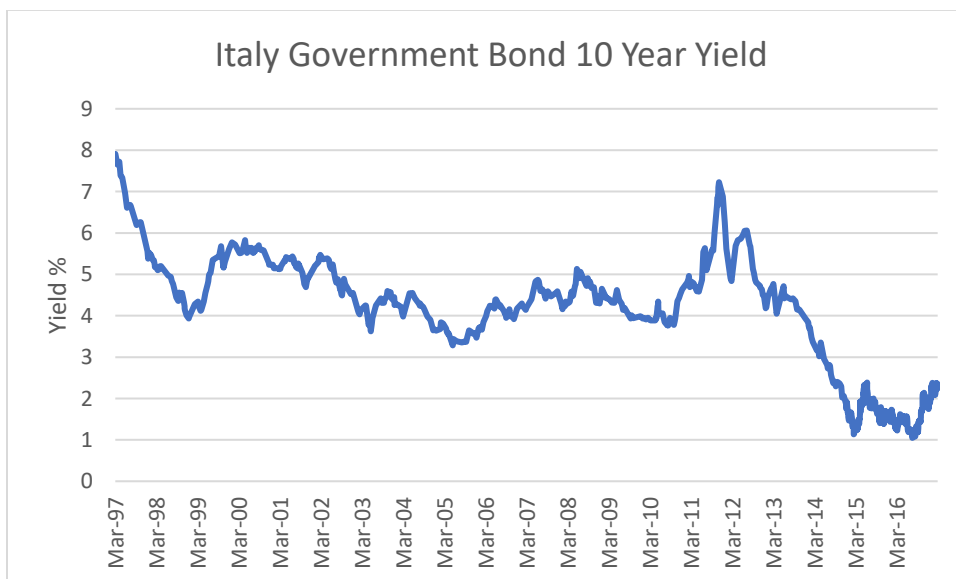


Figure 3.13: Dipartimento Del Tesoro, 1997-2017.

There are a few important points that arise from examining the yield on Italy's 10Y government bond. The first being the sharp rise from the start of 2011 until the end of 2011. One of the key reasons for this taking place was because of the role of speculators and investors. Another important factor that led to this spike in yields was due to the fear of contagion from the Greek crisis and the reaction of Greek government bonds (Arghyrou & Tsoukalas, 2010). Following the announcement of the Greek accounting problems, traders began to look for their next target. More specifically, they looked for the nation that would be most impacted in a negative manor by the ECB's monetary policies. The result of this was a major sell-off of Italian bonds during these months, which lead to a dramatic decline in their price and an increase in yield. On top of this, European banks that held these bonds suffered a major loss in the value of these assets. To make the situation even worse, traders began to short European bank stocks leading to wide spread panic in the European financial sector (Weisbrot, 2015). Why traders and speculators were able to do this is an important and critical question that will be examined in the next chapter. However, it is the view of many economists that the ECB was fully in the wrong by allowing the nation to teeter on the brink of a full financial meltdown through speculation from outside traders (Weisbrot, 2015).

It is also important to look at the steady decline in yields beginning in March 2012. One of the popular beliefs of why this took place was because of improved overall macroeconomic stability in the global economy. The second, and more controversial belief, places the blame on the monetary policy implemented by central bank policy, more specifically through Outright Monetary Transactions (this policy and the controversy surrounding it will be examined in Chapter 4). This policy itself was one of the keystone's Mario Draghi's 2012 announcement that the ECB will do whatever it takes to combat the financial crisis (Draghi, 2012). The central goal

of this policy is to push inflation up and yields down through the purchase of bonds. Although this may prove to be effective in the short run, there is much debate over whether it is an effective long term strategy.

It can be said that similar to Greece, the underlying cause of the crisis in Italy was engineered domestically through minimal economic growth and decline in government revenues that led to an increasing fiscal deficit. However, the nations also shared the fact that their deficits were the result of many other issues including: government corruption, black market transactions and lack of productivity in the labor force (Hatzigeorgiou, 2014).

### **3.3 Portugal**

One of the major reasons for the start of the crisis in Portugal was the role of domestic financial institutions. Along with Greece and Ireland, these countries were the first to enter into the European sovereign debt crisis. Like the two previous case studies examines, they required strict fiscal austerity packages and structural reforms to help boost economic growth in the country. With that being said, Portugal is a very interesting case study for this thesis because of its economic history and geographical location. The fact that its separated, along with Spain, from the other nations examined helps to prove the point that the Eurozone crisis was not limited to one region on the continent.

With that being said, it will be important to first examine the Portuguese government's budget in the years leading up and following the crisis. This is shown in the graph below:

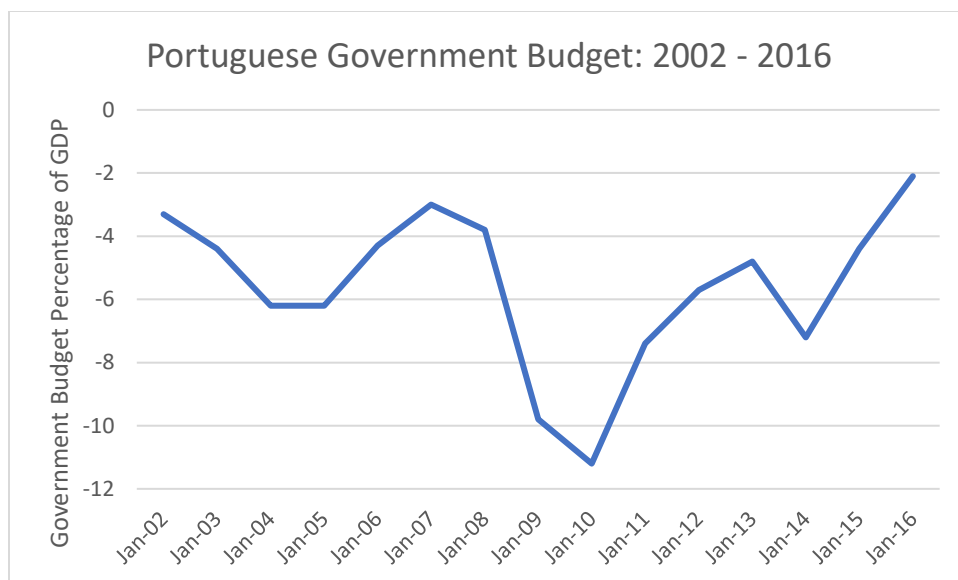


Figure 3.14: Eurostat, 2002 – 2016.

From the graph, we are able to track the deficit that the government of Portugal ran for the last twenty years. It is important to note that there are similar features of the graph to those of Greece and Italy. Following the full implementation of the euro as a common currency in 2002, we notice an increase in the deficit in the following years from around 4 to 6 percent of GDP. Like the nations previously examined, Portugal now had access to easy credit and this in turn led to a reduction in private savings along with an increase in consumption and investment. One of the potential reasons for this is because consumers and investors expected an increase in the future wealth of the country and, as a result, it is possible they substituted future for present consumption. Although they were able to improve on this in the following years, the deficit eventually dropped to a twenty year low of 11.2 percent in 2010 before strict policy measures were implemented by the ECB.

Another critical reason for this decline in economic activity within Portugal was because of sharp increases in nominal wage growth that greatly outpaced overall labor productivity growth. Like the cases of Greece and Italy, Portugal was known to have a relatively rigid labor market. The

reasons for this stem from high employment protection, very strong government influence of wages, and generous unemployment and retirement benefits. We are able to observe the nations slow real GDP growth below. This slow growth coupled with an increasing government deficit were two of the contributing factors to Portugal's financial crisis.

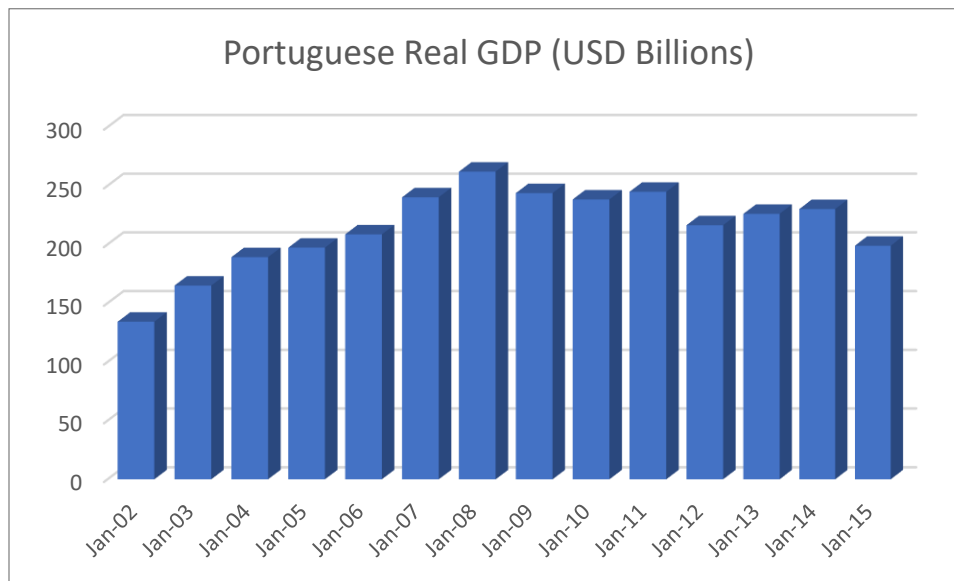


Figure 3.15: World Bank, 2002-2015.

