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SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

THE COMPARISON OF THE US AND THE EU RESPONSES TO THE 2008 CRISIS

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LIST OF ABBREVIATIONS

CRA – Community Reinvestment Act

ECB – European Central Bank

EU – European Union

FDIC – Federal Depository Insurance Corporation

GDP – Gross Domestic Product

HUD – Housing and Urban Development

SIV – Structured Investment Vehicle

TARP – Troubled Asset Relief Program

US – United States

INTRODUCTION

The following master thesis will look at the responses to the 2008 financial crisis in the United States (hereafter, US) and the European Union (hereafter, EU). Given that both of these economic powerhouses constitute the foundation of the world economy, their policy making usually serves as a blueprint for others. The purpose of the thesis is to serve as a guide for future policy decisions. The thesis will focus on two key aspects of economic policy in the post-crisis period.

Firstly, it will assess why the US recovered faster from the crisis than the EU. A comparison of the policies enacted by the US vis-à-vis the EU will be analyzed to assess the discrepancy in recovery (Schnabl & Stratmann, 2019).

Secondly, regardless of the faster recovery, the thesis will assess whether the US or the EU fully addressed the real issues behind the crisis. The thesis will demonstrate that neither of the two responded correctly and that the policies of both were largely harmful. The discussion will be to what extent was the US correct in its policy response which allowed it to recover faster.

In order to fully understand why certain policy was appropriate or not, it is important to address the real causes of the crisis and look at the events leading up to the crisis. The origins of the crisis in both the US and the EU differ, but both are centered around government intervention. The crisis in the US largely stemmed from government intervention in the housing sector, whereas the EU's problems were mostly due to government debt concentrated in several peripheral countries (Norberg, 2009).

To illustrate the impact that government had, the following is a brief overview of several policies of both the US and the EU. It is impossible to assess the response to the crisis unless the causes are entirely known. The thesis will argue that the causes of the crisis were the following:

- During the 1990s, the US government aggressively pursued a policy of home ownership for members of the lower class. This was done through the expansion of the Community Reinvestment Act (hereafter, CRA), several government-sponsored enterprises such as the Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association, as well as numerous other legislative pieces. The government forced banks to issue subprime mortgages to individuals with low credit ratings which they would sell to government-sponsored enterprises and get their money back instantly. This would allow them to issue more mortgages (Sowell, 2009).

- The peripheral countries of Portugal, Italy and Greece all had enormous welfare states with large amounts of government employees and expensive government benefits. In order to finance many of these policies, these governments had to borrow at alarming rates. Ireland, on the other hand, only saw an increase in debt levels when it needed to bailout its banking sector. It was a fairly liberal and competitive economy. Spain also did not have as big of a welfare state. Its problems largely came due to the housing bubble, which the government helped to create to a certain extent (BBC, 2012).

– Following the technology bubble crash of 2001 and the September 11 terrorist attacks of the same year, the Federal Reserve cut interest rates to historic lows of 1 % in order to stimulate the economy (Woods Jr., 2009, 79–82). This made borrowing money much more affordable which allowed the aforementioned homeownership campaign to flourish as mortgages became much cheaper. Furthermore, many of the mortgages issued were issued with variable rates, meaning that they were tied to rates such as the federal funds rate. When the Federal Reserve deemed the economy to be overheating and raised interest rates to 4.25 %, a 3.25 percentage point increase, people with the aforementioned variable rate policies began to default (La Monica, 2005).

– The Euro suffers from structural problems that the US Dollar does not have. It is spread over a heterogeneous area with no shared culture and no shared economic system. This makes labor mobility as well as the overall coordination of monetary policy difficult (Friedman, 1997).

On the other hand, the following is a list of the policies enacted as a response to the crisis. As evident, no policy addressed the above-listed causes of the crisis.

– The United States pursued a program of bailouts called the Troubled Asset Relief Program (hereafter, TARP), as well as fostering the sale of distressed institutions such as Merrill Lynch (Palumbo, 2015). Bailouts of banks were present in the EU as well, but on national levels. The most notable case was the bailout of the Irish banking system. The EU initiated a series of bailouts of entire economies, most notably in Greece, Ireland, Portugal and other countries (Bagus, 2010).

– Several EU countries created stimulus packages for infrastructure development and similar projects. The United States created a stimulus package called the American Recovery and Reinvestment Act of 2009 worth $787 billion (Sowell, 2009).

– The response of the United States mostly centered on stimulus, whereas several EU countries, most notably Greece and Italy, instituted a series of austerity measures aimed at curbing government spending and in order to create more stability in the future (Loren Friedman, 2010).

– Although the initial response of the European Central Bank (hereafter, ECB) was contractionary, in the end both the ECB and the Federal Reserve responded similarly (Look, 2018). Both central banks cut interest rates in order to stimulate the economy via an expansionary monetary policy.

The responses did not address the issue of home ownership advocacy in the US. Although the EU has taken austerity measures, they are countered by the monetary policy of the ECB. The monetary response of the US has been identical to its response to the technology bubble crash, which greatly helped expand the housing bubble in the first place. By fostering an environment of such monetary expansion, the US has set the stage for a potential new economic downturn in the future.

The thesis will employ a historical analysis and historical overview of events while providing qualitative commentary, rather than use quantitative models. The reason is that such an analysis will be more sufficient for assessing these events as they involve a mixture of politics, economics and history. The thesis will make economic arguments from an Austrian Economics School point of view, which focuses on logic and deduction to explain economic phenomena, rather than Keynesian quantitative models that involve statistics and mathematics (Callahan, 2011).

A total of four research questions will be checked to see whether they are true. There will be a research question to uncover the cause of the crisis, followed by two research questions dealing with the responses in the US and in the EU, respectively, and finally one dealing with the faster recovery of the US vis-à-vis the EU. The research questions are as follows:

- Was the crisis caused due to government actions, both in the US and the EU?
- Did the Keynesian response give negative results in the US?
- Did the contrary responses of monetary and fiscal policy give negative results in the EU?
- Did the US recover faster than the EU due to faster liquidity injections?

1 OVERVIEW OF THE CRISIS IN THE UNITED STATES

The following will be an overview of the pre-crisis period in the United States. It will look at the specific policies which fostered the housing bubble and the monetary policy of the Federal Reserve. The chapter will conclude that government intervention in the economy fostered the creation of the housing bubble as it forced banks to issue loans to individuals who were not creditworthy. These mortgages were later bought by government-sponsored enterprises. Such a policy allowed banks to have cash on hand to issue more loans, allowing the cycle to repeat itself. All of this was exacerbated by the low-interest rate policies of the Federal Reserve (Sowell, 2009).

1.1 Legislative Overview

The following list of laws and regulations up until the crisis is not exhaustive, mainly because there were policies such as slum-clearance which affected the housing market, but did not necessarily have an impact on the creation of the housing bubble itself. Therefore, the chapter is not purely a list of all legislative pieces aimed at housing, but rather, legislative pieces that had a direct or indirect impact on the formation of the housing bubble.

Table 1: Overview of legislative acts under the Presidents of the United States

President (term duration)	**Legislation**
Franklin D. Roosevelt (1933–1945)	– National Housing Act of 1934 created the Federal Housing Administration and the Federal Savings and Loan Insurance Corporation. – Amendments to the National Housing Act in 1938 created the Federal National Mortgage Association, popularly referred to as Fannie Mae.
Lyndon B. Johnson (1963–1969)	– The United States Department of Housing and Urban Development (hereafter, HUD) was created as Cabinet level position in 1965. – The Housing and Urban. Development Act of 1968 re-charted Fannie Mae as well as created the Government National Mortgage Association, popularly referred to as Ginnie Mae.
Richard Nixon (1969–1974)	– In 1971, the Federal Home Loan Mortgage Corporation, commonly known as Freddie Mac, was created to end Fannie Mae's monopoly.
Gerard Ford (1974–1977)	– The Equal Credit Opportunity Act was signed in 1974 which forbid discriminatory lending practices against the basis of sex, religion, national identity and other factors.
Jimmy Carter (1977–1981)	– The Community Reinvestment Act (CRA) was passed in 1977 with the aim of fostering lending to minorities.
Ronald Reagan (1981–1989)	– In 1986, tax deductions for mortgages were introduced, while abolished for other forms of debt.

Table continues

Table 1: Overview of legislative acts under the Presidents of the United States (continued)

Ronald Reagan (1981–1989)	– Deregulation of the savings and loan industry led to excessive risk taking due to the presence of the Federal Depository Insurance Corporation (hereafter, FDIC).
George Bush (1989–1993)	– The Financial Institutions Reform, Recovery, and Enforcement Act of 1989 was signed. It required federal agencies to give CRA ratings and also encouraged Fannie and Freddie to support more mortgages for low-income individuals. – The Federal Reserve Bank of Boston published a report that resurged support for the CRA. – The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 was introduced, setting official targets for Fannie and Freddie.
Bill Clinton (1993–2001)	– Amendments to the CRA regulation were introduced in 1995. – The Taxpayer Relief Act of 1997 encouraged purchases of more expensive homes as well as a second home. – The Gramm-Leach-Bliley Act of 1999 allowed investment banking and commercial banking to function under the same roof. – HUD created additional targets for Fannie Mae and Freddie Mac.
George W. Bush (2001–2009)	– Sought to provide home ownership to at least 5.5 million people by 2010. – The American Dream Downpayment Assistance Act of 2003 sough to provide financial assistance to push home ownership.

Source: Kagan (2018a); Norberg (2009); Sowell (2009); Woods Jr. (2009); Wickell (2018).

1.1.1 The New Deal

Although the housing bubble is a 21st century problem, a great deal of the legislation that fostered its creation stems from several decades ago. President Franklin D. Roosevelt initiated the New Deal as a response to the stock market crash of 1929 and the subsequent economic downturn, the Great Depression, which followed it. The set of laws that comprised the New Deal were aimed at increasing government intervention in the economy and as such housing was also affected. The National Housing Act of 1934 was passed with the aim of making housing and home mortgages more affordable. The act also created the Federal Housing Administration, as well as the Federal Savings and Loan Insurance Corporation. The role of the Federal Housing Administration was to foster the improvement of housing standards. It set the rules for construction and underwriting, while at the same time insuring loans made by banks for building houses. On the other hand, the Federal Savings and Loan Insurance Corporation was focused on administrating deposit insurance for savings and loan institutions, which are financial institutions that focus primarily on issuing mortgages (Kagan, 2018a).

Another key aspect of the New Deal which had a direct influence on the formation of the housing bubble was the creation of a secondary mortgage market by the government. In order to have constant funds readily available for making new mortgage loans the aforementioned National Housing Act was amended in 1938 in order to create the Federal National Mortgage Association, popularly referred to as Fannie Mae. Its purpose was to purchase mortgages directly from banks and securitize them, thereby allowing banks to have funds readily available to issue new mortgages (Ginnie Mae, no date).

Beginning in the 1930s, the United States government expanded control over rating agencies. In 1936, the Office of the Comptroller of the Currency banned banks from investing in speculative investment securities. These speculative securities were identified by recognizable rating agencies. Government intervention in the rating agencies industry would be expanded later and would have a direct impact on cementing the monopoly of the big three rating agencies. The big three rating agencies were Standard and Poor's, Fitch and Moody’s (White, 2009).

Although these policies seem irrelevant at first as they were close to seventy years old at the time of the housing bubble, the Federal Housing Administration would go on to play a major role as part of a bigger cabinet program. On the other hand, Fannie Mae would be at the center of the housing bubble due to its role in the secondary market for mortgages.

1.1.2 The Great Society

President Lyndon B. Johnson launched a series of programs that have been dubbed The Great Society. These included the expansion of medical care, ending racial injustice and an overall attempt to end poverty in America. Just like the New Deal, these policies also greatly affected housing (Johnson, 1983, 638–640). In 1965, the United States Department of Housing and Urban Development was created as a Cabinet department in the executive branch of the government. Its goal was to focus on developing policies pertaining to housing. The aforementioned Federal Housing Administration of the New Deal became part of HUD (HUD, no date). Furthermore, the Housing and Urban Development Act was passed in 1968 which re-chartered Fannie Mae. However, it converted it into a government-sponsored enterprise. It also split the Government National Mortgage Association, popularly referred to as Ginnie Mae, from it (Ginnie Mae, no date).

1.1.3 The 1970s and the 1980s

In order to end Fannie Mae's monopoly on the second-hand mortgage market, the Federal Home Loan Mortgage Corporation, popularly referred to as Freddie Mac, was introduced in 1971 (Pickert, 2008). The aforementioned HUD presided over both Fannie and Freddie and thus indirectly over home owners and home buyers. What made institution such as Fannie and Freddie problematic is the fact that they were neither fully privately owned nor fully publicly owned. As government-sponsored enterprises, they were privately owned but implicitly backed by a government guarantee. This created a very large incentive issue. This is due to the fact that private owners would take risk and profit the additional money such risk would earn them. At the same time, if the risk were to be too large, the government would step in with a bailout. Both Fannie Mae and Freddie Mac would go on to play a crucial role in the formation of the housing bubble (Sowell, 2009, 15).

In 1974, the Equal Credit Opportunity Act was enacted. It forbade creditors to discriminate against race, gender, religion, nationality, marital status, age as well as other factors (Kreiswirth & Tabor, 2016). At first glance, such legislation might seem positive, however, it creates further costs for financial institutions as they are forced to prove compliance. Furthermore, certain factors which may be deemed discriminatory by such an act could be used to filter non-creditworthy applicants and result in fewer write-offs for the bank. Three years after this act was signed, perhaps the most important legislative piece was passed. In 1977, Congress passed the Community Reinvestment Act (CRA) with the aim of increasing home ownership amongst low-income individuals in the United States, whom were mostly minorities. The act assessed whether financial institutions were issuing enough mortgages to such groups. The act forced banks to make loans to individuals to whom they would not have lent money to otherwise, had it not been mandated by the Government (Woods Jr., 2009, 31). The act was introduced with the supposed belief that banks were actively engaging in discriminatory lending practices and because of this banks were forced to engage in a form of "affirmative lending". Despite the fact that CRA did not initially gain much prominence, it would be resurrected in the 1990s following a report with similar findings on racial injustice in mortgage issuances (Howard, 2000).

In 1975, the Securities and Exchange Commission cemented the monopoly of the big three rating agencies by requiring that the minimum reserve requirement of broker-dealers be based on the riskiness of their bond portfolios. An issue arose with the fact that a broker-dealer could approach a rating agency and pay a premium to get an AAA rating, despite their portfolio being loaded with high-yield bonds. As a result, the Securities and Exchange Commission created Nationally Recognized Statistical Rating Organizations, which were select few agencies whose ratings the Securities and Exchange Commission endorsed. Despite having designated four additional agencies as Nationally Recognized Statistical Rating Organizations, a series of mergers in the 1990s reduced the number to the contemporary big three. Furthermore, as financial institutions needed rating agencies to survive, the business model on which the agencies functioned was changed from an "investor pays" model of the early 20th century to the "issuer pays" model. This allowed for a serious conflict of interest to occur given the profit incentives of an agency (White, 2009).

Furthermore, in 1986, tax deductions for mortgage payments were introduced, while tax deductions for other loans such as auto and credit card ones were abolished. Not only did such an act push up the demand for housing, but it also increased home loans overall, regardless of their intended use. For example, as late as 1994, close to two thirds of all home loans were used to pay down other debts, such as auto and credit card ones. It was precisely these same loans that were no longer tax deductible (Norberg, 2009, 5).

The most significant economic downturn of the 1980s was the savings and loan crisis. As aforementioned, savings and loans institutions were a crucial player in the mortgage market. During the 1980s, Ronald Reagan's administration loosened restrictions on savings and loan institutions. However, the Federal Depository Insurance Corporation remained in place and as such, any losses incurred by savings and loan institutions would have been covered by the FDIC. Deregulating the savings and loan industry and thereby letting them make riskier investments was the only way to stop the industry from going bankrupt. Such deregulation, accompanied by a safety net from the government, eventually led to a serious economic downturn that would last from 1985 to 1991. Overall, the deregulatory measures taken by Ronald Reagan were welcoming, however, the incentives given by the FDIC created a serious conflict of interests (Woods Jr., 2009, 61).

The savings and loan crisis is incredibly important due to the fact that it had a great impact on housing, as construction dropped greatly. For example, during 1986, 1.8 million housing units were created, whereas five years afterwards, by 1991, only around 1 million homes were started (Diamond Jr. & Lea, 1992). Furthermore, in 1993, the overall number of banks fell below the number of banks during the height of the Great Depression for the first time in a century (Ferguson, 2009). In order to boost the housing market, the government enacted several legislative pieces and regulatory bodies to aid in recovery. In addition to the already-present political sentiments regarding minorities and housing, this would have serious effects on the formation of the housing bubble. Namely, the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 was introduced, creating the Resolution Trust

Corporation. The Resolution Trust Corporation closed hundreds of insolvent savings and loan institutions. This legislation also abolished the Federal Savings and Loan Insurance Corporation. Perhaps the most important aspect of this legislative piece was the fact that more responsibility was given to Fannie Mae and Freddie Mac to support the issuance of mortgages to low-income families. These low-income families would otherwise fail to obtain a mortgage in the open market without the help of the government. In addition, regulatory agencies were required to rate financial institutions based on how well they were following CRA guidelines. Federal agencies were required to publicly rate financial institutions on a four-tiered scale, thereby further fostering lending to individuals who would not get a mortgage in an open market (Kagan, 2018b).