Still, Portugal was able to maintain somewhat healthy debt levels relative to the cases previously examined. From the graph below we are able to trace their government debt to GDP levels:

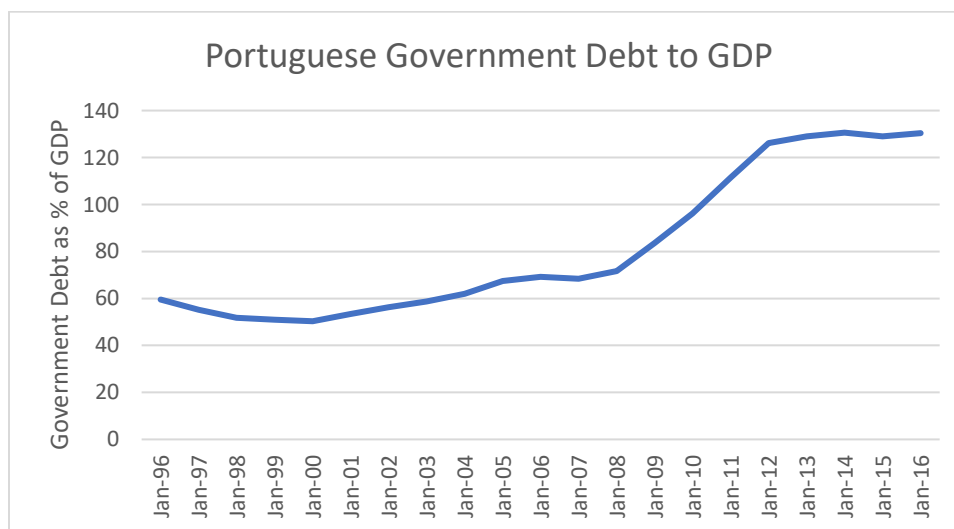


Figure 3.16: Eurostat, 1996 – 2016.



Portuguese debt to GDP was relatively stable throughout much of the 1990s and into the early 2000s. This was in sharp contrast to the case of Italy's government debt which accounted for roughly 100 percent of GDP during the same time. However, we do observe a sharp increase in 2008 to 2013. The key reason for this sharp rise in government debt is because of austerity measures and bailout packages imposed by the IMF and EU program (the criticism surrounding these policies will be examined in the next chapter). However, the Portuguese government also decided to utilize expansionary monetary policies, following the global recession of 2008-2009, to help combat the potential shocks on the domestic economy.

The role of debt was also a critical factor in the case of Portugal. It is important to note that foreigners, in the form of financial institutions, sovereign wealth managers and asset managers, held around 70 percent of Portuguese debt. We can observe the levels of external debt below:

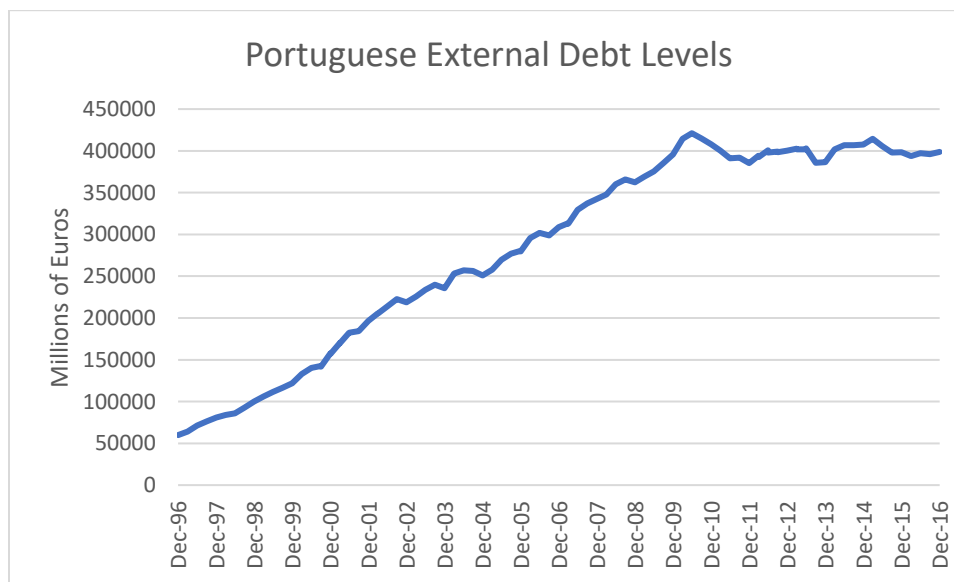


Figure 3.17: Banco de Portugal, 1996 – 2016.

We are able to see the steady rise in foreign held Portuguese debt over the last twenty years with the high point coming in the second quarter of 2010, right before the nation accepted the bailout

package offered by the EU and IMF. The graph above mimics a similar pattern to that of Greece and other Eurozone nations.

One of the results of the high levels of debt and slow economic growth was a sharp increase in the yield of Portuguese government bonds. Although there was some hope that Portugal would be able to undergo fiscal consolidation, the overarching situation across the rest of Europe led many investors to believe that Portugal was the next domino to fall. From the graph below we can see the impact on Portuguese 10Y yields:

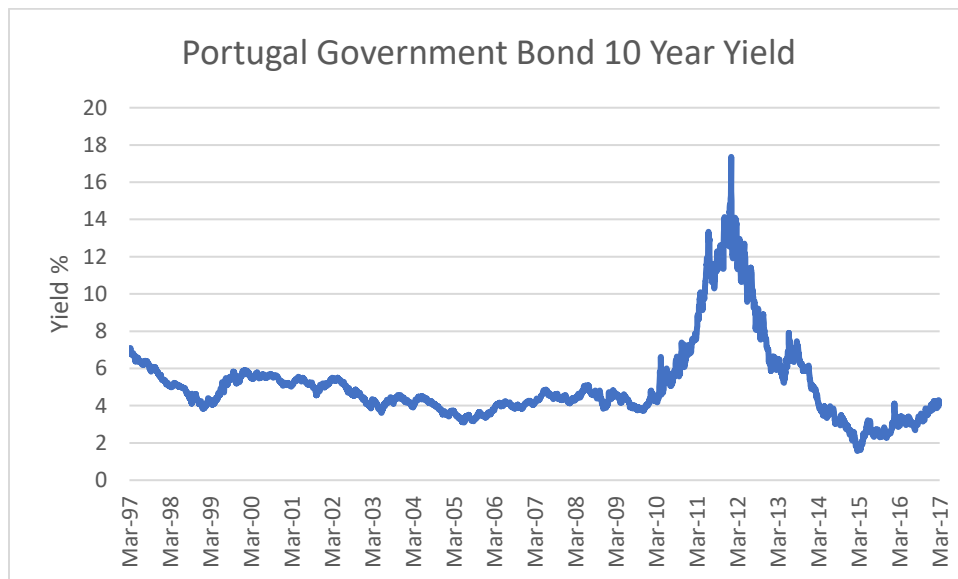


Figure 3.18: IGCP, 1997 – 2017Q1.

We notice the sharp rise in the yields of Portuguese 10Y government bonds in March of 2011 up until the end of the year. Although speculators had previously driven up yields, it wasn't until Fitch, the rating's agency, lowered the nation's credit rating from A+ to BBB-, along with Standard and Poor's from A- to BBB-. In the years following, we observe yields began to drop as a result of rising bond prices through QE. However, over the last two years, yields are beginning to rise again as it is feared that the ECB may remove the ability to participate in Outright Monetary Transactions as Portugal's credit rating improves.

There is no doubting the fact that the Portuguese economy was extremely fragile in the years leading up to the crisis. However, we can infer from many of the statistics above that the country was not struggling to the same extent as Greece and Italy. In fact, the implementation of IMF-EU program in April of 2011 led to a sharp rise in the nation's government debt to GDP ratio and amount of external debt. That said, speculation did play a role in the increasing yields on Portuguese government debt and almost forced the government into accepting the austerity measures put forward by the EU and IMF.

### **3.4 Spain**

When examining the case of the Spanish economy in the context of the Eurozone sovereign debt crisis, there are many unique differences that separate it from other case studies. One of the most notable being the fact that in the years leading up to the crisis, Spain was running a government budget surplus and not a deficit. From the outside, many aspects of the Spanish economy appeared to be fundamentally sound. With that being said, there were other components of the financial sector that were not as stable and that contributed greatly to the nation experiencing a crisis similar to that of Italy and Greece. The key reason why the crisis in Spain was fundamentally different was because it was caused by a domestic housing bubble in the country, similar to that of the crisis in the U.S.

It is important to paint a picture of the Spanish economy in the years following its adoption of the euro. From the graph below we are able to trace the government's budget from 2002 to 2015:

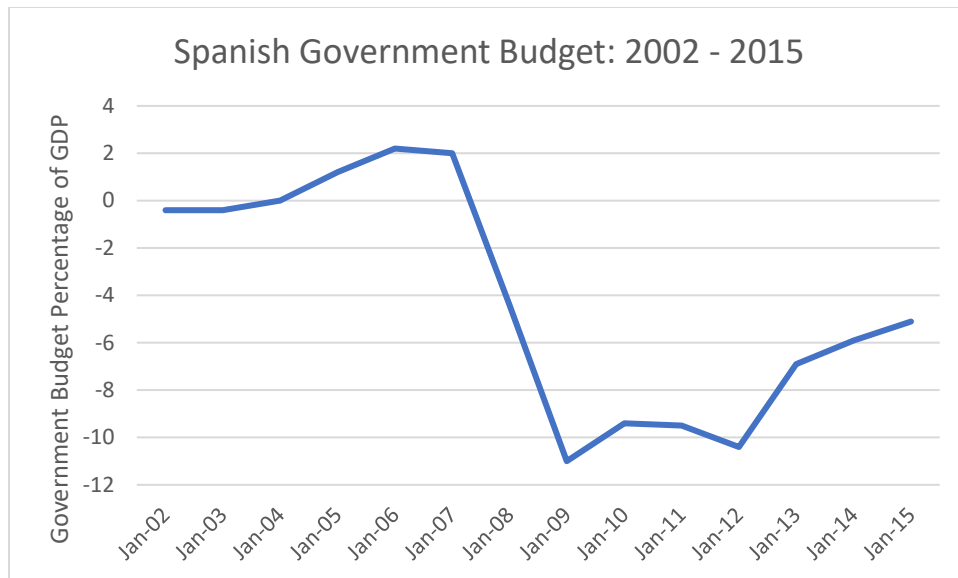


Figure 3.19: Eurostat, 2002 – 2015.

From the graph above we can deduce that from 2002 to 2007 the Spanish government was running a surplus. However, in 2007 the economy began to falter and by 2009 the country's deficit was at 11 percent of GDP. The main driver behind this sharp decline was the overall health of the global economic sector. The key take away from the data above is that Spain did not rely on the easy-credit that came with adopting the euro as a common currency in 2002, like many of the other member states.