1.1.4 The 1990s

The discussion hitherto had focused on some of the historical aspects of legislation which would go on to have an impact on the formation of the housing bubble. The political push for home ownership that would culminate in the formation of housing bubble itself began in the 1990s and reached its climax in the 2000s.

As aforementioned, the CRA did not gain much notoriety initially. However, things changed when in 1992, the Federal Reserve Bank of Boston issued a report claiming minorities were getting mortgage loans at lower rates than white applicants. This re-affirmed the sentiment that was behind the creation of the CRA in the first place. The Federal Reserve Bank of Boston proceeded to issue a manual instructing how banks could end this racial injustice. None of the rules that the manual contained were focused on risk or profit, the former rising for the bank if extending loans to non-creditworthy individuals, with the latter decreasing due to larger defaults. At one point the manual stated that CRA loans do not fit into the standard credit score framework and as such cannot be viewed in the same risk and profit manner (Woods Jr., 2009, 17–18). There are several problems with this report. Firstly, even if it were true that minorities were rejected more often than whites due to racism or other injustices, despite having a good-enough credit score, then by all laws of economics, a financial institution would have taken advantage of this plain arbitrage opportunity. Secondly, empirical mortgage data shows that whites are also discriminated against, as mortgage applicants of Asian descent have the highest approval rating (Sowell, 2010, 156). The social aspects that cause the disparities in mortgage applications in such a free and competitive economy as the United States are a complicated topic itself. Racial and ethnic groups have varied since the founding of America in terms of their attitude towards work, leisure, education and other factors. Such differing attitudes are naturally reflected in one's credit rating as well (Sowell, 1981).

The Federal Housing Enterprises Financial Safety and Soundness Act was passed in 1992 which gave even more power to Fannie Mae and Freddie Mac (Jackson, 2006). This legislation allowed HUD secretary Henry Cisneros to set a target for Fannie Mae and Freddie

Mac. It required 42 % of all mortgages traded by Fannie Mae and Freddie Mac to go to households with low income. Cisneros' successor Andre Cuomo raised the bar eight percentage points to 50 % in 1999. President George W. Bush subsequently raised it to 58 % (Norberg, 2009, 29–37).

To solve the issue of limited money for mortgages, the government sought to have banks sell their mortgages to institutions such as Fannie Mae and Freddie Mac. They further pooled several mortgages together and sold them as a standardized instrument on the market. These instruments were often referred to as collateralized debt obligations or asset-backed securities. The investor buying such an instrument gets a share of a pool of income that is combined of mortgages of different quality, thereby diversifying the overall risk he is exposed to (Woods Jr., 2009, 12). In addition, both Fannie and Freddie guaranteed investors repayment of interest and principal in case the original borrower defaulted on their mortgage, for which they charged a premium (Norberg, 2009, 25–26). By having such enterprises purchase 30-year mortgages, banks can essentially re-lend again as they do not have to wait thirty years to get their money back. As the purpose of the entire government scheme for housing was more home ownership, this eventually created a vicious cycle (Sowell, 2009, 15).

The CRA regulation was tightened in 1995, which led to more standardized compliance on whether banks were fulfilling their requirements of lending to low income individuals. One such metric that was observed by regulators was whether banks were lending enough to individuals earning 80 % less than the national median income. If banks failed to comply, they would be prevented from expanding their operations, whether in their home state or in other states (Norberg, 2009, 27–28). From an economic point of view, the chances of someone repaying a mortgage despite earning 80 % less than the national median income are very slim. Homes are considered a luxury and it is the case in all societies that they are purchased by individuals or couples once they have settled down. Settling down in most cases also means having an income that is above the national median. Therefore, from a purely economic point of view, such regulation greatly stifled a bank's lending abilities as most individuals qualifying for mortgages under this new legislation had much higher chances of defaulting. However, this issue was solved by the second-hand mortgage market, which was dominated by Fannie Mae and Freddie Mac.

Furthermore, the Taxpayer Relief Act of 1997 encouraged the purchase of more expensive homes, as well as a second home. This was due to the exclusion from capital gains tax in the case of a sale of a home. The amount was $500,000 for married couples and $250,000 for single people, available every two years. This further increased demand for housing (Norberg, 2009, 6).

In July of 1999, HUD secretary Andrew Cuomo announced an action to provide $2.4 trillion in mortgage loans to 28.1 million families. Although Andrew Cuomo did not specify where the money was going to come from, the government can either tax, print or borrow in order to raise that amount of capital. All three measures translate into bad economic policy as they hinder economic growth (HUD, 1999). Later that same year, there was a regulatory revolution with the end of the Glass-Steagall Act, which banned investment banking and commercial banking from operating under the same roof. The act that ended this piece of legislative history was the Gramm-Leach-Bliley Act of 1999. However, the push for home ownership was so strong that even such deregulation came with strings attached. Namely, the government excluded banks that were not fulfilling the desired goals in terms of lending to low-income individuals, as demanded by the CRA, the Federal Reserve Bank of Boston and a myriad of other government agencies (Sowell, 2009, 74). That same year, Fannie Mae also lowered credit requirements to boost mortgages to low-income individuals even further (Holmes, 1999).

1.1.5 The 2000s

Despite the bursting of the technology bubble in the early 2000s, the push for home ownership was so strong that the sector was barely affected by the economic downturn. Namely, housing prices rose 8.8 % from August 2000 to August 2001 (Norberg, 2009, 6). Nonetheless, the political push for home ownership continued well into the new millennium.

In March of 2000, HUD issued several goals for Fannie and Freddie that they should realize in the period from 2001 until 2003. Namely, at least 50 % of houses financed by each government-sponsored enterprise should be for low-income individuals, whilst 20 % for very low-income individuals. Furthermore, at least 31 % of all dwelling units financed should be in specific underserved areas (HUD, 2001).

Furthermore, later that same year, the Commodity Futures Modernization Act was passed. The act, amongst other things, deregulated the financial industry and allowed credit default swaps to be traded by investment banks, hedge funds and insurance companies (Chen, 2018). It was stated that the act had an impact in the eventual collapse of the insurance company AIG (Davidson, 2008). Although it is without a doubt that exposure to credit default swaps was their eventual downfall, it was not because there was not enough oversight over this market nor the fact that credit default swaps, as financial instruments, were inherently unsound. The problem was that credit default swaps were sold for mortgage-backed securities and as evident so far throughout this chapter, it was the government that was responsible for creating a bubble for that underlying security.

In 2002, President George W. Bush continued the political push for home ownership. He set out the goal of increasing the amount of minority home owners by at least 5.5 million by 2010. He aimed to achieve this via tax credits, subsidies and by giving $440 billion to various organizations that fostered community development (CNN, 2002). Furthermore, the next year, president Bush signed the American Dream Downpayment Assistance Act with the aim of helping forty thousand families a year by providing a grant of $10,000 or 6 % of the home's total value. The act also sought to lower closing costs (Wickell, 2018).

Between 2004 and 2006, Fannie Mae and Freddie Mac purchased $434 billion in securities backed by subprime loans and thereby fostered a new market. Firms such as Lehman Brothers, Citibank and Merrill Lynch hired experts in the field in order to enter the market as well (Leonnig, 2008). For example, in 2006, Merrill Lynch created the most collateralized debt obligations in the world. The amount of risk Merrill Lynch was taking forced the insurance company AIG to state that they would stop insuring Merrill Lynch (Norberg, 2009, 56–58).

Many of the problems were exacerbated by the shadow banking sector which was created as a response to the Basel accords that made banking under normal conditions more expensive. The Basel accords created a price list for risk-taking and banks sought to take risks which were the cheapest for them in terms of capital. They did this by creating a structured investment vehicle (hereafter, SIV), which is essentially a special company controlled by the bank. The SIV makes investments rather than the bank. The SIV can also borrow from the market, but if not able to, could always be financed by its mother company. Because it is the SIV which holds the risky investments and not the bank, it is not required to hold as much capital to cover those investments. This way the SIV saves millions and even billions when investments are made on a large scale (Norberg, 2009, 52).

It was not only low-income individuals who were fueling the demand for housing, speculators also played a role in the crisis. The fact that the crisis is dubbed as a subprime mortgage crisis obscures the whole picture of the actions of all the players in the markets. Naturally, as lending standards loosened for low-income earners, the standards loosened even further for prime borrowers. This led to an array of speculators buying up property housing and attempting to sell them at a profit as housing prices surged due to the increased demand. Foreclosures were highly susceptible to movements in housing prices and as such both groups were affected. For example, a 1.6 % drop in housing prices in late 2006 caused foreclosures to increase by 43 % overall. From 2006 to 2007, the increase in foreclosures started was higher for prime borrowers than subprime ones, although the absolute numbers were still much higher for subprime borrowers (Woods Jr., 2009, 22–23).

A common problem during the governmental push for housing was that low-income individuals often failed to meet the prerequisites for a mortgage. Mortgages require a certain down payment, proof that an individual will have future income to pay off his mortgage and a few other things to ensure the bank that they are lending to a creditworthy individual. All such problems were solved with financial innovation in the lending sector, which introduced adjustable-rate mortgages, low or no down payments, interest-only mortgages and a myriad of other new ways of financing a mortgage (Sowell, 2009, 37–50).

Another issue that is pertinent to this discussion is the size of government deficit spending during the presidency of George W. Bush. All of the aforementioned government agencies and programs related to housing had to be financed somehow. Furthermore, the Bush administration enacted expansions of other government programs which were unrelated to housing. One such example was the 2003 Medicare Modernization Act which further increased government spending on healthcare. In addition, the US declared war on Iraq and Afghanistan as a result of the 9/11 terrorist attacks which further exacerbated the issue of government spending. The Bush administration managed to turn a $127 billion surplus into a $158 billion deficit by George W. Bush’s second year in office. Furthermore, despite promises of enormous tax cuts of over $1 trillion, no such cuts were proposed for government spending (Norberg, 2009, 19).

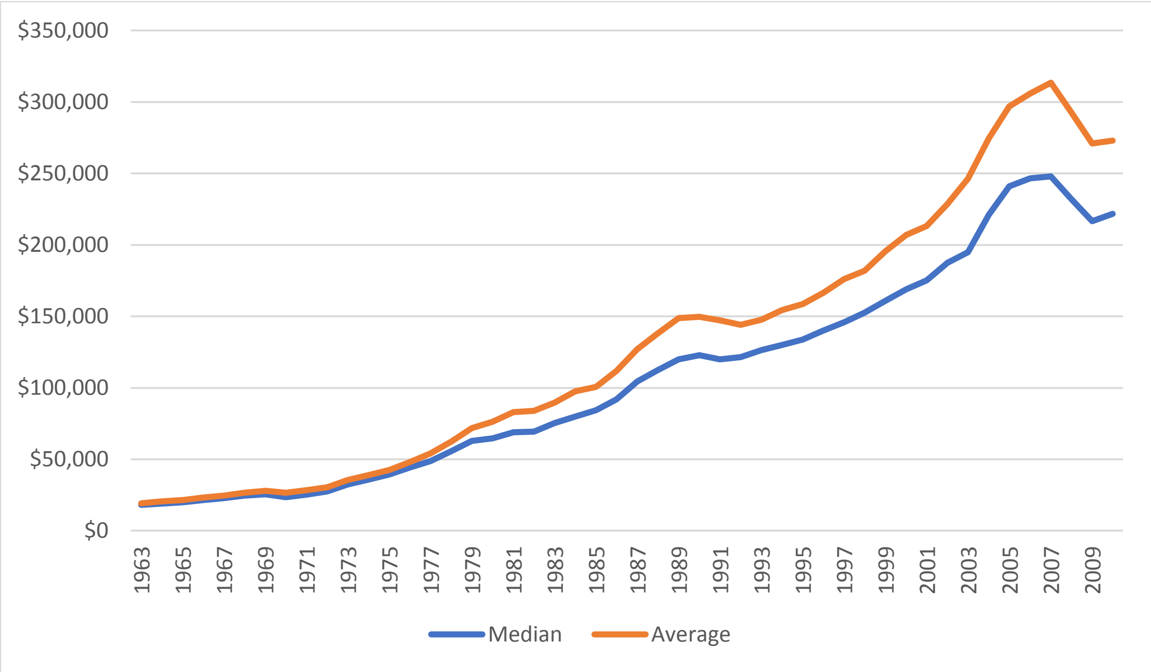
The dangers that Fannie and Freddie posed were expressed by several government officials, but largely ignored. For example, Armando Falcon Jr. of the Office of Federal Housing Enterprise Oversight, an agency whose job was it to monitor Fannie and Freddie, issued a report warning that the risks undertaken by the agencies would lead them to insolvency. Falcon Jr. was fired the same day he published his report. He was reinstated after a scandal exposed some of the dubious accounting practices conducted by the two enterprises, re-affirming sceptics’ concerns regarding the two enterprises (Norberg, 2009, 36–56). Similar concerns were expressed by Secretary of Treasury John W. Snow in 2003, as he stated that additional oversight over Fannie and Freddie was needed (Sowell, 2009, 84). An attempt to provide further oversight over the government-sponsored enterprises by creating a new agency within the Department of the Treasury was blocked by Congress (Labaton, 2003).

1.1.6 Summary

There is a myriad of other instances of government pushing to increase mortgages and homeownership amongst the lower classes of society, but the bulk of it rests on the Community Reinvestment Act and what succeeded it. The 1990s saw a resurgence in the political push for home ownership that started with the Community Reinvestment Act.

As evidenced, it was government that sought to push banks into the risky field of subprime mortgages, rather than banks entering this market themselves. It is questionable whether banks would have entered the market themselves given the credit profiles of the individuals that banks were forced to lend to by the government.

Figure 1: Median and average home prices in the US (1963–2010)



Source: U.S. Census Bureau (no date.).

1.2 The Actions of the Federal Reserve

The Federal Reserve's discretionary monetary policy is aimed at soothing economic cycles. However, it has usually made matters worse. The chapter will argue that the actions of the Federal Reserve contributed to the housing bubble and its final crash.

1.2.1 Monetary Policy During the 1990s

Following the mild economic downturn in the beginning of the 1990s, the US economy seemed to be recovering and by 1994, the Federal Reserve was raising interest rates to halt a potential boom. The federal funds rate in September 1994 was 4.73 %, whereas in January of 1995 it was 5.53 %. However, economic distress reemerged with the Mexican crisis and the subsequent Japanese crisis. Not wanting to repeat the bailouts that occurred during the Mexican peso crisis, the governments of Germany and the US sought to subsidize purchases of Japanese goods and to reverse the exchange rate in favor of a strong Yen. Such an action would require an increase in liquidity, which had to go somewhere. This time the liquidity went to the stock market. As the federal funds rate was beginning to decrease, there was an increase in the NASDAQ Composite, which crossed the 1000-point mark for the first time in history. The federal funds rate in June of 1995 was 6 % with the NASDAQ standing at 933, while in April of 1996 it was 5.22 % with the NASDAQ standing at 1190 points. This coincided with a general awareness of the powers of the internet, as some of the more powerful technology companies, such as the Netscape browser, were looking to do an initial public offering. When they did go public, the stock increased over 100 % on the first day (Callahan & Garrison, 2003). There is a myriad of other companies that went public that had even higher first-day returns, such as Linux of 697.5 %, TheGlobe.com of 606 %, Foundry Networks of 525 % and more(Krantz & Johnson, 2014, 318).

1.2.2 The Bursting of the Technology Bubble

The NASDAQ rose at an alarming pace, reaching almost 2200 points in January of 1999. In order to stop the economy from overheating, the federal funds rate was raised six times from June 1999 to May 2000. Unfortunately, despite attempts to cool down the economy, such a stock market frenzy on the NASDAQ had already left an economic mark, as it collapsed at the turn of the millennium followed by a mild recession. The NASDAQ Composite fell from 3966 in June of 2000 to 2471 in December of the same year and by September of 2001 it was down to 1498 (Callahan & Garrison, 2003). In addition to the crash, the United States was struck by the September 11 terrorist attacks. This the worst terrorist attack on US soil, which had a death toll of more than 3000. Such a macroeconomic shock greatly affected the market, as the New York Stock Exchange dropped 14 % the first day it opened after the attacks (Norberg, 2009, 3).

As a response to these two economic shocks, Federal Reserve Chairman Alan Greenspan decided to cut rates to 1 % starting in 2001 in order to stimulate the economy. Expansionary policy was pursued by Greenspan in the past. He was praised for saving the United States from several crises by using the same policy (Norberg, 2009, 1–2). After eleven federal funds rate cuts, the federal funds rate was 1 % from June 2003 to June 2004 (Woods Jr., 2009, 79–82).