Another indicator that would lead many economists to believe that Spain's economy was healthy in the years leading up to the crisis was the nation's low government debt to GDP ratio:

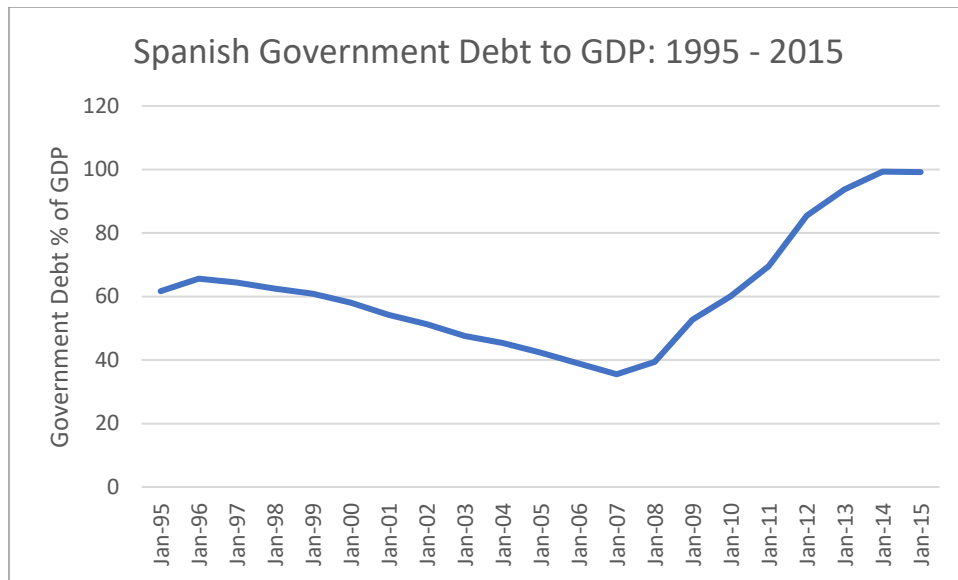


Figure 3.20: Eurostat, 1995 – 2015.

From the graph above we can determine that in comparison to the prior case studies, the Spanish government's debt to GDP was relatively low. It was not until the financial crisis of 2008 that it began to rise. One of the reasons for the continued increase in government debt was the fact that the nation accepted a 100-billion-euro bank bailout put in place by the EU (this money will come from the European Financial Stability Facility, which was set up to help members that are experiencing financial distress, and not from the IMF).

It is important to examine why the nation's banks were forced to accept this bailout in the first place. During the 1990s and 2000s the Spanish economy enjoyed a period of unprecedented growth. Many economists, at the time, viewed Spain as the posterchild of the Eurozone. The result of this growth encouraged a number of sectors of the economy to expand rapidly. One of these sectors was the real estate market. One of the major reasons why this took place was the consistent inflow of foreign capital into the country, which came on the heels of its membership into the EMU. This, along with the ability to access cheap credit, allowed the sector to take off. Because of this housing boom, the Spanish government received extra tax revenues through

rising asset prices, high construction activity, and capital inflows. On the graph below we are able to track the steady rise in the Spanish housing market and the eventual decline beginning in 2007, shortly after the U.S. decline:

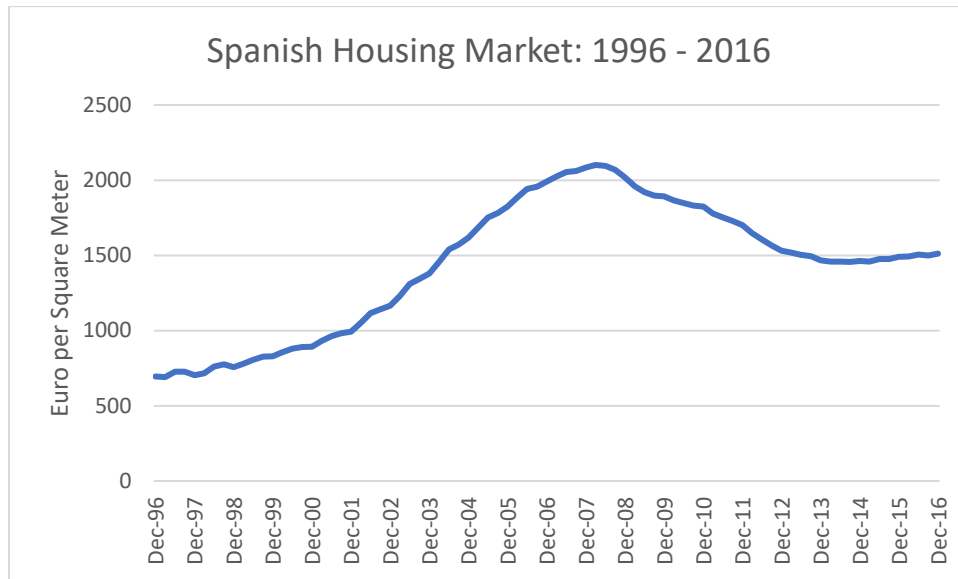


Figure 3.21: Ministerio de Fomento, 1996 – 2016.

Although the Spanish housing market first began to show signs of weakness at the end of 2006, due to a slowdown in the construction sector, the U.S. financial crisis and the global freezing of credit in 2007 was what really impacted the nation's economy. Over the next few years, growth, investment and consumption began to decrease. This brought to light Spain's dependence on foreign credit. However, it is important to note that although Spanish public debt was low, private external debt was very high, which exasperated both the mismatch on maturities and currencies. The impact on employment in the country was also so great that it drove unemployment to the same levels set in Greece:

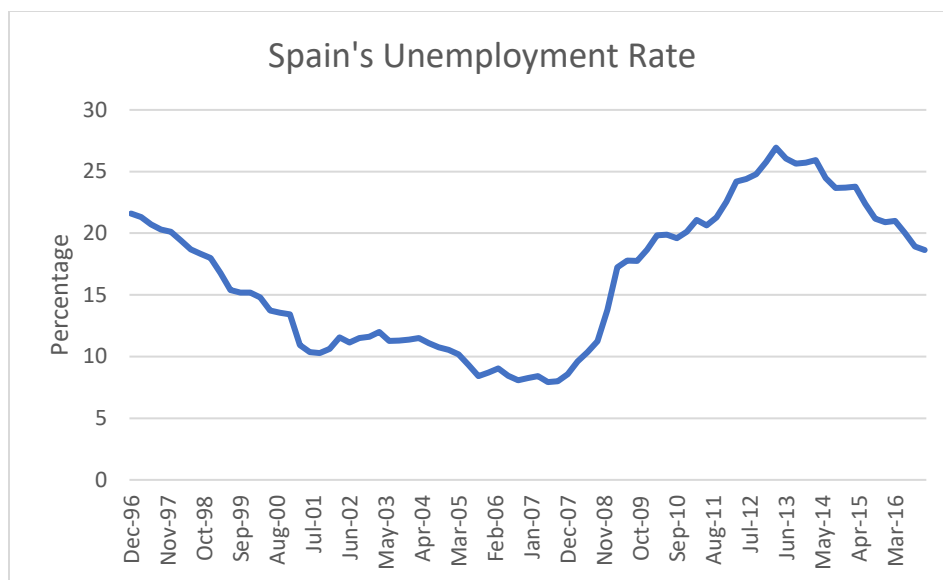


Figure 3.22: National Statistics Institute, 1996 – 2016.

The impact of the housing bubble also led to major losses within the Spanish banking sector. The reason for this was because many of the banks had to now cut their losses from bad-loans they gave out. As of 2015, non-performing loans as a percent of all bank loans in the country were at approximately 6.3 percent (World Bank, 2015). On top of this, many speculators thought the next potential downfall would be in the financial sector and, as a result, began betting on the drop in price of government bonds. The impact on the bonds' yield was not good. From the graph below, we can see the Spanish 10Y government bond yields:

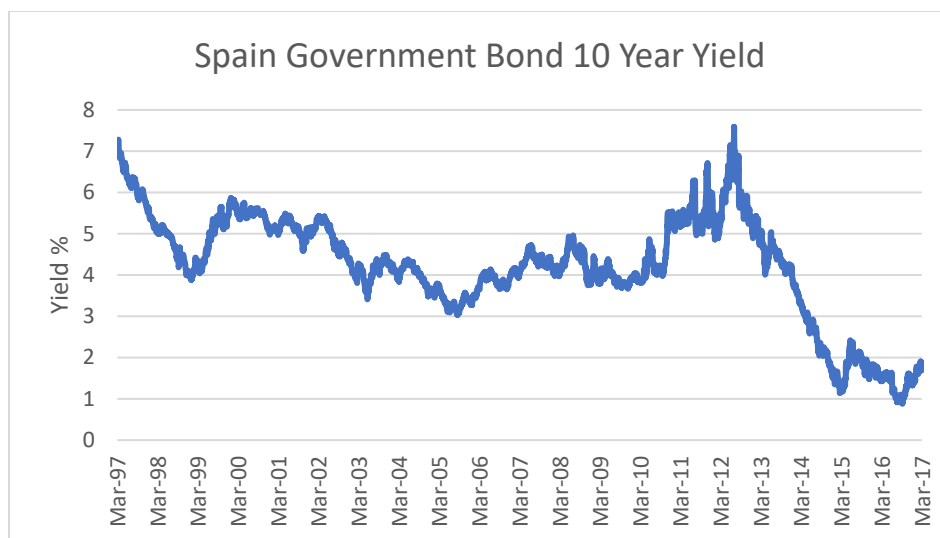


Figure 3.23: Tesoro Public, 1997 – 2016.

From the graph, we notice a similar pattern to that of the previous case studies. For example, one can note an initial speculative attack by outside investors due to suspected weaknesses in the economy that causes a spike in yields. This is followed by a rise in the price of bonds and reduction in their yield as the EU begins to purchase the bonds being offered by the country.

It is clear that the crisis in Spain was fundamentally different. Although there were major economic weaknesses in the nation prior to joining the European monetary union, the country had less red flags than many of its counterparts. The ability for Spanish banks to access easy credit following the adoption of the euro ultimately led to the nation's demise as housing prices skyrocketed and the cracks in the Spanish economy were brought to light following the U.S. financial crisis. What remains to be seen is whether or not the bank bailout adopted by Spain will be successful. This policy will be examined in the next chapter, but what is important to remember is that their bailout was not only smaller than other nations, but was also orchestrated without the role of the IMF.



### 3.5 Ireland

Ireland is another important nation to examine when looking at the sovereign debt crisis.

Although the four previous nations that were analyzed shared similar geographic locations, Ireland is geographically independent. This is important to note as it further proves that the crisis throughout the Eurozone affected nations of all backgrounds. Similar to the crisis in Spain, the Irish crisis was fueled by a housing bubble and bad loans made by banks. Ireland enjoyed an extended period of economic prosperity from 1997 – 2007 and it was dubbed the *Celtic Tiger*. As the economy continued to expand and foreign investment flowed into the nation, there was a major rise in real estate and commercial development. These developments were supported by loans made by Irish banks that had access to cheap credit.

Like Spain, when looking at some of the pre-crisis risk factors that have come to define other nations in the Eurozone, Ireland was relatively stable. From the graph below we can see the government budget of Ireland from 2002 to 2015:

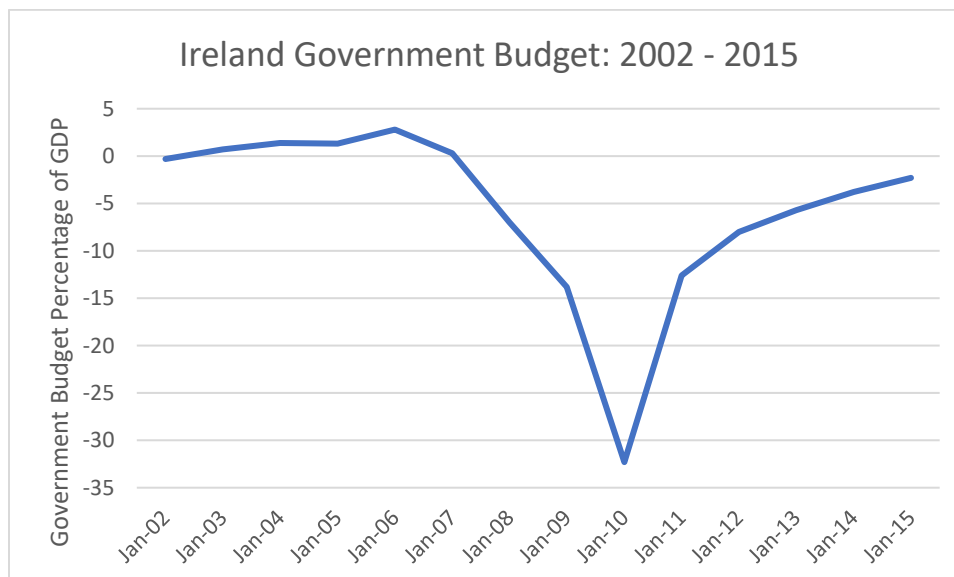


Figure 3.24: Eurostat, 2002 – 2015.

The Irish government was able to run a solid government surplus from 2002 until the financial crisis of 2007, and it wasn't until 2010 that the nation reached a record low deficit of 32.9 percent as a result of the policies recommended by the ECB. Another important observation to note is that Ireland, like Spain, did not enter into a deficit following the adoption of the euro in 2002. To further understand why many economists believed that the Irish economy was fundamentally strong, the nation's sustained GDP growth in the years leading up to the crisis must also be examined:

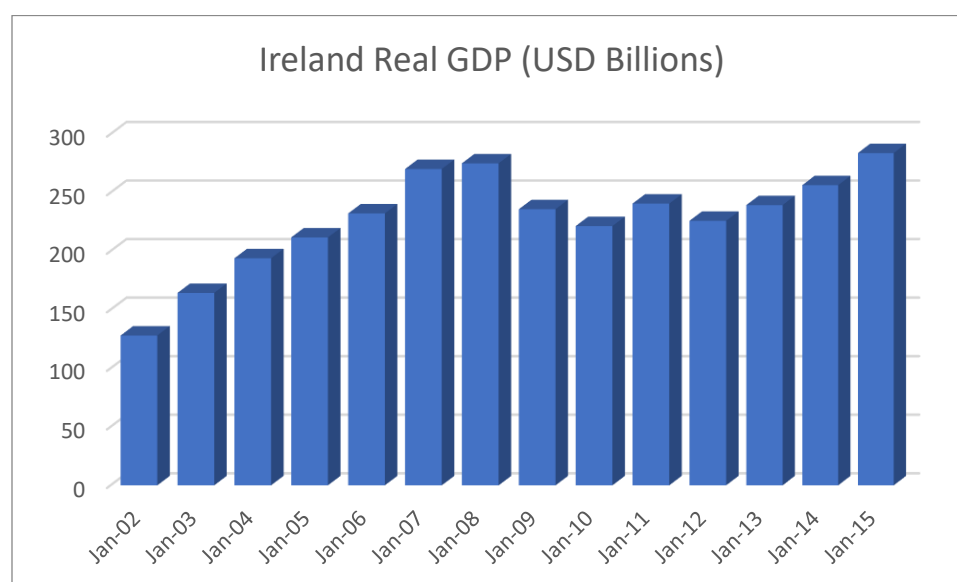


Figure 3.25: World Bank, 2002 – 2015.

Similar to the case of Portugal, we notice a steady rise in Ireland's Real GDP following the adoption of the euro in 2002. From 2002 until 2008 the nation's GDP increased by over 100 percent. One of the most important reasons this took place was because of Ireland's low corporate tax rate. Ireland's corporate tax system is divided up into two separate rates: trading income and non-trading income. The trading income rate is 12.5 percent while the non-trading income rate is 25 percent. As more and more foreign companies set up shop in Ireland, the demand for real estate continued to rise, further fueling the nation's bubble. From the graph

below we are able to observe the rise in Irish residential housing prices and the eventual decline in 2008:

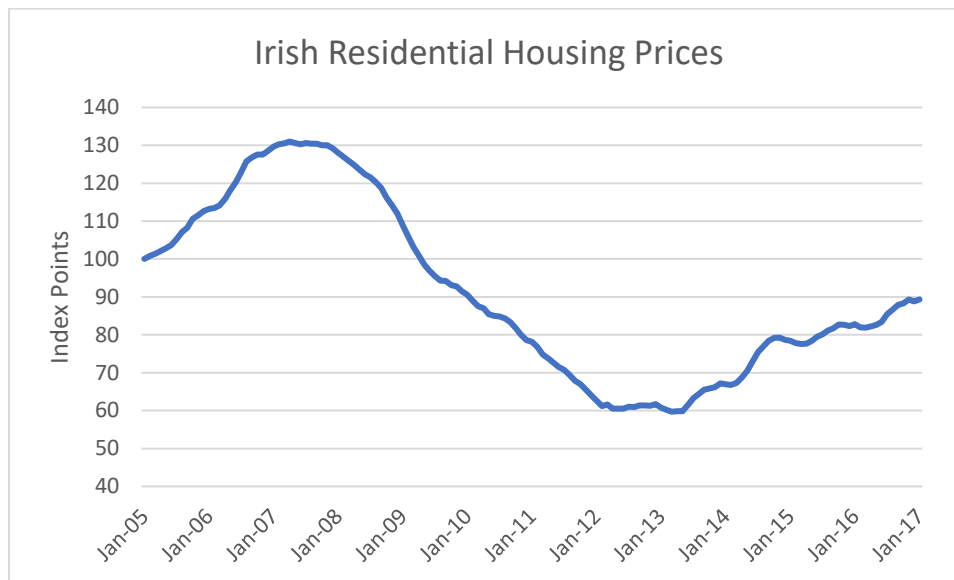


Figure 3.26: Central Statistics Office Ireland, 2005 – 2016.

The index that the Central Statistics Office of Ireland uses is one that measures the change in the average level of prices paid by households for residential properties sold in Ireland. From the graph above we see the steady rise in housing prices from 2005 to 2008. However, following the crash of 2008, prices crashed over 50 percent to low a point in the second quarter of 2013.

Another key area of the Irish economy where there were clear signs of instability was the reliance on external funding by domestic banks through global short-term debt markets. As there was increasing demand for real estate in the country, banks tapped into debt markets to help fill the demand for loans. When the crisis hit and Irish banks were unable to obtain the necessary credit, the financial sector was on the edge of a full meltdown. It is important to note that as of 2015, non-performing loans comprised 14.9 percent of all bank loans in the nation (World Bank, 2015). However, in comparison to many of the other case studies examined, Ireland had very sustainable levels of public debt in the years leading up to the crisis. The issue pertained to the

private sector and banks continuing to give out loans to finance commercial and residential projects (during the peak of the bubble 2006, the construction sector made up 25 percent of the nation's GDP). From the graph below we can see the steady growth in Ireland's external debt from 2002 to 2008:



Figure 3.27: Central Statistics Office Ireland, 2002 – 2016.

As previously mentioned, the rise in the nation's external debt as seen above greatly contributed to Irish banks tapping into foreign debt markets to help finance the real estate boom. As the bubble began to burst Irish banks were highly leveraged and had balance sheets that were dominated by bad loans and falling asset prices.