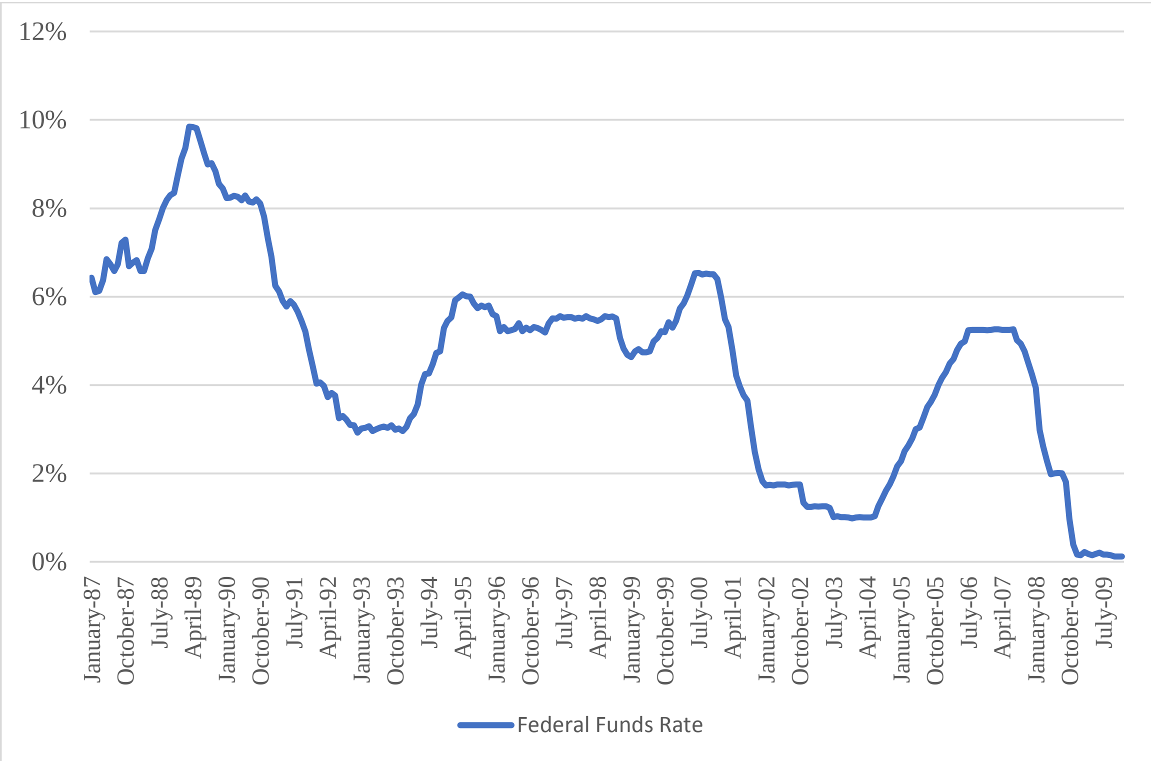
1.2.3 Monetary Policy During the 2000s

Due to the federal funds rate being so low, most individuals were encouraged by Greenspan himself to take adjustable-rate mortgage loans as opposed to the traditional fixed rate mortgage rates (Woods Jr., 2009, 22). A Federal Reserve report at the time indicated that Americans could save well into the tens of thousands if they opted for an adjustable-rate mortgage, which allowed interest rates on their mortgages to move freely. Trusting the report and given the appealing conditions of paying an adjustable-rate mortgage at such a low federal funds rate, Americans began to take out adjustable-rate mortgages. In 2004, a report revealed that the number of adjustable-rate mortgages soared from 5 % to 40 % in a single year (Norberg, 2009, 7).

However, problems began to occur when the Federal Reserve began increasing the federal funds rate as it witnessed the emergence of a new bubble. The federal funds rate was 4.25 % by the end of 2005, having been raised a quarter of a point for each of the thirteen Federal Reserve meetings held since June 2004 (La Monica, 2005). People began to miss mortgage payments as their monthly burdens had been increased by 3.25 percentage points in a little over a year, with many defaulting on their mortgages due to the adjustable-rates that they were encouraged by the government to undertake. In addition, many of the individuals who qualified for mortgages had little income, let alone savings to fall back on. This further hampered their situation and ability to save their homes from foreclosure.

As Alan Greenspan was at the helm of the Federal Reserve during the turbulent period which led to the crisis, it is perhaps most ideal to illustrate the federal funds rate from 1987, when he took office, to 2009. Many of the events discussed are highly visible on Figure 2 as the rate fluctuates several times.

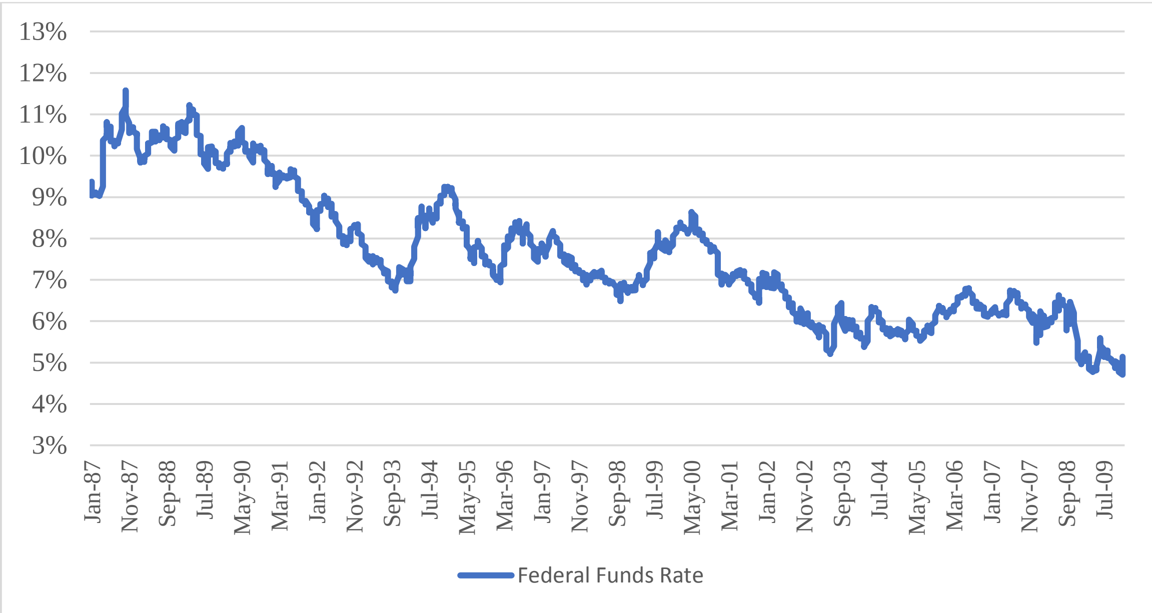
Figure 2: Federal funds rate (1987–2009)



Source: Board of Governors of the Federal Reserve System (US) (2009).

Figure 3 depicts the 30-year fixed mortgage rate from 1987 to 2009. As evident, the rates during the early 2000s are lower compared to the previous two decades.

Figure 3: 30-year fixed mortgage rate (1987–2009)



Source: Freddie Mac (2009).

2 OVERVIEW OF THE CRISIS IN THE EUROPEAN UNION

The following is an outline of how the governments of various EU countries contributed to the crisis. It is a continuation of the discussion on the role of government involvement in fostering the 2008 crisis.

2.1 Unsustainable Economic Policies

The discussion here will focus on the main culprits behind the Eurozone crisis, namely the peripheral countries of Portugal, Ireland, Italy, Greece and Spain. The overall issue in the Eurozone pre-crisis were the artificially low interest rates that were created by the adoption of the Euro. This made financing fiscal policy much easier. Unlike in the United States, there was not as much backing for housing, although the government did intervene by giving various incentives such as tax breaks. The underlying economies of the peripheral states for which such a high level of debt was needed in the first place will be discussed in more detail in this chapter. It will be evident that the borrowing was used for a huge welfare state as well as other government activities (Bagus, 2011).

Other authors have emphasized more some of the structural problems that led to the crisis, rather than focusing solely on the irresponsible behavior of the peripheral countries. Namely, the Eurozone was designed to meet the needs of the core countries such as Germany. Peripheral countries differed largely from core countries. The peripheral countries are much more prone to asymmetric shocks and serve as a buffer zone for the core countries. As a result, problems in one peripheral country are spread to others. Afterwards, they also reach the core countries as well. Peripheral countries do not have the means to respond to these shocks in a proper manor before they reach others (Mramor, 2019).

In addition to fiscal policy issues, the peripheral countries, with the exception of Ireland, all ranked extremely low on the Institutions Quality Index during the 2001 to 2008 period. Namely, Italy ranked worst, followed by Greece, Spain and Portugal. Ireland was ranked above countries such as the United Kingdom, but still below-average and on the lower end of the scale. The ranking is based on the judiciary system, regulative institutions, institutions protecting market competition, anti-corruption institutions and public sector institutions (Jurlin & Čučković, 2010).

Table 2 summarizes the main macroeconomic issues for each of the peripheral countries.

Table 2: Overview of unsustainable policies by peripheral countries in the EU

Country	**Main issues**
Portugal	– Huge welfare state that has expanded since the 1960s. – Continuous fiscal deficits since 1974. – In economic downturn since the early 2000s. – Low quality institutional development. – Adoption of the Euro.
Ireland	– Largely liberal economy, debt problems came after the country bailed out its banking sector. – Formation of a housing bubble, albeit with minimal government intervention. – Adoption of the Euro.
Italy	– Burdening welfare state and government intervention in the economy. – Restrictive labor policies that drove up costs and hampered economic development. – Adoption of the Euro.
Greece	– Large-scale government employment with generous benefits.

Table continues

Table 2: Overview of unsustainable policies by peripheral countries in the EU (continued)

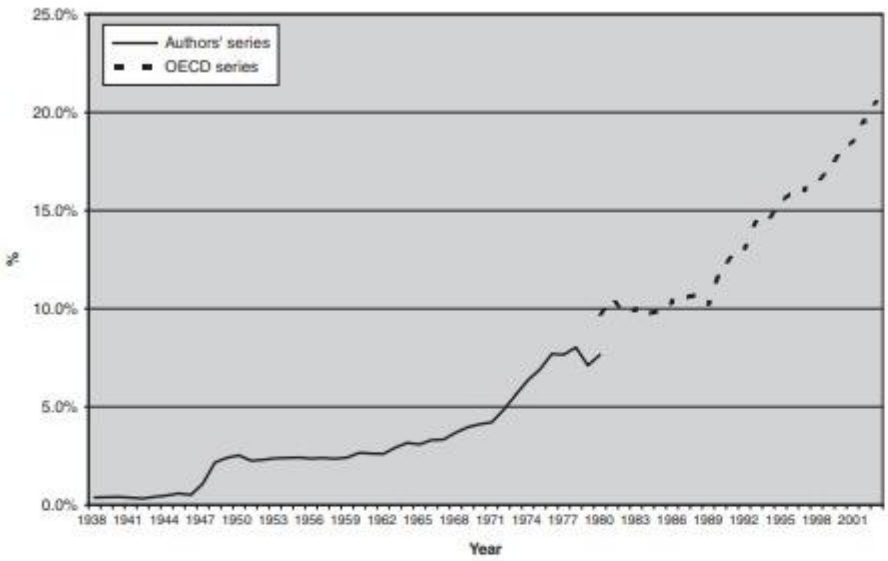
Greece	– Welfare state and overall government control of the economy. – Uncompetitive economy, undeveloped institutions, widespread corruption. – Adoption of the Euro.
Spain	– Formation of a housing bubble, with government involvement. – Low quality institutional development. – Adoption of the Euro.

Source: Bagus (2010); Carolo & Pereirinha (2010); Concheiro (2012); Jurlin & Čučković (2010); Picardo (2018).

2.1.1 Portugal

Portugal suffered from a burdening welfare state, coupled with an economy that was based on government intervention. In 1962, the Social Welfare Reform was undertaken, creating a unified social welfare scheme. This reform exacerbated social spending, which reached 4 % of Gross Domestic Product (hereafter, GDP) in 1969. At the time this seemed a non-negligible increase, however, the increase was even greater from 1969 to 1974. The increase during this five-year period was mainly due to additional coverage being provided to hitherto unprotected groups, as well as providing benefits such as pension and family allowance. As a result of all of these new people that were taken under the government's umbrella, between 1971 and 1974 social expenditure rose at a rate of around 36 %per year. Around 64 % of this increase represented a rise in spending on pensions. Even with all of these new trends and the overall expansion, prior to the 1974 revolution, social expenditure as a percentage of GDP in Portugal never exceeded 6 %. However, things began to change following the fall of Estado Novo regime. Social expenditure surpassed 10 % in the decade of the 1980s and by 1995 it was at around 15 %. It finally climbed above 20 % after the new millennium (Carolo & Pereirinha, 2010).

Figure 4: Social expenditure as a % of GDP in Portugal (1938–2003)



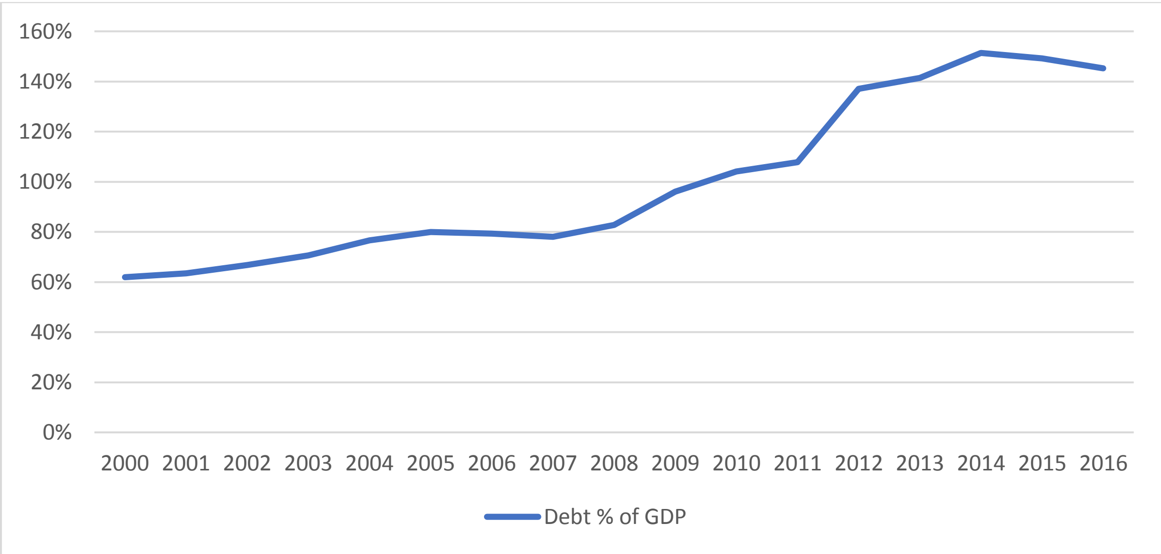
Source: Carolo & Pereirinha (2010).

The rise in social expenditure is not to indicate that times before the revolution were better. Portugal's dictator António de Oliveira Salazar was a fascist dictator who ruled the country for decades with an authoritarian regime. Salazar's Estado Novo regime was based on a corporatist economic system which intended to replace individual competition by collaboration of the most important social groups of the production process. With the fall of Estado Novo in 1974, the revolutionaries were faced with a myriad of state-directed companies, ruled by close friends of the dictator and the business elite. However, instead of opening up the economy and allowing firms from abroad to enter the market and dismantle inefficiency in the market place, the revolutionaries nationalized companies in key industries. In addition, in the 1976 constitution, the preamble affirmed the need to open a path towards a socialist society. Laws were passed which made firing full-time employees arduous, people were given rights to work, housing, education, culture, health and a myriad of other things. Before the revolution, Portugal spent 20 % of GDP on basic necessities such as military expenditure and the judiciary, however that number increased to 46 % after the revolution (Bragues, 2010).

These uncompetitive policies left an economic impact on Portugal, whose GDP per capita was 66 % of the European average in the years after the revolution of 1974, however, this number soon fell to 60 % in 2000. Changes to the constitution were made during the 1980s to foster privatization and its accession in the EU also brought welcoming changes, however, its economy was fundamentally flawed as it was a huge welfare state built on shaky, government-sponsored ground (Bragues, 2010).

Portuguese exports have fallen since adopting the Euro in 2000 and as such it has had to borrow abroad to finance its deficit. In addition, unlike Ireland, Spain and Greece, Portugal did not see the positive effects of the long period of growth which was reflected in low interest rates during the early 2000s. This is mainly because it did not see a housing or consumer boom and as such no improvements were made in its GDP (Thomas Jr., 2010). Portugal's gross government debt to GDP ratio rose from 62 % of GDP to 82.8 % of GDP in 2008 to 104.1 % of GDP in 2010 (OECD, 2016). In addition, Portugal has achieved a fiscal deficit every single year since the revolution of 1974 (Bragues, 2010). In 2018, it was estimated to still be around 1 % due to an injection in its troubled banking system (Khalip, 2018).