Speculators and traders were quick to pick up on the crisis in Ireland. As a result of this, they began to drive up Irish government bond's yield as shown on the graph below:

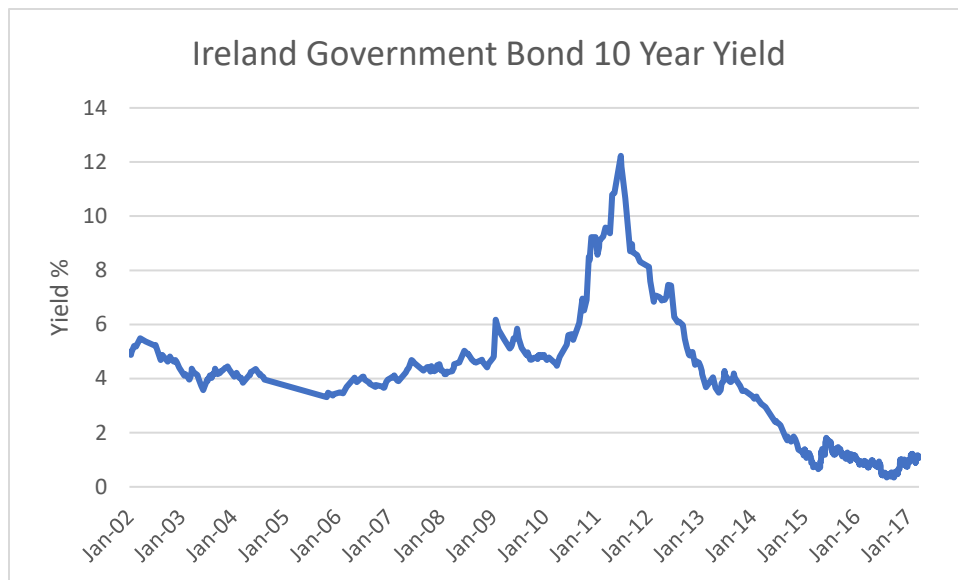


Figure 3.28: Ireland Department of Treasury, 2002 – 2017Q1.

The graph above depicts the initial leap in the yields of these bonds in the second half of 2010 and into 2012. The yield curve first shifted because of Ireland being locked out of the bond market through the EU and IMF joint policies (they accepted an 85-billion-euro package to help de-lever and recapitalize the nation's banking sector). Yields moved again as investors and speculators thought that they would default on these bonds. However, we notice that there is a sharp decline in yields following the announcement of the Outright Monetary Transactions (OMT).

From examining the case of Ireland, we are able to conclude that like Spain, the cause of the crisis was fundamentally different than what transpired in Greece, Italy, and Portugal. Although the nation had sustainable levels of public debt to GDP and was not running a deficit, there were still underlying issues in the economy, such as, the dependence on global short-term debt markets to sustain the real estate bubble. It is important to note that signs of recovery in Ireland are being seen as unemployment continues to decline while GDP has risen over the last four years. The key to the nations long-term efforts will lay in their ability to diversify their economy

and attract foreign corporations looking to take advantage of the low corporate tax rate. The fact that Ireland has strong fundamentals in terms of both productivity and FDI is also likely to impact their recovery in a positive way.

### **3.6 Argentina**

The crisis in Argentina is fundamentally important to analyze when looking at sovereign debt crises throughout the last two decades. Like many of the PIIGS nations, the Argentinian government ran a deficit leading up to their crisis. One of the main reasons for this deficit was because of pro-cyclical fiscal policies utilized by the Argentinian government. On top of this, many point to the Argentinian peso being pegged to the U.S. dollar as another major reason for the crash. It is important to note that the reason why Argentina kept their peso pegged to the U.S. dollar for so long was because it not only helped eliminate hyperinflation in the nation, but it also provided the potential framework for sustained economic growth. Furthermore, it also led to a sharp increase in FDI inflows to the country while attaining price stability (Baer, Elosegui & Gallo, 2002). If the currency became competitive enough to generate large trade surpluses and foreign exchange earnings so the country could pay interest on the large amounts of international debt that it owed, the fixed rate could have worked

Like many of the previous nations being examined, Argentina enjoyed years of economic growth prior to its financial crisis. One of the key reasons for this being its strong manufacturing sector. From the graph below we are able to observe the growth in the Argentinian Real GDP in the years leading up to the crisis.

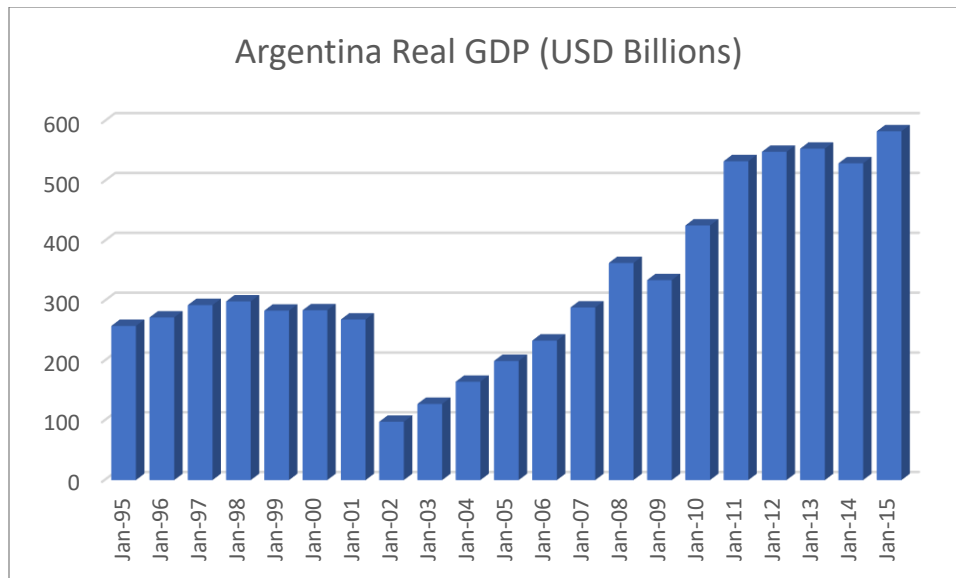


Figure 3.29: World Bank, 1995 – 2015.

From the graph below we can trace the deficit that the country was running in the years leading up to the crisis in 2001:

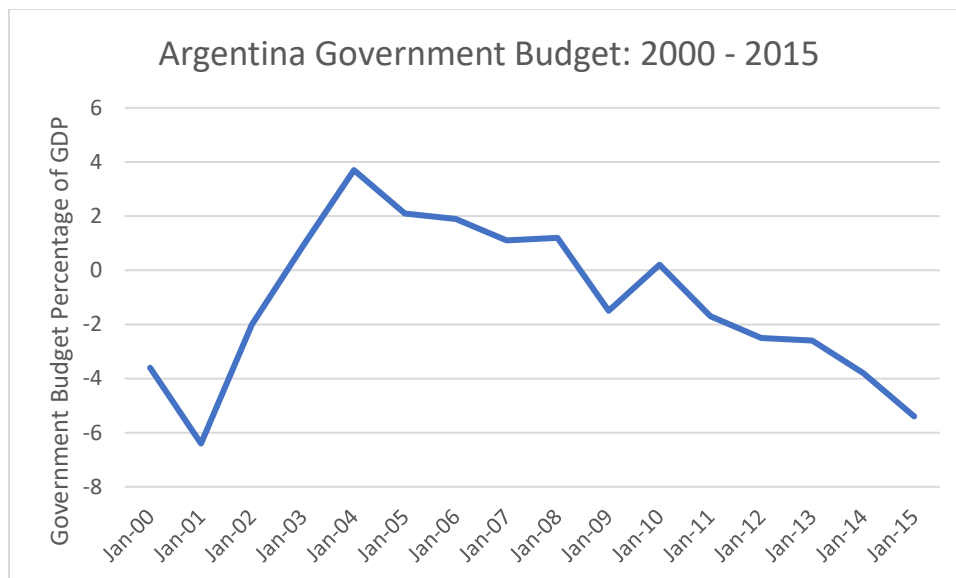


Figure 3.30: Banco Central De La Republica Argentina, 2000 – 2015.

Like many of the European case studies, we notice that, prior to the crisis, the government was running a budget deficit. It is important to note that the improvement of the budget deficit was

the result of the de-valuation of the currency and movement away from the peg to the U.S. dollar.

Having said this, it is also important to examine the level of debt the nation had with respect to its GDP:

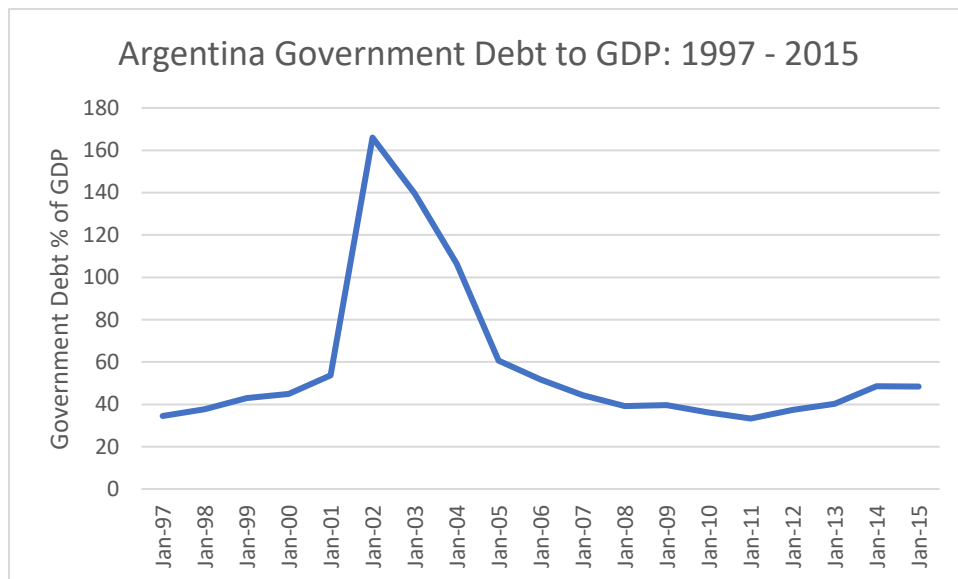


Figure 3.31: Ministry of the Economy – Government of Argentina, 1997 – 2015

From the graph above we see the sharp rise in government debt in respect to GDP in the year 2002. The underlying reason for this was again the removal of the peg of the peso to the U.S. dollar. However, the more important discussion point from the graph is the recovery in which Argentina experienced following the initial crisis. We see that the nation was able to reduce its debt levels by around 80 percent from 2002 to 2009. This was due to a number of policy measures implemented by the Argentinian government that will be examined in the next chapter. Furthermore, the debt service as a percentage of GDP in Argentina was also extremely high in the years leading up the crisis at a level of approximately 74 percent in 1999 and approximately 64 percent in 2000 (World Bank, 2000). This is an important statistic to examine, as interest and amortization played a key role in negatively impacting the nation.



Another important stylized fact to examine in the case of Argentina is external debt levels. From the graph below we can see the consistent rise in these levels in the years leading up to the crisis:



Figure 3.32: Instituto Nacional De Estadística Y Censos, 1996 - 2016

Similarly, to several of the European nations previously examined, Argentina also suffered from a very inflexible labor market. The government was very protective of individual workers and imposed high barriers to fire employees, along with the very generous unemployment benefits particularly at the provincial level. Although the government tried to improve labor market flexibility in the first half of the 1990s through fixed-term contracts, more flexible working hours and reduction in labor costs, the market remained very rigid throughout the period leading up to the crisis.

The recovery in Argentina has been very successful relative to other nations that have experienced sovereign debt crises. In April of 2016, the nation re-entered the foreign bond market offering 16.5 billion dollars of debt (more than double the previous highs of governments in emerging markets). From the crisis in Argentina, we are able to reassess the issues and problems associated with a hard peg such as the currency board. However, we also see the

underlying issues associated with taking on large amounts of foreign debt. An important point to remember is that the Argentinian recovery was engineered without the help of the IMF.

However, they were still able to drain 4 billion dollars out of the economy in 2002. The reason for this was the fund was acting on behalf of international creditors, with the goal of pressuring the Argentine government to pay more of its previously defaulted debt to foreign lenders.

Contrary to popular belief, the Argentinian recovery was not orchestrated by a commodity boom, but instead by increasing consumption and investment within the economy that was led by the government abandoning its pro-cyclical policies. The policies that the Argentinian government chose to implement are examined in more detail in the following chapter. These policies struck at the core of the fundamental economic issues in the nation and aimed to provide not only labor market reform, but also create a realistic and manageable debt repayment schedule. Nonetheless, it's important to remember the initial move to a floating regime did burst exports and lit a spark for the economic recovery of the nation.

## **Chapter 4: Policy and Discussion**

### **4.1 The Implementation of the Euro**

From the previous chapter, we can come to the conclusion that the crises in each European nation, along with the crisis in Argentina, were the result of clear-cut domestic economic and financial issues. Although these problems differed from nation-to-nation, they are all related in that foreign institutions and actors were not the underlying cause of them. In other words, there is no doubting that the fundamentalist view carries significant weight when examining the causes of these crises. However, it is important not to discount the fact that foreign actors still played a key role in the crises that were examined. Specifically, they exasperated and accelerated the crises in each individual nation by many of the policies they recommended and implemented. Although many of these policies had a negative effect on the nations, there have been some cases in which real and substantial economic progress has been made. This chapter will aim to examine the specific policies that were implemented and potential solutions and changes that should be made to them. It will draw on the help from other crises including the Argentinian crisis of 2001 and the East Asian Crisis of 1997.

When looking at the case of the Eurozone, it is important examine potential remedies on how the crisis could have been avoided altogether. One of the most popular and critical solutions to this would have been to have kept the European Union a political union and not to create the euro as a common currency. Furthermore, there should have been a better understanding of the economic health of the nations that were invited to adopt the euro. The criteria that was used to outline whether or not a country would be allowed to join the euro was laid out in the Maastricht Treaty. Although the nations that adopted the euro were able to fulfill the criteria set forward, albeit by the manipulation of their own statistics, there were still underlying economic issues.

Furthermore, many economists working for the EU ignored potential warning signs as they

believed in market fundamentalism (Stiglitz, 2016). Market fundamentalism refers to a neo-liberal belief that markets on their own are efficient and stable. For example, there were clear real estate bubbles forming in many of the nations during the early and mid 2000s that the European Union failed to deal with when offering membership. However, from the market fundamentalist prospective, markets do not create bubbles and, thus, no measures were taken as there was belief amongst policy makers that the bubbles would, for lack of a better reason, work themselves out (Stiglitz, 2016). When creating the monetary union, policy makers also underestimated the fragility of such a union if it were to be exposed to a crisis. In particular, the absence of both a banking union and other European-level (region-wide) mechanisms to help buffer against the crash of the financial sector was a major shortfall.

Many economists also argue that it made no sense for the common currency to be adopted because each country was sufficiently different. In other words, there is a strong belief that the institutional arrangements and conditions to fill the void created by these differences were missing when the currency union was established (this void being filled by additional institutions to help them function with one another) (Stiglitz, 2016). The policy makers in the EU hoped that over time these countries would become more similar and converge and thus could allow the currency area to work reasonably well.

With all of this being said and examined, the question of why nations such as Greece and Italy were even admitted into the EMU and allowed to adopt the euro as its currency must be asked. While Italy joined the EU in 1951 as a founding member, Greece joined the union in 1981, and both nations adopted the currency in 2002 as two of the first countries. There is no doubting the fact that EU policy makers were aware of prior economic problems within these two nations. This is where much of the criticism is raised; why would they allow countries with a history of

high debt levels in both the private and public sectors and underlying fundamental economic issues into a monetary union with nations that were far more economically healthy than them? From the analysis above we see that both nations had considerably higher levels of government debt than other Eurozone countries along with much larger amounts of external public debt.

It becomes clear that the adoption of the euro as a common currency in these nations that had fundamental economic weaknesses was a mistake. Although there is no telling whether or not these crises would have happened if the countries remained out of the euro, the fact that they were all connected through a common monetary union led to relatively economically stable nations being brought into a situation they otherwise would have not had to deal with. The blame should not fall directly on any one member state, but instead on the creators of the Euro.

Although their goal was to create economic stability in the region, they failed to understand that the European Union was created as a political tool, not an economic one. Although many of the political goals that policymakers hoped to accomplish through the EU have been reached, there is no doubting the fact that the economic challenges it has faced will forever stain its reputation.

## **4.2 Eurozone Policies**

The Eurozone policies that have been put in place to deal with the crisis are viewed not only skeptically, but also under a microscope. Although there have been some improvements, as seen in Spain and Ireland, much less progress has been made in the cases of Greece and Italy. It is important to note that this chapter will not look at each individual reform and policy measure implemented by the ECB for each of the case studies being examined (Greece alone has been presented with thirteen separate austerity packages since the start of the crisis). Instead, it will examine the major bailouts as well as reforms and policy measures that were established in the immediate weeks and months following the initial collapse of the Greek economy. It will also

pay close attention to the monetary policies utilized by the ECM as a way to spur economic growth and limit the role of speculators.

As an immediate response to the crisis the ECB implemented both inter-governmental mechanisms, the European Financial Stability Facility (EFSF), and supranational initiatives, the European Financial Stabilization Mechanism (EFSM). These policy measures were replaced by the European Stability Mechanism (ESM) in October of 2012. Together the EFSM and the EFSF, along with a 250-billion-euro commitment from the IMF, allowed total funding capacity for the crisis to be around 750-billion-euro (ECB, 2012).

The EFSF was agreed upon in May of 2010 by the Council of the European Union with the objective of providing financial assistance to the nations in the region who were experiencing economic difficulty. The underlying goal of the facility was to safeguard financial stability in the region by raising funds in the capital markets to finance loans for euro area member states. The facility had allotted 440 billion euros of financial aid to the debt-ridden nations. However, to qualify for this rescue package, nations had to agree to very strict austerity measures put forward by the troika. Austerity measures refer to actions that many of these government had to take as a result of pressure from the Troika that forced the nations to reduce their budget deficit using a combination of spending cuts or tax rises. The EFSM, although similar to the EFSF, is different as it provided 60 billion euros in relief backed by the EU's budget and was available to all 27 EU member states (ECB, 2012). The ESM has a maximum lending capacity of 500 billion euro and acts almost as a permanent bailout fund for European nations (ECB, 2012). It is important to note that the ESM was able to get the money it needed by borrowing from the financial markets through the selling of bonds. The largest contributors to the ESM were Eurozone governments led by Germany, France and Italy.

In the case of Greece, the European Union and the IMF approved a 110-billion-euro loan package to the Greek government in May of 2010. However, this loan required sharp spending cuts to reduce the level of Greek public debt along with other provisions. The troika targeted taxation, the public sector, retirement benefits, and the labor market in Greece. In the first year of these austerity measures, taxes were said to increase by around 2.3 billion euros while public sector wages are said to be cut by up to 20 percent (ECB, October 2011). Furthermore, the troika demanded that defense and health spending be cut by 200 and 310 million euros, respectively. It can be said that these cuts will undermine the future human and physical capital of the nation and, thus, undermine the nation's growth potential. However, what many considered to be the nail in the coffin for Greek workers was the fact that monthly pensions above one thousand euros were to be cut by 20 percent, along with social security benefits being cut by around 1.1 billion euros. As we know, the response to these measures was not positive. Riots and strikes hit the country almost immediately and led to widespread political instability and further disrupting economic activity by creating uncertainty. These austerity measures have also been utilized in Portugal, Spain, Italy and Ireland as a policy measure suggested by the troika in order to improve the economic conditions while also being able to tap into the 750-billion-euro war chest they created for relief (ECB, 2012). However, many economists argue that these austerity measures helped to further compound the crisis and not beneficially impact economic growth.

The ECB also decided to implement standard and nonstandard monetary policy decisions. The banks original reaction to the crisis was to adjust interest rates downwards (because of the grim macroeconomic outlook). The result of this was short-term interest rates being close to zero in the months and years following the crisis to allow for favorable financing options. However, the bank quickly realized that this would not be enough and quickly led to the implementation of less

standard policy measures including: lending operations through fixed rate tender procedure with a full allotment, the provision of liquidity maturity and an expansion of set of assets that could potentially serve as collateral that would allow individual nations to receive central bank liquidity. However, the ECB decided to go one step further and implement policies that directly intervened in securities markets with the most notable ones being the Securities Markets Program (SMP) in 2010 and the Outright Monetary Transactions Program (OMT) in 2012 (ECB, 2012).