Figure 5: Total gross government debt of Portugal as a % of GDP (2000–2016)



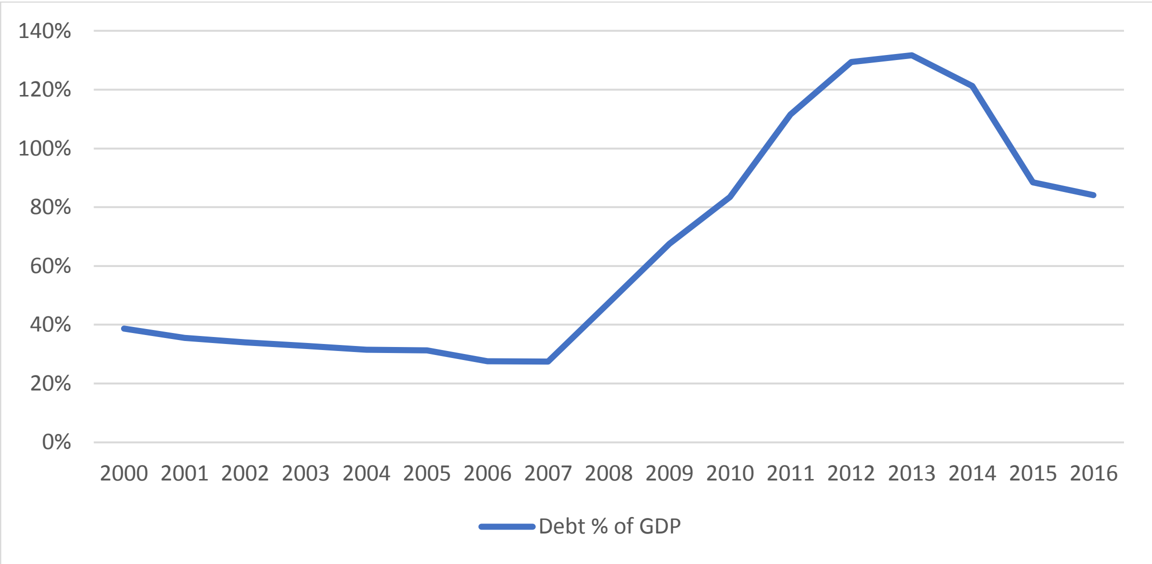
Source: OECD (2016).

2.1.2 Ireland

Ireland is perhaps the most liberal economy of all of the peripheral countries and among the freest overall in the EU. Because of this, it is at first difficult to see why it is in the same category as the other four countries, whose economies were not as liberal. Ireland's economy was, to an extent, too competitive. It had the lowest corporate tax rate in the Eurozone at the time at 12.5 %, which attracted many banks to come to the island. In addition, these banks had access to cheap credit due to the low interest rates that were mentioned throughout the thesis as well as the implicit backing of the Euro by the political community. This essentially meant that banks could lend great amounts, knowing that the government will bail them out. This is much similar to what has happened in the United States with the FDIC scheme at several points in history (Bagus, 2010). Therefore, it is quite difficult to talk of Ireland in the same light as with all other countries. Although Ireland surely must have had certain policies that were not ideal in a laissez-faire economy, but the overall economy was resting on a fairly sound basis. There was, however, government intervention in the housing sector through various tax breaks which fueled the property bubble (Creaton, 2011). By giving out tax breaks for only one certain good, this distorts the market by making other investments, which would have been more profitable otherwise, look more expensive.

The Euro played a huge part in the Irish bubble. The growth of Irish banking assets jumped from a 7.4 % in 2002 to 31 % in 2005, a quadruple increase. The yearly growth in the money supply also jumped, from a negative 6.7 % in 2003 to 22 % in 2006 (Shostak, 2012). Total gross government debt as a percentage of GDP was 38.7 % at the start of the millennium, steadily reducing to a low of 27.7 % in 2007. Therefore, it is evident that government fiscal policy was not the issue here, it only became an issue after the crash. Total gross government debt as a percentage of GDP almost doubled in 2008 to 47.5 % and by the end of the decade it was 83.5 %. Total gross government debt only rose when Ireland decided to bail out its banking system (OECD, 2016).

Figure 6: Total gross government debt of Ireland as a % of GDP (2000–2016)



Source: OECD (2016).

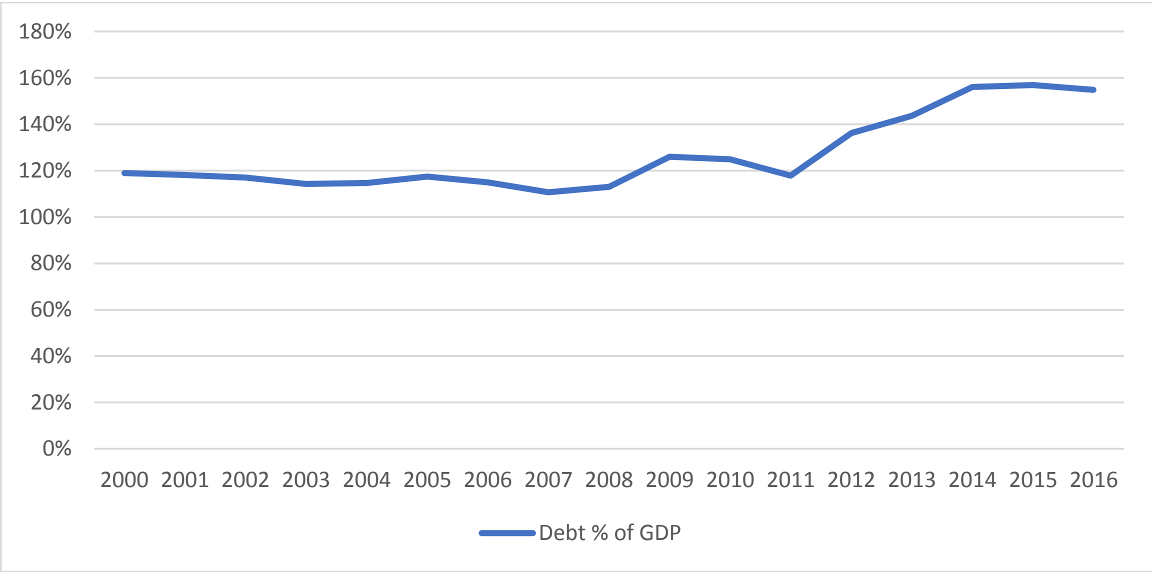
2.1.3 Italy

In sharp contrast to today, Italy initially had an economic miracle. It posted growth rates of 7.7 % per year from 1946 to 1962 and outpaced in industrial growth countries such as France, West Germany and other Western nations. This transformation from a long period of fascism and state control was rightly dubbed an economic miracle. At least a fifth of its then-50 million population moved from the backward and poor south to the more developed and prosperous north. The rapid growth also put an end to Italian migration as over 20 million had left the country in less than a century. The person to thank for this miracle was a classical liberal economist by the name of Luigi Einaudi, who served as the Governor of the Central Bank, Minister of Finance and later as President throughout his political career. He was a fervent supporter of low taxes, free trade and deregulating a country in which the remnants of fascist state control were still evident. Italy's success was hailed by US president John F. Kennedy in a speech and the Financial Times also dubbed the Italian lira as the most stable Western Currency in 1959 (Falasca, 2012, 15–17).

However, during the 1960s, several programs were developed with the aim of redistributing wealth and increasing equality in society. Such measures often translate to higher taxes and increased government spending. In 1962, unions demanded shorter work weeks and more vacation time to be mandated by the state. Soon thereafter Italy got its first left-of-center government as the Partito Socialista Italiano started to gain power. Several other changes were undertaken such as ignoring the constitutionality of a balanced budget and by the 1970s, Italy's budget deficit was around 8 % of GDP. The Bradolini Act was passed in 1969 which reformed the pension system by allowing people to retire much earlier and also greatly lowered the standard for disability pensions. Furthermore, a Workers' Statue was passed during the 1970s in which one article required a long and arduous process of establishing evidence that a worker has to be fired, or otherwise he must remain in the firm. The engineering and metal sectors also received mandatory working times, thereby disallowing individuals who would like to work more to do so. The healthcare system, which was completely funded by taxes, was also nationalized in the 1970s. As evident, the policies undertaken by Italy from the 1960s thereafter were in sharp contrast to how its economy looked in the years right after the war (Falasca, 2012, 17–19).

The anti-business climate continued well into the 1980s as more and more regulations began to be introduced combined with increased fiscal spending that created an uncertain environment. As a result, there was widespread unemployment in the private sector, especially in the south. To solve the unemployment issue, the government began employing more and more civil servants, increasing public expenditure by massive amounts – rising from 32.7 % of GDP in 1970 to 56.3 % in 1993. Funding for all of this public expenditure was made possible with high taxes, which caused the aforementioned unemployment problems, the constant printing of the Lira and lastly, with debt. The printing of the Lira made Italian firms competitive in the export market but this soon came to an end by the 1980s. Debt as a percentage of GDP was around 30 % during the 1950s and 1960s, but had reached a massive 121.8 % of GDP in 1994. Although attempts were made during the 1990s to introduce privatization and liberal reforms, Italy's economy was based on government control and as such was fundamentally flawed (Falasca, 2012, 15–20). As a result, going into the new millennium, Italy was burdened by a heavy welfare state, combined with corruption and without fiscal discipline. Total government gross debt as a percentage of GDP was 119 % in 2000, however, by the end of the decade it had risen to 126 % of GDP (OECD, 2016).

Figure 7: Total gross government debt of Italy as a % of GDP (2000–2016)



Source: OECD (2016).

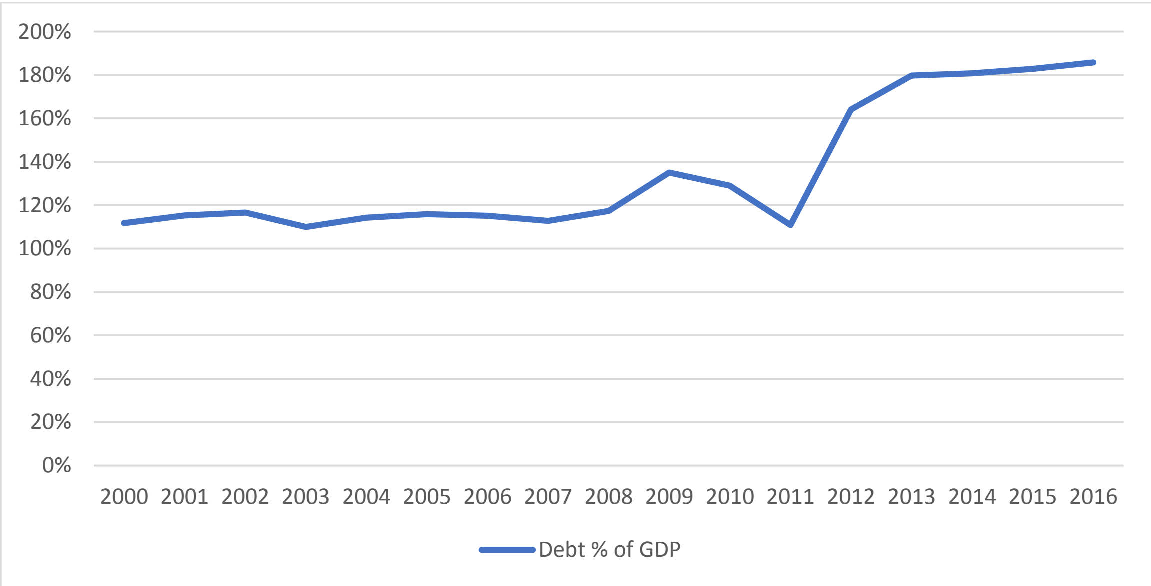
2.1.4 Greece

Upon joining the EU in 1981, the Greek economy was fairly stable. Namely, its gross government debt to GDP ratio was 28 % and its deficit was below 3 %. Things soon thereafter changed, as for the next 30 years two political parties – the Panhellenic Socialist Movement and the New Democratic Party, took turns running the country with expensive spending projects. Not only did the government sector rise, but also salaries and other benefits for government employees as well. Public servants needed only thirty-five years of experience to retire and could do so at the age of fifty-eight, with women at the age of fifty. However, the most inefficient policies were the 13th and 14th paychecks that were awarded to Greek workers. Workers were given an additional paycheck in December for the holiday gifts and also got 50 % month's pay during Easter, as well as 50 % when they took their vacation (Picardo, 2018).

These spending policies were financed with debt. As aforementioned, upon joining the EU, the Greek gross government debt to GDP ratio was fairly stable and healthy, however, by the time it had become a member of the Eurozone that same ratio was increased almost five times. In 2000, its gross government debt to GDP ratio was 103 % while its fiscal deficit was 3.7 %, well above the 60 % and 3 % respective thresholds set by the Stability and Growth Pact (Picardo, 2018).

The large amounts of fund transfers from the EU to Greece had a negative effect on private investment in the country. This is due to the fact that the efficiency of such investment depends on the institutional development of countries. Due to the Greece's low development in this this area, the phenomena of crowding out of private investment was observed when it came to EU funds (Katsaitis & Doulos, 2009). As aforementioned, Greece, along with several other peripheral countries, suffered from institutional quality levels which is a likely explanation for this (Jurlin & Čučković, 2010). The Institutional Quality Index also deteriorated greatly since 2006, which further exacerbated the issue (Kouretas & Vlamis, 2010). Overall, the Greek economy was not based on a fundamental free-market platform. Rather, it was based on government intervention. In the post-crisis period, the initial 50 basis point spread had turned into a 3300 basis point spread between the Greek and the German bonds (Picardo, 2018).

Figure 8: Total gross government debt of Greece as a % of GDP (2000–2016)



Source: OECD (2016).

2.1.5 Spain

Spain's case was very similar to Ireland, but different in other aspects. Although it is true that the government did pursue certain policies that were of uncompetitive nature, the main issue that drove Spain into the crisis was the property bubble. Gross government debt was fairly stable and the gross government debt to GDP ratio was even lower than that of Germany during the mid-2000s. However, the extremely low interest rates made borrowing incredibly lucrative which forced banks, ordinary home-buyers and property developers to borrow to build housing (Knight, 2012).

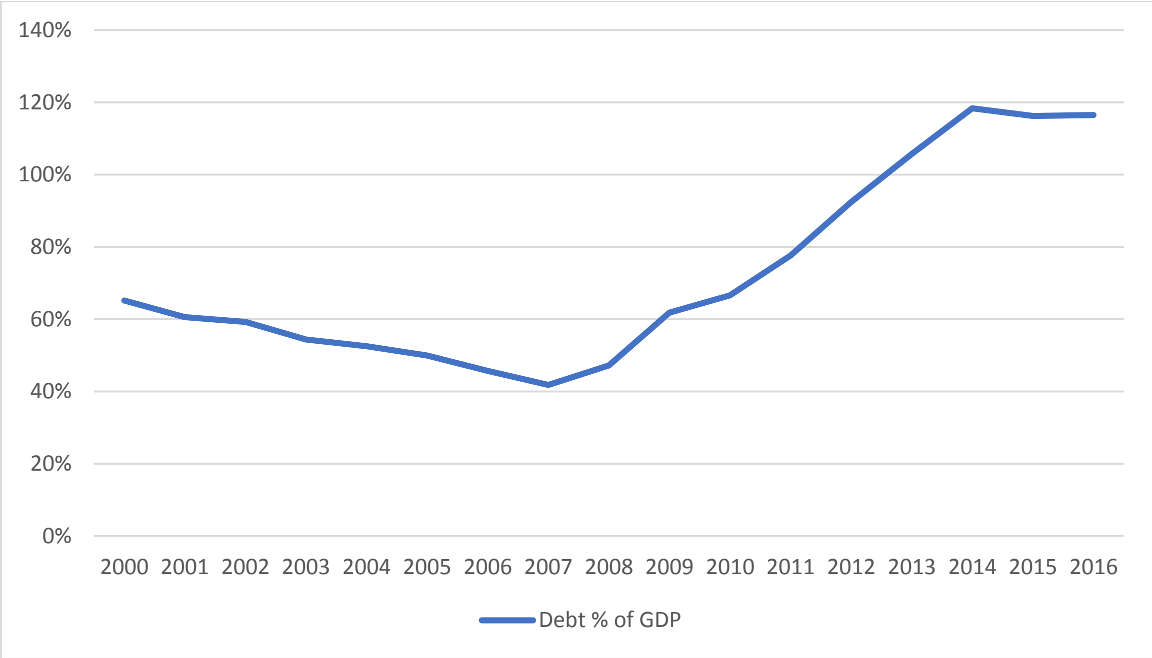
Spain was hard hit by the housing bubble crash as the country was on a construction spree throughout the early years of the 2000s. Between 2001 and 2008 around four million new housing units were built, equal to around twelve dwellings per one thousand inhabitants, more than double of the EU average of five per one thousand inhabitants. In 2006, it had constructed 760,000 houses, more than France and the United Kingdom combined. When the stock market crashed there were around 700,000 housing units in 2009 which were completed but remained unsold. Many of the houses built were not primary residences, but rather secondary ones aimed at being tourist villas and hotels. Spain had been actively promoting its tourist markets for decades as more competitive locations were opened to tourists in the 1980s. Not only was housing pushed, but also theme parks and other attractions for foreigners (Concheiro, 2012).

Much of this was made easy by the aforementioned cheap credit policies that made government debt also very lucrative, however, Spain's gross government debt as a percentage of GDP was not such a big issue (Bagus, 2011, 48). On the other hand, between 1996 and 2007, property prices in Spain tripled (Knight, 2012). Gross government debt was 65.2 % of GDP in 2000, dropping to a low of 41.8 % in 2008. As the housing bubble was so enormous, there was widespread unemployment after its crash, which led to massive fiscal stimulus. Debt as a percentage of GDP began to rise and by the end of the decade had increased to 66.6 % (OECD, 2016). Although it is true that the country had run budget surpluses prior to the crash, indicating that it might not have been as fiscal irresponsible as neighboring Portugal, the reality is wholly different. The budget surpluses were due to the increased tax revenues from the housing bubble, government spending increased at an average rate of 7.6 % from 2000 to 2009 (Hidaglo, 2012). Furthermore, although government spending was 39.2 % of GDP in 2000 and exactly the same figure in 2007 – indicating fiscal prudency, this was partly due to the high GDP growth rate that Spain experienced as a result of the housing bubble. Once the economy came to a stop in 2008, government spending jumped 2.3 percentage points. Therefore, government spending did not remain constant because the government was pursing liberal policies and thereby spending little, but due to the artificially high GDP growth rates (Rallo, Oro, & Marti, 2012).

Although much of the boom was attributed to the private sector, the government did have a hand in fostering it to an extent. Most of these instances were related to laws pertaining banking which impacted the housing bubble. Laws allowed banks to loan up to 100 % of the cost of the home, therefore not requiring any down payment. This allowed individuals with no stable income to borrow homes on 30 or even 50-year mortgages. Furthermore, banks were permitted to collect a defaulted mortgage loan even after seizing one's property. Politicians also heavily fostered borrowing as there were more kilometers of high speed rail built and under construction than in any other country apart from China. Governments, both local and central, also backed the building of airports, bridges and other projects with subsidies. Many of these projects remained abandoned such as the airports in Ciudad Real and Castellon (Alvarez, 2018).

Furthermore, apart from the housing bubble, Spain suffered a labor market bubble as well, as wages rose at an alarming pace. Labor costs rose 40 % to relative levels in Germany from 2000 to 2010. This made exports incredibly expensive and further deteriorated Spain's competitiveness. Due to the fact that Spain partakes in the Euro, it can no longer print money and further devaluate it to boost exports. The unemployment levels post-crisis, reaching as much as 20 %, created the need for social spending and as already mentioned, this forced debt levels to rise. Unfortunately, due to its economic situation, Spain has to borrow at higher interest rates now, which further creates problems for an already unstable economy (Knight, 2012).

Figure 9: Total gross government debt of Spain as % of GDP (2000–2016)



Source: OECD (2016).

2.1.6 Summary

The peripheral countries had spent the years running up to the crisis pursuing fiscal stimulus and a myriad of other unsustainable economic policies which led to rising debt levels. As shown throughout this chapter, these countries did not suddenly decide to spend in order to boost the economy, but rather have had economic systems which relied on government intervention for decades prior to the crisis. As a result, the welfare state and government intervention as a whole is deeply embedded in the frameworks of these countries.

Overall, the crisis differs from the one in the US from several points of view, but what is most evident is that a common currency played a much more important role in the EU than it did in the US. The Euro allowed countries with unstable programs to borrow at cheap rates to finance them. This created large-scale economic issues for the countries involved, as well as for the entire EU.

2.2 Structural Problems of the Euro

Table 3 outlines some of the key issues with regards to the Euro.

Table 3: Description of problems of the Euro

Problem	Description
Heterogeneity & Labor Mobility	– The Euro covers a wide area where people do not speak the same language nor share the same culture, therefore impairing real labor mobility when crises occur.
Competition Policy	– Countries are not able to compete on monetary policy. Purposeful devaluations by the Central Bank, for example, could be useful for a country's exports.
Monetary Policy	– The ECB pursued an expansionary monetary policy at the beginning of the 2000s. This is similar to what happened in the United States as well.

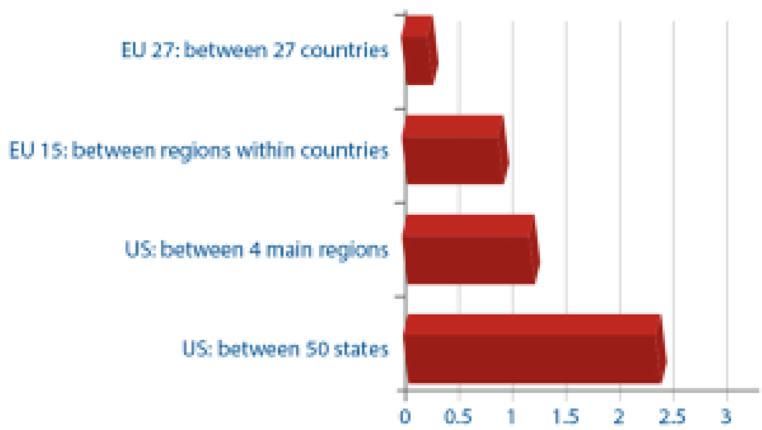
Source: Bagus (2011); Friedman (1997).

2.2.1 Heterogeneity and Labor Mobility

Socio-economic factors of the EU reveal the fragility of the Euro. Because it covers such a wide array of people and regions, it is difficult for them to make mobility adjustments at the onset of a crisis. It would become increasingly difficult for someone from a northern European country to move to a southern one due to various socio-economic reasons, the most important one being language and culture. In addition, there are other factors in play that prevent mobility such as labor laws, some cultural patterns surrounding employment, licenses and a myriad of other hindrances to achieve the same labor mobility in the EU that exists in the US. The United States also has a single currency, the US Dollar. Although the states may vary in their individual policies, they all speak the same language and state policies are more alike than those of the EU – meaning that a New Yorker can travel easily to Los Angeles to find a job, despite the two of them being several time zones apart. As a result, a common currency in Europe would be better suited amongst countries such as Germany, Austria or even the Netherlands due to their shared historical heritage and more-or-less even economic standing (Friedman, 1997). Protestant countries in the north have been historically more in favor of capitalism and free markets rather than government control (Weber, 1930). Many of the countries in Western Europe had the foundation of the Roman Empire to build on, whereas Eastern European countries had their economies ruined by fifty years of communist rule (Sowell, 2016). Overall, the cultural differences between the EU are much larger than those in the United States, hence why a common currency would not be as effective.

Upon consulting empirical data from 2010 regarding labor mobility in the EU in the post-crisis period it is evident that the numbers are striking vis-à-vis the United States. Mobility between the EU member states is only around 0.25 % of the total EU population. Even mobility between 15 member states which are considered to be older ones is low, roughly 1 %. On the other hand, labor mobility in the United States as a whole trumps the mobility in the EU – standing at almost 2.5 %, around ten times higher than the mobility between EU states. Even if only looking at the mobility in the United States just as mobility between the four main regions (West, Midwest, South and Northeast), rather than mobility between all of the 50 states, the number comes to slightly above 1 %. – still above what the EU stands at. Even later data, namely from 2011 to 2012 revealed that United States labor mobility was 2.7 %, whereas in the EU it was only 0.2 %. In fact, intra-EU labor mobility is lower than the percentage of non-EU migrant workers in the EU labor force which stands at 4.3 %. During 2000 to 2010 labor mobility fell 41 % when compared to the previous years. Labor outflows to other EU countries right afterwards were most prominent in countries with the highest economic distress – such as Spain and Greece (Andor, 2014). These numbers prove that the EU cannot ease a crisis by transferring employment from one area to the other as efficiently as the United States can.

Figure 10: Annual cross-border mobility as a % of total population in the EU versus the US



Source: Andor (2014).

2.2.2 Competition Policy

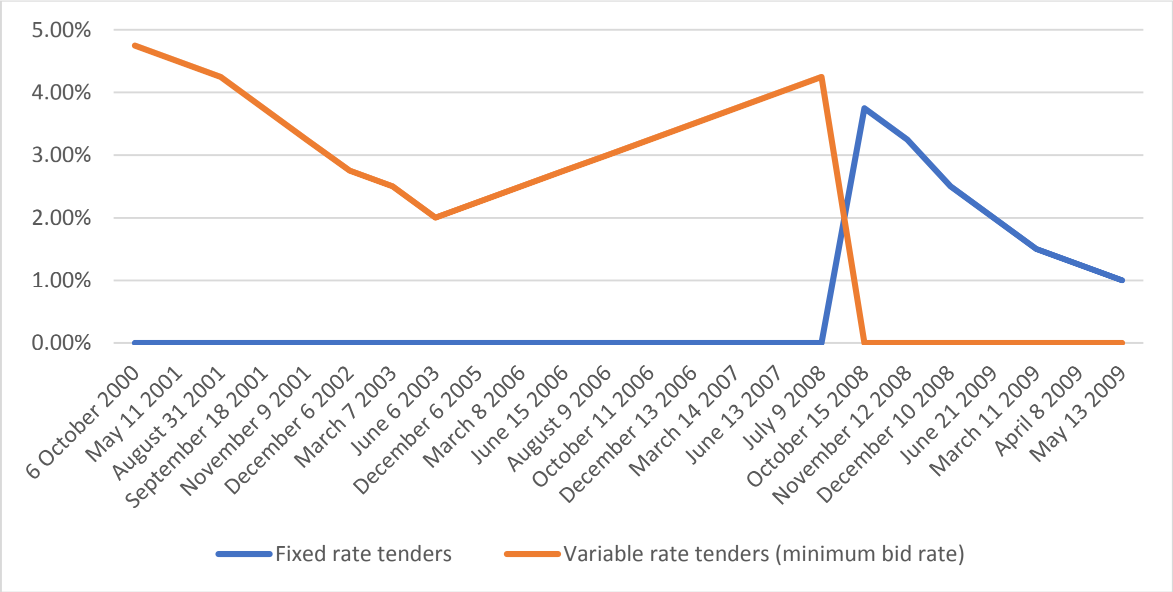
The Euro also does not allow member states to compete on monetary policy. As discussed throughout the paper, it has become evident that central banks are the culprit behind some serious economic downturns and if a country could avoid such trouble by managing its central bank better, it would attract more investments and capital because investors know that it is sound. Such monetary competition occurs on a more global basis, as individuals in poorer countries tend to hold onto stronger currencies such as the Dollar of the Swiss Franc in case their own countries' ones might go bust. It is increasingly common for dollar reserves to be kept outside the United States and such monetary arrangements even have their own name – Eurodollars (Mishkin & Eakins, 2012, 272). Such arrangements could be achieved in the EU as well and thus nations would be more apt to keep their currencies strong, knowing that they would be abandoned the minute inflationary fears hit investors' minds.

The Euro has been criticized for not allowing individual member states to devaluate their currency and thus drive exports in the wake of the crisis. If Greece had its own currency, it would be highly devalued which would make Greek exports cheaper. Germans will have to purchase those goods in the Greek currency and thus drive up the demand for it, making it stronger while at the same time promoting growth via exports. At present, the weakness of the Greek economy is offset by the strength of the German or Italian economy and hence the market is not showing the true value of the Euro (Gordon, 2017). The Euro also stifles a country's ability to create a repayment of debt scheme. Although printing money is surely a cause of inflation, if done at a moderate pace to hinder hyperinflation, it can often be the last resort for a country. Greece is a typical example, as many suggested that it should go back to the Drahma and begin its debt repayment by printing money. If Greece were to attempt to do the same with the Euro, it would cause contagion in the market as the inflation brought on by the Euro would be felt in other Eurozone countries (Ruparel, 2015).

2.2.3 Monetary Policy

The ECB pursued a policy of expansionary monetary policy. This is similar to what the Federal Reserve did as well. As evident on Figure 11, there were initially high interest rates at the turn of the millennium, just as was the case with the Federal Reserve. This was followed by a sharp decrease. Namely, the main refinancing operations rate was 3.75 % at the end of 2000, whereas by the end of 2001 it had dropped to 2.25 %. There were further reductions to 1.75 % in 2002, whereas by the end of 2003 the rate was at 1 % where it stayed for two years, when it was raised to 1.25 % in 2005. It was only thereafter that the rate began to climb again. This entire monetary episode is almost identical to what had occurred in the United States and such a climate fostered the cheap lending policies that brought about the debt crises in the several EU countries (European Central Bank, no date).

Figure 11: Main refinancing operations rate of the ECB (2000–2009).



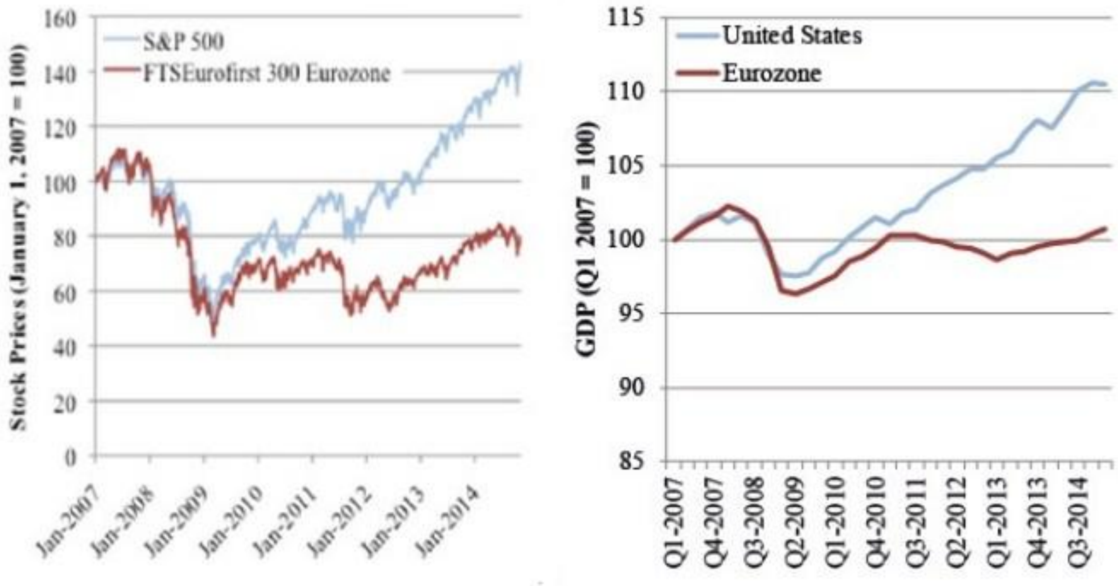
Source: European Central Bank (no date).

3 POST-CRISIS ASSESSMENT

3.1 Overview

As stated in the beginning of the thesis, the US recovered faster than the EU. Several EU countries have been experiencing harsher economic conditions than the US due this overall slower recovery process. The unemployment rate in the US in 2009 hit 10 %, but has declined since by over 5 %. On the other hand, Eurozone unemployment rates have been in double digits during the same time frame (Invstr, 2017). It was only in 2017 that rates fell below those of 2009. However, some peripheral countries, which were hardest hit by the crisis, still had unemployment rates that were in double digits. Namely, Greece's unemployment rate was at 21.7 %, Spain's unemployment rate was at 17.1 % and Italy's unemployment rate was at 11 % (Bowman, 2017). On the other hand, it was 2014 when US unemployment fell below 6 % for the first time since 2008. This means that it took essentially six years for unemployment numbers to recover in the United States, compared to eight years in the Eurozone. This is provided that the start of the US crisis is viewed to be 2008 and in the Eurozone 2009 (Moore, 2014).

Figure 12: Stock market and GDP performance in the US versus the Eurozone



Source: Kang, Ligthart & Mody (2016).

In order to asses these differences as well as to evaluate the responses overall, several policies must be analyzed in detail:

Table 4: Comparison of the responses between the US and the EU

Policy	**US vs EU**
Government Bailouts	– The US instituted the TARP (Troubled Asset Relief Program), fostered the sale of several troubled financial institutions such as Merrill Lynch. – EU had bailouts of banking systems such as those in Ireland, but the primary response was bailing out the economies of several countries such as Greece and Portugal.
Legislation	– US instituted the Dodd-Frank Act to overhaul the workings of Wall Street. – Deeping of the Eurozone through the European Banking Union, European Stability Mechanism, European Systemic Risk as well as other measures.