The objective of the SMP was to conduct interventions within the regions public and private debt securities markets to make sure depth and liquidity in the markets were at stable levels. In other words the program aimed to deal with the malfunctioning securities markets that were being impacted by speculators and traders. It is important to note that this policy greatly differed from that of QE or other large-scale asset purchase programs, as it was not the aim of the bank to prevent long term yields from rising. However, the SMP went against the clear fundamentals of many of the economic policy makers that designed the implementation of the euro. This can be said because many of these policy makers believed in efficient markets, when in reality, prices are driven by the flow of information and will not always work efficiently. Through this program, the ECB was able to signal to the market that they would be buying securities, which in turn, immediately led to a drop in the yield of these bonds. On the opposite side of the coin, the SMP led to further speculation by outside investors and traders. Because there was no guarantee when or what securities the ECB was going to buy, speculators further infiltrated the market trying to figure out in which directions yields would move.

The OMT program was implemented as a replacement to the SMP in September of 2012. This was one of the most controversial policies implemented by the ECB as it was conditionally



attached to the two bailout funds set up in the region (EFSM and EFSM). In other words, for nations to qualify for the OMT program they essentially had to play by the rules set forward to them by the troika. Furthermore, the IMF was directly involved in the design of the country-specific conditionality and monitoring of the program (ECB, September 2012). The program itself allowed the ECB to make purchases for European nation's short-term bonds in the secondary market, with the aim of bringing down market interest rates faced by countries. The size of the program itself is unlimited and helped support the claim put forth by Mario Draghi that he would do whatever it takes to save the euro (Draghi, July 2012). With that being said, the program has yet to be used by any members of the Eurozone because of the fear of complying with either of the EFSM or EFSM policies. Another important caveat of the program is that it does not protect Italy, Spain or Portugal from any spillover effects from the crisis in Greece. A potential solution to the OMT program is the use of quantitative easing as an alternative monetary policy (this will be examined in the solutions sector of the chapter).

Another example of a key policy put in place by the policy makers within the region was the new Fiscal Compact Treaty of 2013. As opposed to many of the previous policies discussed in this chapter that aimed to provide short-term support, the Fiscal Compact Treaty aimed to provide a long-term solution to the fiscal problems in the region. The main talking point of the treaty was that it required that new fiscal principles to be embedded in each country's national legislation with the goal of reducing high public debt levels and maintaining a fiscal balance close to zero. One of the methods policy makers hoped to utilize in attempting to make this happen was by focusing on the structural budget balance of each nation (Lane, 2012). Policy makers thought that a structural budget balance, like the one that was implemented, would encourage governments to save cyclical revenue during periods of economic growth to help protect against

a greater slippage during recessions. To deal with the large amounts of public debt, nations will have to reduce public debt to below 60 percent of GDP (ECB, 2013).

Still, this approach has faced many problems from the beginning including: measurement and surveillance issues. First off, it is challenging for forecasters to differentiate between cyclical and trend fluctuations in output. To deal with this inconsistency, governments must enact a mechanism that requires adjustments if the forecast errors for the structural budget balance continue to rise over several years (Lane, 2012). A second issue that arose was the hope of the policymakers that the fiscal discipline of each nation would be monitored at the domestic level. The belief was that each individual nation would monitor their fiscal balances since it would have greater political legitimacy than external surveillance by other EU organizations (Lane, 2012). The problem with this objective is that it remains unclear if individual nations have the capacity and capability to identify excessive imbalances in an accurate manner or if they are able to deploy policy instruments to deal with these risk factors.

Another major policy that the leaders of the EU chose to implement was the common areawide *Eurobonds* (Lane, 2012). These bonds were implemented with the goal of avoiding the disruptive impact of destabilizing speculative attacks on national sovereign debt markets within individual European nations. By introducing these bonds, policy makers hoped that member states would support them as they are cheaper than the alternatives for reducing default risks (larger bailout funds). Furthermore, countries who are facing serious debt payments would only have to pay the average and, lower, interest rate of all the euro members. The key to this is making sure that countries who are less financially stable do not over borrow. So far there have been relatively positive results, especially in the case of Greece where policy makers have been using *Eurobonds* to scrape together enough funds to meet repayment schedules.

However, this policy can be viewed as too little too late. As examined in the previous chapter, many nations faced major speculative attacks on their bonds as traders and investors were constantly looking for the next domino to fall. By examining the yield curves of these nation's 10Y government bonds we see the sharp rise in yields. This is backed anecdotally by an excerpt from an individual trader who discussed his ability to speculate on these bonds, thus causing their value to drop significantly (Weisbrot, 2015). Although these Eurobonds have proved to be productive in diminishing speculative attacks and allowing countries to pay back their debt on time, they failed to help the nations deal with the initial attacks and rise in yields.

The verdict is still out on whether or not the reforms put in place by the troika will lead to future economic stability in the nation. Although there have been some promising signs in Spain and Ireland, little improvement has been seen in Greece and Italy (it is important to remember that Italy represents a significant share of Euro GDP, as opposed to Greece). What is important to understand in the cases of Spain and Ireland is that they have begun to see relatively stable GDP growth. Furthermore, Spain has begun to reform their labor market and has seen recent improvements. One of the key things the Spanish government did was lower the corporate tax rate to make the nation more appealing to large corporations while also increasing FDI into the nation.

#### **4.3 Learning from other Crises**

It can be said that by examining the East Asian crisis of 1997 there are some important lessons that can be applied to the Eurozone crisis. After examining the crisis, it is clear that many of the nations had similar structural issues that related to their overall economic health. For example, when looking at the case of Indonesia, we see it was a country plagued by structural problems, corruption and an indecisive government (similar to that of Greece). The crises were also similar

in that in many of the cases the financial turmoil in the individual nations was characterized by an increase in the access to easy credit, a rise in overall debt, and a lack of supervision and regulation. In the case of the east Asian crisis, the governments in the region embarked on a restructuring of their domestic financial sector. This was done through shutting down non-viable financial institutions, increasing capital, and strengthening financial institutions that were deemed vital and selling off assets that were not of value in helping the recovery effort (Coeure, 2013). On top of this, the governments of the East Asian nations that were affected by the crisis implemented further institutional and structural reforms. This was done through strengthened regulation and supervision of the financial sector along with further bank governance and market transparency.

It is also important to examine the role that the IMF played in the crisis. However, in the case of the east Asian crisis it is clear that the IMF misunderstood many of the essential differences between the financial problems in these nations and those that they had dealt with in the past (they failed to originally grasp the idea that the crisis and stress on the financial sector had risen because of excessive short-term foreign borrowing by these nations private sectors). The fund was quick to realize that the solution they put forward regarding the role of budget surpluses and higher interest rates further compounded the crisis (Katz, 1999). Instead they placed a heavier emphasis on structural and institutional reforms rather than immediate crisis management measures. With that being said, it is clear that the IMF was not helpful in providing a long-term solution to the crisis in East Asia and much of the responsibilities fell on the domestic governments.

However, there are some clear fundamental differences as to why the crises among the nations are fundamentally different and why the policy measures utilized in the East Asian crisis may not

be applicable to the European crisis. Unlike the case in Asia, the European countries are unable to devalue their currency as a way of creating economic growth through exports. The second difference in the crises is the role that the IMF played. In Asia, the IMF eased up their austerity measures in the region after severe criticism, while in Europe the Troika appears to be relentless up to this point. The result of this, as previously discussed, was domestic governments implementing their own recovering strategies, which in turn proved to be relatively successful.

Another potential crisis that the policymakers of the troika should look at is the case of Argentina, which was able to emerge from their own crisis in 2001-2002 in a relatively robust manor. Furthermore, they also had a very strong export sector that was able to rely greatly on the nation's vast and diverse natural resources. This reliance on exports coupled with the removal of the Argentinian peso from the peg to the U.S. dollar proved to be extremely important in leading the nation out of their crisis. As seen in the east Asia, the role of the IMF in no way helped improve the situation and instead the responsibility fell on the domestic government. In the years leading up to the crisis the IMF also made matters worse with its procyclical recommendations to domestic policymakers in these nations.

There are many reasons why the policy measures established by the Argentinian government are so difficult to emulate in the case of the Eurozone. One of the key reasons being the fact that there was a political overhaul in the nation that led to a new government taking power and implementing their own economic policies. Argentina was also able to rely on its natural resource sector as a way of increasing exports following the devaluation of the peso. Furthermore, Argentina also chose to run a major deficit while playing hardball with its creditors especially those who were foreign and held the majority of the country's debt (they reached a debt restructuring agreement in 2005). This is in sharp contrast to what is happening in European

nations right now where nations are running budget surpluses in order to satisfy their creditors demands. In the case of Argentina, strict foreign exchange controls were implemented during the beginning stages of the crisis. For example, exporters who had revenues greater than 1 million dollars, had to turn the excess to the central bank, while manufactures faced taxes on their exports (IMF, 2003) .

In both of these individual cases, we witness the importance that the role of the domestic governments played in trying to provide both long term and immediate solutions in response to the crises they faced. Although the IMF tried to get their hands dirty and provide their ‘resources’ to the nations involved, the funds’ involvement was not beneficial in providing immediate and long-term stability and growth in the case studies examined. This is something to keep in mind for the policymakers within each of the PIIGS nations. However, what may prove to be a challenge for these nations, is the fact they are not endowed with the same resources or exports and do not have the same ability to change their exchange rate to the overarching economic situation, as seen in the cases of Argentina and east Asia. The result of this is that many nations are being forced into accepting the policies and austerity measures sponsored by the IMF to the ECB and EMU, as seen in the years following the start of the Eurozone crisis.

#### **4.4 Potential Solutions and Criticisms**

There is no doubting or ignoring the severe criticisms surrounding many of the policies established by the troika. As previously mentioned, one of the most criticized policies are the austerity measures that were established. Although many economists agree that some extent of austerity was needed in Greece to be able to reduce the government’s deficit, these same measures were not needed for many of the other countries. In the case of Spain, the crisis arose from the banking sector and the nation was also running a surplus. In other words, Spain

shouldn't have been forced to implement the measures put forward by the troika to have access to the bailout funds it needed.

One idea that is perplexing about the measures established by the troika is the fact that the IMF has had a history of warning against the troubles associated with high taxation (specifically, the disincentive effect it has on the discouragement to work and save) (Stiglitz, 2016). However, in Greece the fund insisted on raising the effective tax rate to a level of 40 percent. Furthermore, they required all Greek firms to pay their taxes ahead of time at the start of the year. The goal of this was to reduce tax evasion, a problem that Greece has had to deal with for decades. This is a fair argument. What doesn't seem to add up, however, is the belief that a country can grow its economy by paying taxes before they have even earned any money during that fiscal year. This policy clearly went against what most economists consider to be a good tax system, one that does not distort the economy any more than is necessary (Stiglitz, 2016).