Table continues

Table 4: Comparison of the responses between the US and the EU (continued)

Stimulus Packages	– US instituted a stimulus package under President Barack Obama in 2009 worth $787 billion. – Several EU countries underwent stimulus packages, such as Germany, France, the United Kingdom. However, policy response was centered on austerity in the peripheral countries.
Austerity Measures	– US focused on stimulus programs, rather than austerity measures. – In the EU austerity measures were largely taken in peripheral countries.
Monetary Policy	– The Federal Reserve and the ECB pursued an expansionary monetary policy, although the initial policy pursued by the ECB was contractionary. – US instituted quantitative easing (QE) program much earlier and brought the policy rate much lower than the ECB.

Source: Bagus (2012); BBC (2012); Sowell (2009); Melander (2010); Schnabl & Stratmann, (2019); The Economist (2017); Tumpel-Gugerell (2009).

3.2 Government Bailouts

An economist may object to bailouts on several points. Firstly, individuals and businesses should be responsible for their business and financial mistakes. Secondly, if government wants to bail anyone out, it has to get this money either through higher debt, higher taxes or by monetizing it. All three instances increase the overall economic distress in a country. There is a myriad of other ways to refute the idea of bailouts, but the primary concern with them is the fact that they give the wrong incentive structure, as players in the financial market know that the government will step in to save them from bad decisions. However, even the staunchest classical liberal can make a case for bailouts if the initial incentives given to players in the market were essentially the workings of the government. Therefore, it is the government's fault that those same companies that now need bailouts are in financial distress in the first place. As noted throughout the thesis, it was to the government that urged banks to issue mortgages to people with low credit scores or face repercussions. Therefore, as evident, the debate surrounding bailouts is not very simple. Because of this, the thesis will treat the issue of bailouts as a necessary evil. Instead of focusing on whether bailouts were needed or not, the thesis will rather asses as to how the United States and the European Union dealt with this necessity and how they administered these bailouts.

The United States initiated the Troubled Asset Relief Program (TARP) which was arguably the core of its policy response. The US government enacted the Emergency Economic Stabilization Act of 2008, which authorized the Secretary of Treasury to purchase distressed assets such as mortgage-backed securities as well as supply banks, both domestic and foreign, with cash injections through the Troubled Asset Relief Program. The original amount of $700 billion was later reduced to $426.4bn. The program lasted six years and it ended with the government's sale of its stake in Ally Financial in 2015. Although the plan did bring stability, it also paved the way for further government intervention that was created during the administration of President Barack Obama. One of the reasons why the program led to a call for further government intervention is its supposed success in the rate of profit it has achieved. The Treasury has stated that tax payers have recovered $441.7 billion, implying a profit of slightly more than $15 billion. This number is expressed nominally, however, the rate of return on an annualized basis is 0.6 %. This number is lower than the returns on most Treasury Bills. Furthermore, when taking into account inflation, the 2015 value of $441.7 billion translates to $402.71 billion in 2008 dollars, implying a net loss of $24 billion. Due to the fact that TARP amounts were paid at different times, an average inflation rate of 2 % was used over the period (Palumbo, 2015). Another failure of the program is that the recipients of TARP returned what they did only by taking additional loans from the government. Namely, during the first phase of TARP, the Capital Purchase Program, banks repaid $211.5 billion from the $204.9 that they received originally. However, almost a half of the banks that repaid this money did so by borrowing from other TARP programs. The most prominent program from which they borrowed was the Community Development Capital Initiative (Gongloff, 2012). More than $2 billion of federal money that was handed out with the intention of spurring lending to small businesses was used by banks to repay the Troubled Asset Relief Program (Maltby & Loten, 2011).

Some of the key financial institutions in the US were highlighted during the bailout proceedings, namely Lehman Brothers, Bear Sterns, Merrill Lynch and AIG. All of them shared different faiths in the end, however, all but Lehman Brothers were not allowed to fail. Bear Steans was bought out by rival bank JP Morgan at a stock-for-stock valuation for just $2 a share. This is a discount price of higher than 90 % when applied to its closing price just two days earlier. The total deal was worth $236 million, in sharp contrast to Bear Stearns' pre-crisis market capitalization of $140 billion. However, JP Morgan does not deserve all of the credit, the Federal Reserve backed the deal with $30 billion to fund Bear Stearns' less-liquid assets (Clark, 2008). AIG, the giant of the American insurance industry, was hard hit due to its exposure to credit default swaps and thus exposing itself to the mortgage-backed securities market. The Federal Reserve helped the company out with a $85 billion emergency loan to keep the company afloat. The investment banking giant Merrill Lynch was handed to Bank of America to form Bank of America Merrill Lynch (Mathiason, 2008)

The ad hoc policy of letting one institutional fail, while others remain afloat may appear to be controversial. However, Lehman Brothers simply did not have enough collateral to cover the loans, according to Secretary of Treasury Henry Paulson. This statement was affirmed by former Federal Reserve Chairman Ben Bernanke and President of the New York Federal Reserve Bank Timothy Geithner, all of whom had the power to administer the loan (Ball, 2018). The failure of Lehman is in fact a positive aspect of the controversial bailout process and one in which the US allowed itself to differ from the EU. As discussed, a bailout is essentially allowing tax payers to pay for the failures of a company. Financial distress is a scenario that happens on a daily basis amongst small and medium size enterprises. Therefore, there should be no reason why a firm, regardless of how large it is, should not be allowed to go bankrupt. It also cemented the fact that the US, although was willing to administer certain bailouts, was not pursuing such a cheap money program as would go on to happen in the EU with multiple bailouts of the Greek economy.

Bailout programs in the EU were of similar nature, but albeit slightly different. Although the EU did suffer from the housing bubble crash, the true economic downturns started coming about in 2009 when the EU began ordering countries such as France, Spain, Ireland and Greece to reduce their deficits. Soon thereafter it was revealed that Greece's debts have surpassed €300 billion, the highest in modern history (BBC, 2009). The Greek government initially promised that it will not need to be bailed out. However, the sheer size of the economic distress that the Greek economy was involved in was soon shown. It was revealed that due to accounting irregularities, Greece's budget deficit from 2009 was revised from 3.7 % to 12.7 % (Barber, 2010). Despite austerity measures and other political backing, Greece ended up getting bailed out in May of 2010 with a €110 billion package from the International Monetary Fund and the EU (Hope, 2010). The aforementioned measures of attempting to forestall the eventual collapse of the Greek economy did not work as the overall system that the Greek economy was based on was flawed. Greece's economy has not been sound for decades and therefore a program that is intended to last only a few months will not change it.

The economic help that was extended to Greece by the International Monetary Fund and the EU set the stage for further bailouts of troubling economies in the EU. Furthermore, even this initial bailout of Greece, despite its size and political backing, would not be enough. The next country to be bailed out was Ireland, as investors became worried about the country's ability to repay its debts following the Greek turmoil. Ireland rested on a fairly liberal economy. Its debt levels became unsustainable purely out of bailing out out its own banking system following the housing bubble collapse. The country was given €85 billion in November of 2010. However, the most striking fact was the fact that the average interest rate that was to be paid was 5.8 %, which is slightly higher than Greece's 5.2 %. Had this difference occurred between Greece and Italy, two countries with similar unsustainable policies that included a huge welfare state as well as a historic tendency towards debt, there would be no surprise. Ireland, as aforementioned, was a more liberal economy compared to Greece and as such its recovery time was expected to come much sooner. Therefore, charging both countries very similar rates seemed controversial. However, upon closer scrutiny, it would appear as if the higher rate was charged purely out of scaring away other countries from taking what was considered to be cheap debt. In fact, Germany had initially pushed for a 7 % interest rate on Ireland's debt (Hume, 2010).

Realizing the imminent dangers of the economic downturn that the EU has entered, a permanent bailout fund was created of €500 billion called the European Stability Mechanism in February of 2011. It replaced two earlier programs which were the European Financial Stabilization Mechanism and the European Financial Stability Facility. Both of these programs had similar purposes and at the time were allowed to continue the already-administered bailout packages (Pignal, 2011). Another Eurozone bailout was initiated in May of 2011. Portugal received €78 billion, cementing the notion that the peripheral economies were the most vulnerable. Despite the largest bailout of the three countries, the Greek economy was still in trouble a year after the initial bailout. Because of this, a set of strict austerity measures were undertaken in the country in hopes of getting the country back on its track. However, these measures had little success as even talks began to spread surrounding Greece exiting the Eurozone. Soon after the last tranche of Greece's initial bailout was administered, a second bailout was imposed worth €109 billion. The European Central Bank also began buying Italian and Spanish government bonds, with Italy passing austerity measures. A myriad of other political as well as economic measures were taken with the same context, such as the ECB buying bonds from banks (BBC, 2012). Furthermore, countries who were exposed to the debt of peripheral countries were just as exposed to their economic downturns and required bailouts themselves. The most prominent example is Cyprus, which had great exposure to Greek government debt and as such it, too, greatly suffered during the crisis in Greece. The country received a €10 billion bailout in 2013 (Spiegel, 2013).

When discussing the issue of bailouts, speed is a key factor. Although the United States has had its fair share of problems, the government and the Federal Reserve stepped in quickly and took measures that, although unpopular, tried to get the financial system back into shape as soon as possible. Several banks were sold off to others, such as Merrill Lynch, while others received injections from the government. All of this was, objectively speaking, achieved in a very short time span. The Eurozone is different, with problems being present many years after the crisis. For example, as late as 2016, the Italian bank Monte dei Paschi di Siena was filled with hundreds of billions of Euros in bad loans and needed a massive bailout. This further cemented the fact that many European banks faced structural problems almost a decade after the crisis. Portuguese banks faced similar issues as a Moody's report stated that the mild economic recovery of two years was not enough to make Portuguese banks worthy prospects in 2016. The report also mentioned that Portuguese banks were among the worst capitalized and the prospects over the next short period were very grim. Such problems would not be occurring had the issue of banking been handled more quickly and efficiently, as was the case in the US (Invstr, 2017).

More specifically, one of the reasons for the faster recovery of US banks has been the Troubled Asset Relief Program which forced equity injections by the US government for companies in difficulty. What is most important is the speed by which the injection was administered, the majority being in 2009, whilst 2008 and 2010 saw their fair share as well. The years following only saw minimal injections. On the other hand, the EU has injected capital at a much slower pace, only injecting substantial blocks in 2008 and 2009 (The Economist, 2017).

3.3 Regulatory Responses

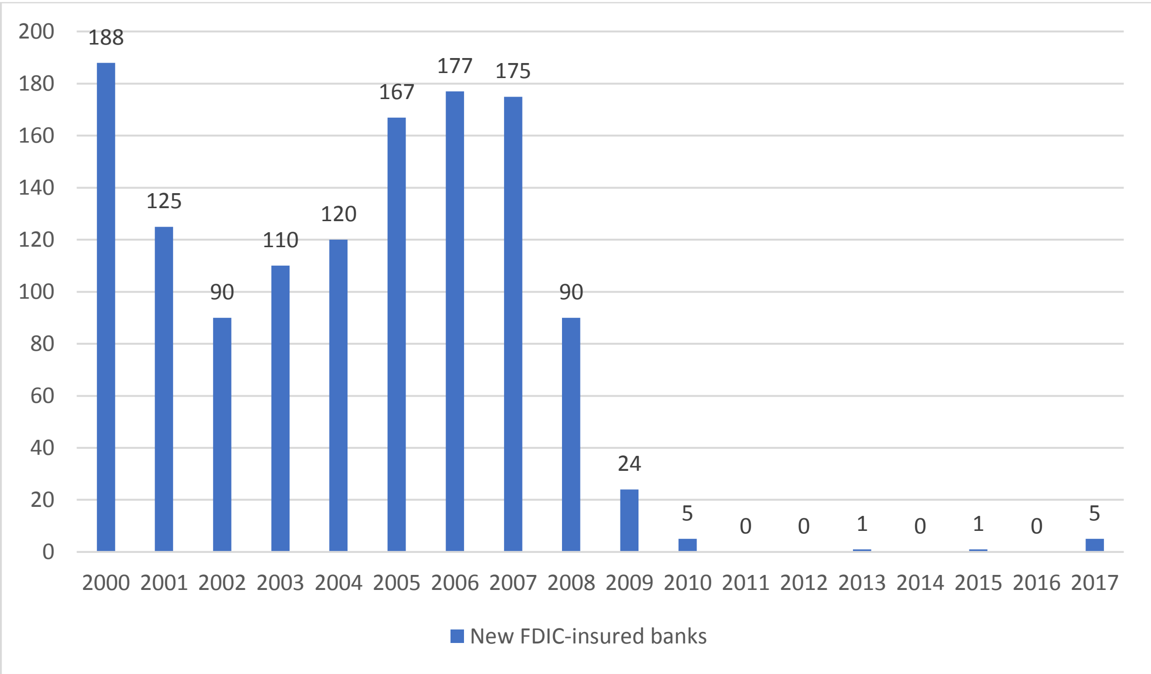
One of the most important issues after every crisis is to assess whether the country has realized what the actual causes of said crisis were. In this case, government intervention was the deciding factor in kicking off the housing bubble in the US, while fiscal irresponsibility triggered the debt crisis in Europe. Therefore, the only way to stop a future crisis from happening is to end all such interventions which contributed to the crisis and build an economy that rests on a free market, rather than government intervention. Although the EU and the US did implement certain changes that were on a positive note, such as austerity measures, the majority of the causes of the crisis have not been addressed. As a result, a series of legislative actions have been taken to increase government oversight of the economy, rather than decrease it.

The initial legislative response in the United States was the Emergency Economic Stabilization Act of 2008, signed under president George W. Bush. This act brought about the Troubled Asset Relief Program. As TARP was discussed at length in a previous sub-chapter, the focus will now be on subsequent legislation that followed the TARP program. The first significant act, passed in February of 2009 under president Barack Obama, was the American Recovery and Reinvestment Act. It was a stimulus package with the aim of saving existing jobs, providing relief and creating as many new jobs as possible. The aim was to put $787 billion into the American economy, especially focusing on small businesses. The number was revealed to be much higher in 2012 at $831 billion (Amadeo, 2018). The idea of a stimulus package is flawed. Firstly, the US had just spent a substantial amount bailing out its troubled banks. This was itself a largely unpopular plan due the fact that taxpayers bore the cost. Secondly, such a plan is a sure downfall for the economy as it was precisely due to government intervention that the economy entered into downturn in the first place. Any recovery packages ought to have been primarily focused on ending government intervention in the housing market, rather than creating more government programs. In fact, the complete opposite happened with regards to government intervention in the housing sector. For example, in 2009, the Federal Housing Administration expanded business by four times compared to 2006. At the same time, more than one in six borrowers who had taken mortgages under various Federal Housing Administration programs were missing payments. Congress also made several regulatory changes that favored the Federal Housing Administration such as giving tax breaks for first-time home buyers (Higgs, 2009).

Some specific measures that the American Recovery and Reinvestment Act introduced were an additional $250 to recipients of various Social Security programs, as well other benefits such as extending unemployment benefits. Close to $100 billion was spent on public works projects. Namely, $46 billion was spent on transportation and transit, $31 billion to modernize federal buildings and $6 billion on water projects. A report stated that such projects created close to twenty thousand jobs for each billion spent. However true this may be, there is a difference between working for the sake of statistics and efficient work, with the latter issue not being assessed. The program might have created twenty thousand jobs, however, if the same could have been accomplished by employing only ten thousand people then the program was a failure from a profit-based analysis. Other programs, whose costs ran into the tens of billions, were also undertaken to fund education, healthcare and small businesses (Amadeo, 2018). Such stimulus programs, especially healthcare related ones, are dangerous in the sense that they set the precedent for future expansion in these areas. It creates a permanent government program, rather than just a temporary stimulus.

Apart from the American Recovery and Reinvestment Act of 2009, other legislative acts were passed with the most prominent one being the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010. This act attempted to overhaul the entire financial system of the United States and increase government oversight over it. The problem with the Dodd-Frank bill is its nature. The act blames the crisis on the financial players in the market which is evident in its primary objective, which is, as aforementioned, to increase oversight over the economy. The string of regulations imposed by the Dodd-Frank Act affected smaller banks via increased costs. These regulations forced consumers to pay higher costs as banks were required to follow stricter regulatory guidelines. For example, the threshold of $50 billion over which banks were exposed to more regulatory scrutiny was incredibly low (a recent reform has set the number to $250 billion) (Vartahan, 2018). Costs were raised in general via a string of regulations that increased the compliance costs per customer. Caps on interchange fees, among other restrictions, have increased the usage costs of debit cards for banks. These costs are among the main ones that institutions have transferred onto the consumer. Such increased costs also protect already-established banks from outside competition, as new entrants find it costly to enter the market (Bishop, 2017a). Namely, only six new banks have been chartered from 2011 to 2017, compared to more than one hundred per year in the years prior to the crisis, as evident on Figure 13.

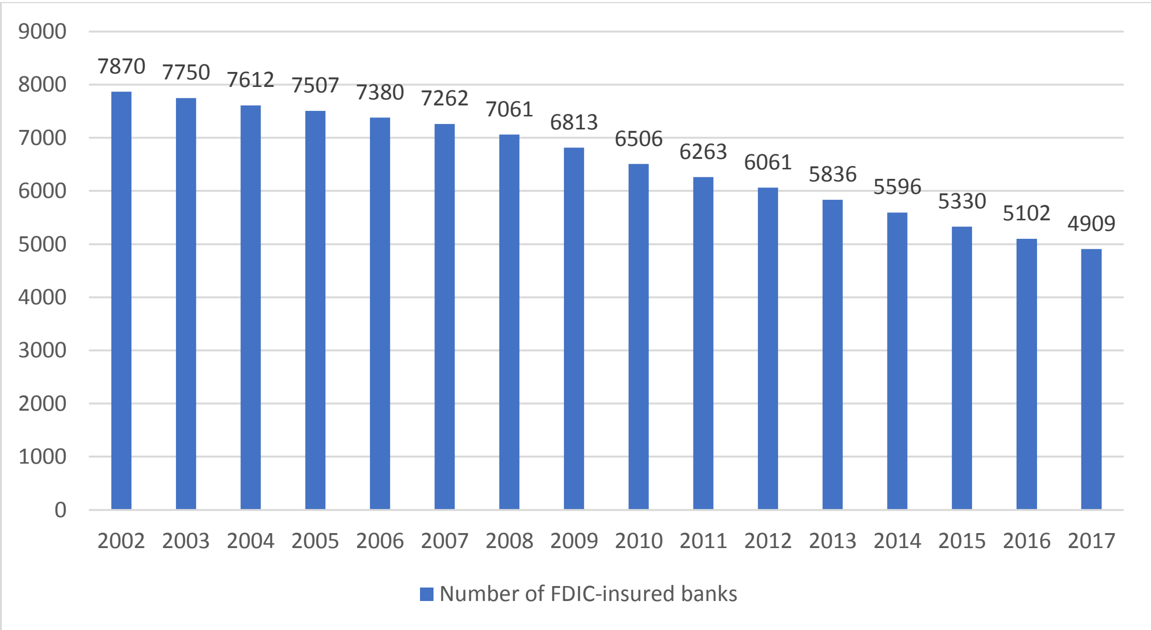
Figure 13: New FDIC-insured commercial bank charters in the US (2000–2017)



Source: Statista (2017b).

Furthermore, the overall number of banks has also been going down, from 7061 in 2008 to 4909 in 2017, as evident on Figure 14.

Figure 14: Number of FDIC-insured commercial banks in the US (2000–2017)



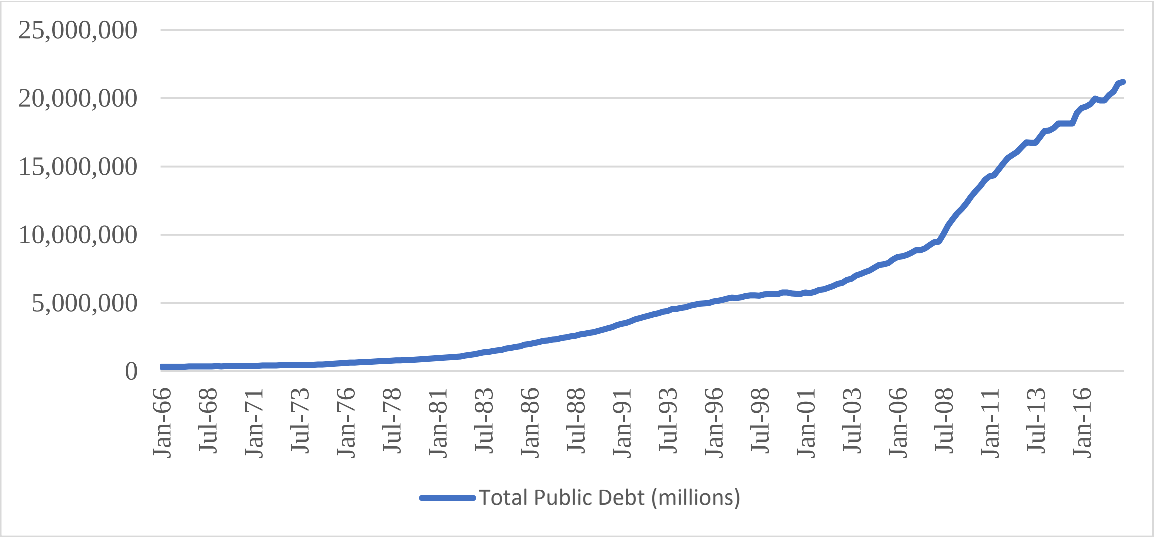
Source: Statista (2017a).

Due to high costs imposed by such regulations, it is simply not profitable to run a business and in addition, the high costs of entering the industry deter potential new entrants. A common objection may be that the number of banks might have decreased, but it was simply due to banks being involved in mergers and acquisitions (M&A) themselves. However, the number of bank consolidations has in fact gone down since the crisis (McLannahan, 2018).

Dodd-Frank also imposed the controversial Volcker Rule which banned banks from proprietary trading and limited investments in hedge funds as well as private equity. The logic behind passing the Volcker rule was an attempt to construct a division in banking, much similar to the one made by the Glass-Stegall Act of 1933. The act wanted to separate the risky operations of a bank from the safe ones. However, despite its original intentions, it painted certain financial instruments, which are incredibly safe when used properly, as speculative and unsafe. The primary example are derivatives, which could be used to hedge risks for a business and thereby greatly aid a business in avoiding financial trouble (Bishop, 2017b).

Figure 15 depicts the rise in the total federal government debt of the United States. As evident, it has been rising ever since the revival of Keynesianism in the post-crisis period. Debt levels rose at an almost unprecedented historical level during the post-crisis period. Additional debt hinders economic growth due to increased debt payments as well as creating an aura of uncertainty in the economy (U.S. Department of the Treasury, no date).

Figure 15: Total US federal government debt (1995–2018)



Source: U.S. Department of the Treasury (no date).

EU governments introduced an increase in deposit insurance ceilings, guarantees for bank liabilities and guarantees for bank recapitalizations. The extent of all of these regulations depended on a country to country basis. On the EU level as a whole, the European Systemic Risk Board was introduced in 2010 with the aim of increasing oversight and monitoring risk in the financial system (Tumpel-Gugerell, 2009). Furthermore, the European Banking Union was formed with the aim of making banks more resilient. It involved a set of initiatives that aimed at strengthening regulatory measures, as well as rules for managing failing banks (European Commission, no date a). Other measures, such as the European Stability Mechanism were introduced. It played a key role during the bailouts (Pignal, 2011). However, the overall issue in the EU was that legislative actions were aimed at banks, rather than constitutional amendments to stop the amount of debt, as that is what caused the EU crisis in the first place. Although the housing bubble impacted the EU, the main issue was a string of unsustainable macroeconomic policies in several peripheral countries.

Another prominent regulatory framework that impacted both the European Union and the United States were the Basel III accords. The issue that the Basel accords wanted to address was the over-leverage of certain banks, which was an important factor during the crisis. Basel aimed to solve this issue by a capital adequacy ratio, Tier 1 and Tier 2 capital. Furthermore, Basel sought to rate the riskiness of certain assets that banks held. For example, debt issued by Germany is bound to be safer than that of Greece and as such, this needs to be reflected in banks' ratios. Basel III failed to address some of the risk-weights of some of the riskiest assets, which was a great criticism also of its predecessor Basel II. Basel II encouraged banks to accumulate risky capital, whilst punishing lending to risky businesses. The impacts of Basel translate, as all regulation do, to increased costs. It forbids competition to enter into the market and thus drives costs up (The Economist, 2010). The problem with Basel is that it encourages the building of a risk-free buffer through government bonds, whose risk weights are close to zero. By promoting such a policy, all banks will essentially have a very similar capital base and as such, they will be all exposed to the same problems. This is contrary to having banks with diverse bases of capital and as such if there is trouble, only banks who have invested in that troubled area will be affected. This could even be the majority of banks, of course, but unlike with the Basel regulations, it will not certainly be the entire system (Norberg, 2012).

Regulatory measures were developed with regards to speculation on the financial market, more specifically short selling. The Securities and Exchange Commission banned short-selling on 799 stocks. The financial authorities of several EU countries did the same, albeit it was an uncoordinated policy that varied from state to state. The main reason behind such a policy was that investors targeted the stocks of institutions which were in distress due to the stock market crash (European Commission, no date b). However, such measures create distortions in the market place. Short sellers are a valuable asset to the economy. By analyzing data on companies privately, they can gather certain implications which the market hitherto has not revealed. By banning short selling, authorities are effectively protecting companies from their downturns and thereby artificially keeping their value up. Had they left the market to itself, it would have allowed investors to short sell companies in distress and buy stocks of companies which managed to implement risk measures ahead of time. Many investors were already foretelling the economic troubles of various companies' months and years in advance as the unsustainable policies of the government were becoming evident (Goldman, 2009). The bank HSBC managed to stay sound throughout the crisis as they managed to implement proper risk-assessment measures beforehand. Had the authorities not issued the short-selling ban, HSBC and other banks' values would have increased even more, while the values of less sound institutions would have rightfully decreased (Norberg, 2009, 85). France, for example, tried to save its main banks by issuing a shorting ban on the stocks of various banks. These banks were heavily exposed to Greek debt. Had they taken adequate steps beforehand to avoid exposure or to properly hedge their risks, they would not have been in such a state. The countries of Spain, Italy and Belgium implemented similar policies (Willsher, Garside, & Neate, 2011).

Overall, excessive regulation stifles economic growth and hurts the country's competitiveness in the long run. Table 5 shows the Index of Economic Freedom in 2008 compared to 2018. As evident, there were major shifts in ranking. Every single country's ranking diminished in the ten-year period. Portugal dropped nineteen places, from fifty-third to seventy-second. Ireland shifted from third place to sixth, which is not as large of a shift compared to other countries. Italy dropped fifteen places to seventy-ninth. Greece dropped thirty-five places, the highest drop out of all countries. Spain went from being thirty-first to sixtieth, a drop of twenty-nine places. This is the second highest drop. The United States dropped thirteen places.

Table 5: Index of economic freedom ranking

Country	**2008 ranking**	**2018 ranking**
Portugal	53	72
Ireland	3	6
Italy	64	79
Greece	80	115
Spain	31	60
United States	5	18

Source: Feulner, Holmes & O'Grady (2008); Miller, Kim & Roberts (2018).

3.4 Austerity Measures

The highlight of the austerity measures has been Greece, which first saw such measures being implemented in 2010. The initial set of austerity measures were meant to save €0.8 billion by freezing wages of government employees, cutting spending on overtime work, cutting travel expenses and reducing bonuses. Furthermore, the government also increased pensions during the same austerity package, which was counter to the intended goals of austerity (Enet, 2010). A second round of austerity measures soon followed the first one.

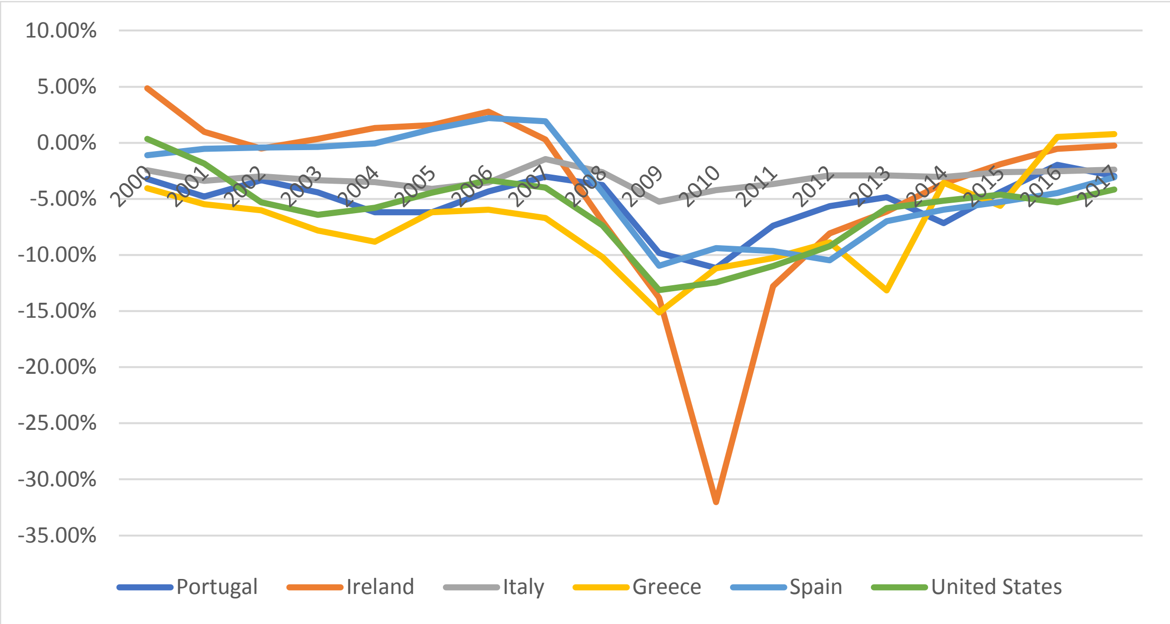
They focused on tax increases as well as cuts in spending. For example, Value Added Tax rates were increased from 4.5 % to 5 %, 9 % to 10 % and 19 % to 21 %, whilst the tax on petrol was increased by 15 %. The spending cuts were mostly related to the bonuses that were received by public employees for holidays and time-off. Although the spending cuts were welcomed, the tax increases further stifled growth. Greece needed investors to come into the country and not be driven away by high taxes (Melander, 2010).

Further austerity measures were taken. The Greek government was focused on cutting spending on public employees, rather than shifting towards an economic system which did not have as many public employees to begin with. However, there were positive steps taken even in regards to government intervention in the economy. The number of publicly owned companies was reduced from 6000 to 2000 and the number of certain government bodies, namely municipalities, was reduced. These measures were largely taken due to pressure from the EU, rather than the inherent belief in limited government by the Greek government (Loren Friedman, 2010). The fact that protesters rallied for days in an attempt to counter the austerity measures taken by the government in the streets of Athens is evident of the public sentiment towards state control (Smith, 2010).

Greece was perhaps the most publicized case of austerity measures. However, other countries also implemented austerity measures such as Italy, Spain and others. For example, Italy announced spending cuts totaling €24 billion over a period of two years whilst increasing oversight over the tax system as well (Flynn, 2010). On the other hand, Spain introduced a cut in public spending of €6 billion, a pension payments freeze, childbirth allowance abolitions and several other measures (Mallet, 2010). The media's focus on the US response has mostly been related to the bankruptcies and bailouts of the more prominent banks, whereas the austerity measures in the United States have largely been ignored and rightfully so. The crisis in the US was not due to government spending, but rather government intervention. Furthermore, the United States implemented a stimulus package as a response measure.

Despite austerity being under criticism by Keynesian economists such as Krugman (2015), austerity may not even be taking place, at least on the scale portrayed. Namely, the argument is that although measures are taken that resemble austerity, as certain budget deficits have decreased over the years, the budget deficit of no country has actually gone down to zero. Figure 16 shows the budget deficits of the peripheral countries from 2007 till 2018 (OECD, 2017a). As evident, these countries have reduced deficits from what they were during the beginning of the crisis, but have not really made much progress since. This indicates that much of the deficit reduction was political, as in demanded by the central authorities of the EU rather than being due to shifts in the political sentiments of these countries (Thornton, 2014). The United States, as evident on Figure 18 as well, has not managed to create a budget surplus. The most likely explanation is due to the increase in government spending and government debt.

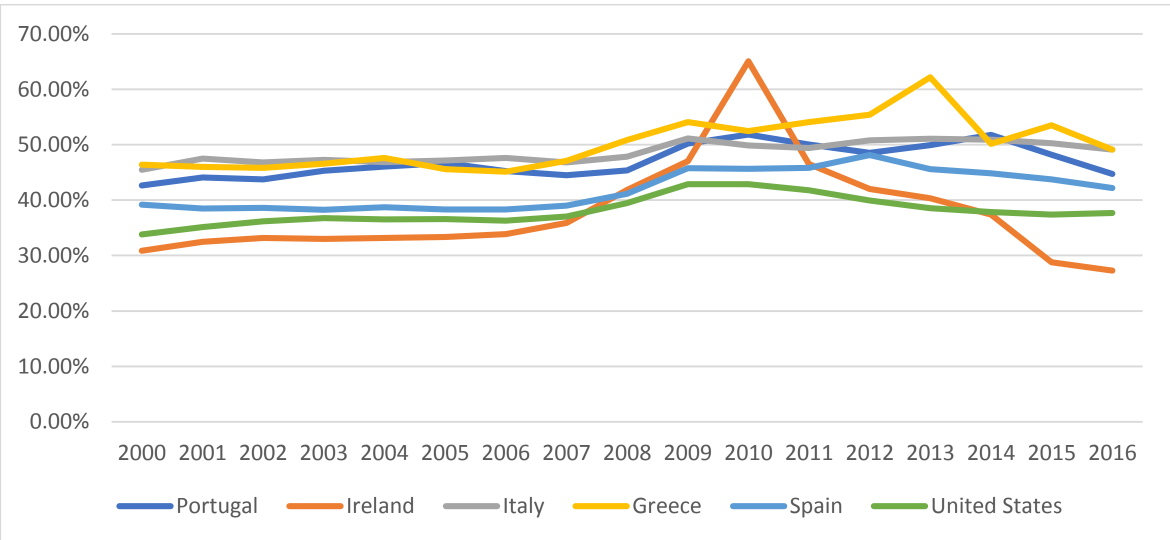
Figure 16: Government deficit as a % of GDP (2000–2017)



Source: OECD (2017a).