Another criticism of the policies put in place by the troika is the way they handled the banking crisis in Spain. As banks weakened in the country, they were forced to pay very high interest rates along with a decline in access to credit (these two things led the banks to become almost insolvent). This is supported by the fact that in 2013 approximately 9.4 percent of bank loans were nonperforming in comparison to total gross loans (IMF, 2013). Instead of focusing on implementing policies that would benefit the Spanish banks, policymakers within the troika were more concerned with saving the European banks that lent money to these countries in an effort to save the euro. What is even more telling is the fact that 60 percent of voters in Spain rejected the austerity measures implemented. The result of this was a political revolt, similar to which took place in Greece, calling for the breakup of long established national states and the rise of separatist parties.

Although the troika did try to implement structural reforms, it was clearly not enough. As the crisis continued it became clearer that there was a deep need for a complete overhaul of the European financial sector. The structural reforms implemented by the troika had the opposite effect of their intended purpose, long term economic growth. By looking at the case of Greece in the previous chapter we see that economic growth has been stagnant at best. Still, there are a number of potential solutions to these structural reforms that should be examined.

One of the most important being a common banking union. This union would include common deposit insurance, common supervision and common resolution. For this union to be successful, there must be a focus on making sure that money does not flow from the banking system of weak countries to banks in strong countries through strong supervision and regulation (Stiglitz, 2016). Another important structural reform that should be examined by policymakers is the mutualization of debt. This has already been carried out through the creation of *Eurobonds*. The key to this is making sure that countries do not overborrow through this system. Furthermore, there should be increased incentive on creating a common framework for stability within the region. There are two questions that must be answered in regard to this: how to promote stability of the Eurozone as a whole and how to ensure that all of the countries in the region do well in the long run (Stiglitz, 2016). To do this a few key policy measures need to be implemented. The first is a common fiscal framework. This refers to the development of better budget rules through the creation of a capital budget. This capital budget should aim to distinguish between government spending on consumption goods from government spending on investment, while maintaining constraints on spending that relates to consumption (Stiglitz, 2016). Another important contribution to the development of a common fiscal framework would be the creation of a solidarity fund for stabilization. Because the crisis has engulfed the entire European region, the



creation of such a fund with the help of European wide resources would be greatly beneficial to the region. This fund would create a long-term solution to the underlying problems throughout the region as it would focus on funding unemployment insurance, support active labor market policies and other related social expenditures (Stiglitz, 2016).

This proves to be a nice transition for what is arguably the most important structural reform that will have to take place: the reform of the labor market. From examining the cases of Italy and Greece there is little doubt, that for the policies that were put in place by the ECB to be effective, there has to be a fundamental change with regards to the labor sector in these nations. A specific focus should be placed on a structure that promotes not only full employment, but also solid, long-term economic growth. Although this may not be the fastest method of returning the countries to economic prosperity, it is one that must be put in place. One of the best examples of a nation that has already taken the initiative and adopted new labor reforms in an effort to change the structure within their domestic economy is Spain. However, this needs to take place on a wider scale and one of the best ways to make sure this happens is to change and expand the mandate of the ECB to promote full employment, growth, and economic expansion. Instead of solely worrying about economic indicators such as inflation levels, the ECB should increase their focus on making sure the financial sector is healthy and prosperous

Furthermore, individual nations need to embark down a path to improve their overall labor markets. There have already been some distinct reforms set out by the troika as part of their austerity measures in the seventh austerity package presented to Greece in October of 2012. In the case of Greece and Italy, further emphasis needs to be placed on the idea of labor flexibility. These two countries can be highlighted because their labor forces are dominated by the role of unions. Although unions are not always the problem as they counter the power of monopolies

and oligopolies in certain markets, they contributed greatly to higher wages and generous unemployment benefits in these nations. Some of the ways to increase flexibility within these labor markets is through atypical employment arrangements, wage-setting decentralization (away from unions) and lowering unemployment benefits. It is important to note that atypical employment refers to employment that does not conform to the standard or typical model of full-time, regular employment with a single company or firm over an extended period. The problem associated with these measures is that they could also lead to adverse wage efficiency effects. Implementing these policies is obviously easier said than done as many of the nation's labor markets were built on very different policies and beliefs. A region-wide solution may be difficult to not only monitor but also implement so that each nation shares the same benefits as one another.

For nations seeking to implement structural labor market reform, an examination of the policies that Spain has utilized is critical. In 2012, the nation set forward a program to reform the nations labor market that focused on sector-wide bargaining, improved working conditions and decreasing severance payments for unfair dismissals. Although these policies may have been viewed as unpopular at the time due to austerity policies prompting worker dismissal, lowering severance payments encouraged workers to look for a job and not leave the labor market altogether. Specific policies included cutting lay-off payments from 42 months' pay to 12 months, working to create new jobs to decrease the structural unemployment rate, re-training workers so they can take advantage of new opportunities, and allowing for collective bargaining to take place across several industries.

Another potential solution to the ongoing problems is for EU policy makers to try and develop a deeper level of a fiscal union. This would be done through allowing nations to share tax streams

or spending programs that would separate them from domestic output and GDP. On top of this, if the governments worked together to coordinate fiscal policies in relation to current macroeconomic conditions, the nations that were previously suffering would benefit from the advice of policy makers from other states. The issue that arises with this solution is that it is unlikely that many of the leaders in the countries that are economically stable would be willing to step up to the plate and support these nations. This is a valid argument as it is likely that their constituents do not want to pay for the mistakes of other countries.

One of the most critical and controversial policies that has been used to help deal with the crisis is quantitative easing or QE. QE is a monetary policy tool that allows the ECB to create new electronic money in order to buy back government bonds in struggling nations to keep inflation at sustainable levels while also encouraging banks to pump money into the economy. The new money that has entered the economy through the creation of this electronic cash increases the size of bank reserves. The ideal outcome of this would be, as the bank's reserves increased, more banks would make larger loans (they would buy new assets to replace the prior ones they sold to the central bank).

Having said this, the jury is still out on the role of QE as a successful monetary policy. One of the main reasons for this is the belief that QE leads to reckless financial behavior and provides money to a number of countries that are unable to manage the cash in a way that will lead to long term economic growth.

It is evident that the troika understands the fact that there is no 'one size fits all' approach in addressing each of the individual countries. Although each one is fundamentally related to sovereign debt, their causes are all different and thus require unique strategies. One of the issues that will no doubt be weighing on the minds of policy makers in each of the countries being

examined is the elevated levels of public debt. In order to pay off this debt, there needs to be an increase in economic growth within each nation. The best way to do this in a way that is not artificial is through labor market reforms and tighter fiscal policies (it is important to point out that by introducing tighter fiscal policies this may induce a downward multiplier effect). As labor markets are reformed and productivity and efficiency increases, the ability to start raising money through fiscal policies (such as tax revenue) will start becoming a factor, however it can do so only after a substantial lag in months and year. This is obviously easier said than done, as many of these countries have been operating in labor markets that have not been reformed for decades.

## **Conclusion**

From the case studies in the individual nations of the Eurozone and Argentina, it is clear that the underlying cause of the sovereign debt crises in these countries are not due to the roles of foreign financial institutions. Rather, it is clear that each of the economies had underlying issues and weaknesses that were at the heart of each crisis. In the case of the Eurozone, many of these weaknesses and instabilities were present in these nations' economies for decades prior to the initial crash. All that was needed to exploit them was for the first domino to fall. What is interesting is the fact that those responsible for allowing these nations to adopt the euro as a common currency failed to recognize these structural weaknesses. This negligence coupled with the fact the EU was established for political, not economic reasons, and did not have the necessary institutions and tools in-place to succeed, set the region up for disaster if one of its nations were to fail.

It is important not to discount the role of the U.S. financial crisis in exasperating the crises that unfolded in Europe. Although the Great Recession of 2007 – 2009 was not examined in depth, as it was not a sovereign debt crisis, it played a major role in the health of these nations in the Eurozone and their ability to recover. This was especially the case for Spain, Ireland, and Portugal who relied greatly on short-term global debt markets to help finance many of the government and private sector projects in each country.

As discussed in the thesis it becomes evident that the policies implemented by the IMF did nothing but accelerate and deepen the crises. In the case of East Asian nations, it would have been best for the nations to have implemented their own domestic policies and to not have relied as heavily on the IMF for assistance. For example, when examining the case of Argentina, although they relied on the IMF for help in the initial response to their crisis, the role and

policies promoted by domestic policymakers was what eventually led the nation down a path of long-term economic growth.

That being said, Argentina was an exceptional case in that it was able to float its exchange rate while also being able to utilize its strong export sector, as they were heavily endowed with vast natural resources. In the case of the Eurozone, many of the nations are less fortunate in that they do not share the same ability to rely on their commodity sector to spur domestic economic growth. Instead, they have been faced with the task of not only relying on the ECB and EMU for guidance, but also having to try and find alternative ways to generate long-term growth through structural reforms. As discussed, these reforms are not only limited to reducing the overall level of debt, but also towards improving the flexibility of the labor market in each nation. Although these reforms may not be the quick-fix solution that many domestic policymakers and politicians are hoping for, they are necessary for providing a long-term solution to the region's problems.

This thesis opens the door for further research to be examined by future students and economists who are interested in the topic of sovereign debt crises. One of the ways for this to be done is to place a focus on the role of institutions in each of the case studies being examined. In other words, now that it is clearer that the leading cause for these crises was underlying structural and fundamental economic weaknesses, a focus can be placed on solely looking at the role of financial institutions and how they have impacted the recovery of these nations. Another interesting and potential course of study to follow up on would be to examine, in more detail, the movement of government bonds and the movement of their yield curves in the months leading up to the crisis and years following it. If this were to be done, a specific emphasis should be placed on determining if there is any pattern between the institutions and traders that hold the bonds and the way they were traded.

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