With regards to spending, it appears that no country, apart from Ireland, has taken any significant steps from reducing spending from a structural point of view, as Figure 17 shows. They have all kept within the bounds of a certain level since the crisis. Even if pre-crisis data is analyzed, it is evident that apart from Ireland, some countries are spending more as a percentage of GDP post-crisis. Ireland, as aforementioned in the thesis, was one of the most liberal economies in the Eurozone and was also very competitive. The United States has also kept spending constant throughout the years, rather than reducing it (OECD, 2017b).

Figure 17: Government spending as a % of GDP (2000–2017)

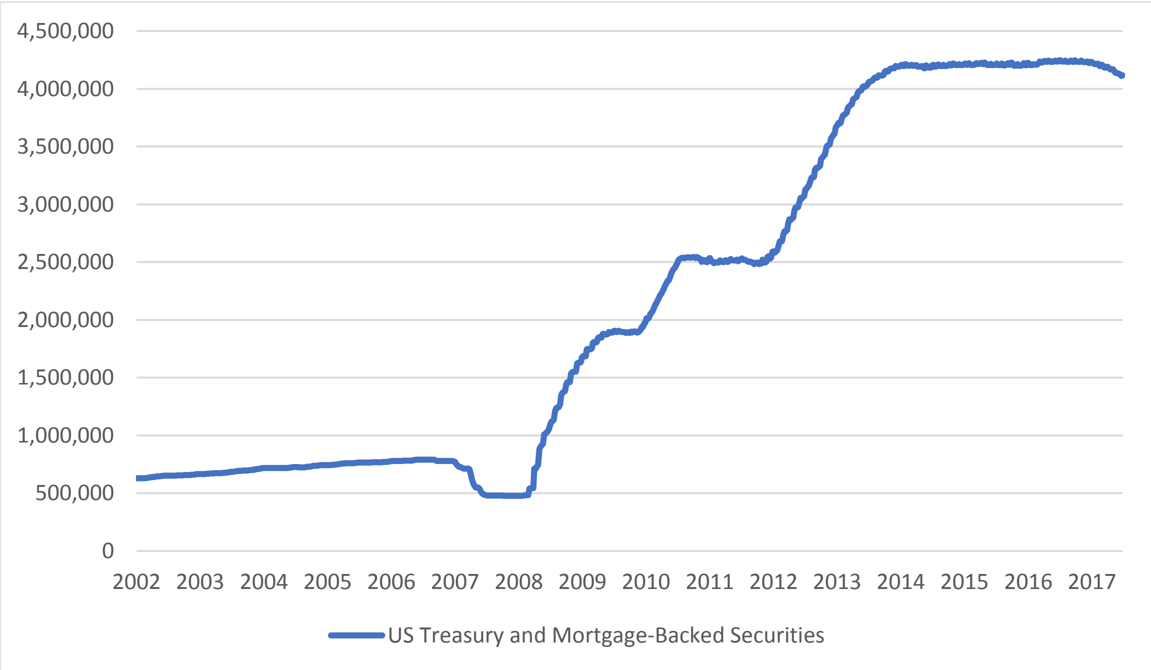


Source: OECD (2017b).

3.5 Monetary Policy

The Federal Reserve initially decreased the federal funds rate from 5.25 % in September 2007 to an all-time low of 0.25 % by the end of 2008. Much of the reduction occurred in the first and last quarters of 2008 (Rich, 2013). Apart from the traditional expansionary policy of lowering the interest rate, the Federal Reserve also pursued an unconventional monetary policy called quantitative easing. Quantitative easing is the purchase of government securities by a central bank in order to lower interest rates and increase the money supply. During quantitative easing, the money supply was increased by roughly $4 trillion. This greatly raised the Federal Reserve's assets side of the balance sheet. The Federal Reserve's liabilities side also grew as the reserves of banks kept increasing. The Federal Reserve thought that they would be used to stimulate growth. However, the problem was that the majority of the money injected in the economy was kept by US banks as reserves. This number was $2.7 trillion at its peak (Kenton, 2019). Figure 18 indicates all treasury securities as well as mortgage-backed securities held by the Federal Reserve.

Figure 18: US Treasury securities and mortgage-backed securities held by the Federal Reserve (2000–2017)



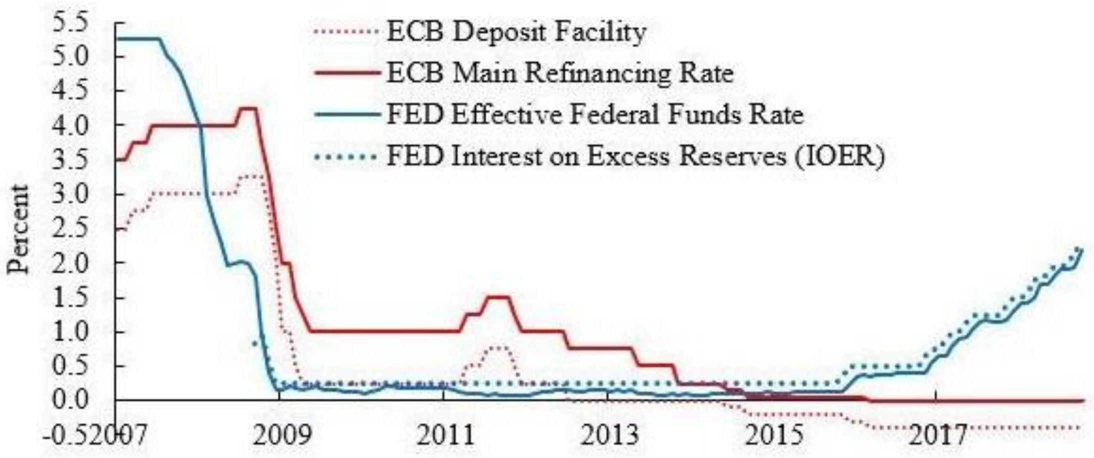
Source: Board of Governors of the Federal Reserve System (US) (no date).

Initially, the European Central Bank raised their main policy rate, the main refinancing operations rate, from 4 % to 4.25 % in July of 2008. This decision was made under ECB president Jean-Claude Trichet in order to curb inflationary pressures. However, the policy of the ECB was soon reversed, as an expansionary monetary policy was introduced which would dominate the post-crisis period (Look, 2018). There was another increase in 2011 in the same policy rate, from 1 % to 1.25 % and then finally to 1.5 %. However, this policy was also reversed by the end of the year as well (Atkins, 2011). As a result, the monetary response by the European Central Bank has centered around monetary expansion.

Namely, the ECB cut interest rates to record lows, from 4.25 % in October of 2008 to a then-record low of 1 % in 2009 (Hopkins, 2009). The ECB also pursued a program of quantitative easing, but much later, starting in 2015. Mario Draghi, the president of the ECB, announced an expanded asset purchase program which would purchase €60 billion (later set to €80 billion) worth of Eurozone government bonds, bonds issued by agencies and bonds issued by European institutions. The reason behind the program was a prolonged period of low inflation as the program intended to set inflation rates to 2 % (Jones, 2015). The main issue behind the ECB's monetary policy is that it was counter to what was happening in terms of fiscal policy which was austerity. This mixed policy bag was flawed, as whatever positive came about from one policy was stifled by the other.

As aforementioned, one of the main issues behind quantitative easing was that banks kept a large number of reserves. However, the excess reserves interest rate climbed to as much as 2.4 % in recent years. In sharp contrast, the EU has maintained a negative interest rate since 2014 on commercial banking deposits, thereby forcing banks to pay money to the ECB. German banks have been forced to pay as much as €20 billion (Schnabl & Stratmann, 2019).

Figure 19: Main policy rates of the Federal Reserve vs the ECB (2007–2017)

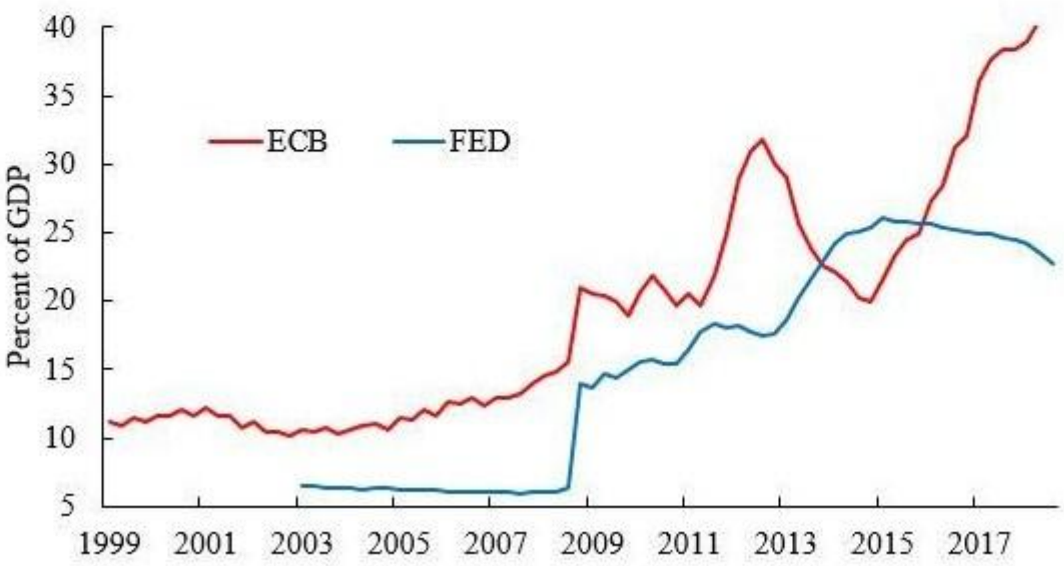


Source: Schnabl & Stratmann (2019).

With regard to quantitative easing, the main issues were speed as well as the nature of the asset purchases. As mentioned earlier, the ECB instituted quantitative easing as late as March 2015 after the first expansionary measure of the ECB balance sheet had expired. Furthermore, the Federal Reserve purchased risky securitized mortgages, helping to prevent a major financial downturn. In addition, the TARP program helped stabilize real estate prices and prices of assets in general, thereby bringing stability to the balance sheets of banks. Less than 50 % of purchases under quantitative easing by the Federal Reserve were bonds, whereas the ECB's government bond purchases constituted 80 %. Such differences imply that the ECB was focused on saving various EU governments, rather than the banking system (Schnabl & Stratmann, 2019).

Furthermore, regardless of the initial size of the Federal Reserve's balance sheet, there has been a reduction in recent years as well as an overall halt to the expansionary policy. The Federal Reserve has been pushing up the federal funds rate, as well as loading off its balance sheet. It began such measures much earlier than the ECB did. Figure 20 indicates these disparities.

Figure 20: The balance sheet of the Federal Reserve as a % of GDP versus the ECB (1999–2017)



Source: Schnabl & Stratmann (2019).

It is evident that the United States was quicker in its response than the ECB and thus brought much-needed stability to the system. However, the issue at hand is whether by doing so the Federal Reserve set the foundation for another economic downturn. The Federal Reserve's response is almost identical to previous crises. The Federal Reserve decreased interest rates as a response to the technology bubble crash and this decrease helped form the housing bubble itself. The technology bubble was also a product of expansionary monetary policy as a response to the economic downturn during the 1990s. Such expansionary policies create a surplus of cash in the economy, allowing investments to be pursued which otherwise would not have been undertaken. The Federal Reserve has officially ended its expansionary policies by selling off its balance sheet. However, at the announced rate of around $50 billion per month, it will take several years until the contraction is fully implemented. This is due to the fact that it wants to reduce its balance sheet size to pre-crisis levels of $1 trillion (Chambers, 2018).

CONCLUSION

The research questions, which were set up at the beginning, will be addressed to see to what extent has the thesis demonstrated them to be true or false.

– Was the crisis caused due to government actions, both in the US and the EU?

The facts outlined in this thesis support this.

The US government developed several government-run policies as well as government-run agencies that exacerbated the crisis. In short, with the help of legislative acts such as the Community Reinvestment Act, as well as other legislative pieces which came about during the 1990s, the United States government forced banks to issue mortgages to individuals who were not credit worthy. These mortgages were later repurchased by government agencies such as Fannie Mae and Freddie Mac, which allowed banks to have money on hand to issue more mortgages. These mortgages were converted into financial securities and often mortgages of all type were bumped together in order to diversify risk. This greatly exacerbated the housing bubble (Sowell, 2009).

With regards to the Federal Reserve, it pursued a low interest policy following the technology bubble crash as well as the 9/11 terrorist attacks, which shook the US economy. Such practices made variable-interest mortgages favorable. However, as soon the economy was overheating, the Federal Reserve proceeded to raise interest rates and thus forcing many of the people who had taken variable rate mortgages to default as their monthly obligations became bigger (La Monica, 2005).

The EU and the ECB behaved in a similar manner. Several EU countries pursued government policies which created deficits and accumulated debt. The peripheral countries of Greece, Portugal and Italy had welfare states for several decades and were not very competitive economies. Financing all of these government programs was made easy by the low rates that the Euro offered. Spain also had its fair share of troubles, but it did not have such a huge welfare state as the other economies. Ireland was such a competitive economy that it drove investors from all over the world to it. Furthermore, the policy of the ECB was almost identical to that of the Federal Reserve, as it pursued lower interest rates at the beginning of the millennium and continued to raise them afterwards (Bagus, 2012).

– Did the Keynesian response give negative results in the US?

The facts outlined in this thesis support this.

The stimulus package resulted in more debt, wasteful spending and essentially laid the foundation for a new economic downturn. Those resources should have been used by the private market. The government does not know as well as the private sector does as to what is most profitable to pursue. Debt has risen as a result of all of these policies at unprecedented levels. This creates further economic distress. Furthermore, as mentioned throughout the text, nothing critical was done about the agencies that created the crisis in the first place, namely, Fannie Mae, Freddie Mac, HUD and others. Any government response should have centered around shutting such agencies down and allowing banks to issue mortgages to whomever they want (Norberg, 2009).

– Did the contrary responses of monetary and fiscal policy give negative results in the EU?

The facts outlined in this thesis support this.

Several EU countries responded with austerity measures in order to cut back spending in the economy. Greece was at the forefront of these measures in the media. The ECB responded in a much different fashion – lowering interest rates in order to pump money into the economy to stimulate it. This meant that the policies were contradicting each other and thus stifling recovery as there was no clear path. The policy of the EU during the early 2000s was also a policy of low interest rates and it was this policy that helped fuel the debt crisis, as stated in the thesis (European Central Bank, no date).

Lastly, the EU has not shifted away from government control of economy and its government control over the economy has further expanded. No peripheral country has made any structural shifts and even the most liberal economy, Ireland, has decreased in its economic freedom ranking, as demonstrated in the thesis (Miller, Kim, & Roberts, 2018).

– Did the US recover faster than the EU due to faster liquidity injections?

The facts outlined in this thesis support this.

The US was much quicker in implementing bailouts, regardless of how controversial they may have been. The EU never injected large amounts of capital into the economy, thereby continuing the trend of uncertainty. The US had two large injections, whereas the EU had smaller injections for several years to come (The Economist, 2010).

The Federal Reserve cut its rate much lower than the ECB and was also willing to purchase distressed assets more than the ECB, thereby preventing a total collapse. The ECB has been reluctant on lowering its rate to that that of the Fed. There are further coordination problems with regards to the Euro which make monetary policy in the EU much more difficult than in the US (Schnabl & Stratmann, 2019).

The main reason behind the malfunctioning of the Euro is the vast region over which it is spread – a region that does not share a common culture, language or identity. As such, the economies of each of these countries differ greatly and have been impacted by the crisis all in a different manner. On the other hand, the US Dollar is used in a country that is homogenous in language, history and other factors. As a result, conducting monetary policy is vastly more complicated in the EU, than in the US (Friedman, 1997).

Lastly, the response of the Federal Reserve has been similar to its response to the technology bubble crash in 2001. It was precisely due to such an increased supply of money in the economy that the housing bubble was formed. Prior to this, the response to the economic downturn of the 1990s was also an expansionary monetary policy. This led to the formation of the technology bubble in the first place. Therefore, it is evident that, if analyzed historically, expansionary policy has caused economic instability in the longer term (Callahan & Garrison, 2003).

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APPENDICES

Appendix 1: Povzetek (Summary in Slovene language)

V magistrski nalogi želim preučiti odzive Združenih držav Amerike (v nadaljevanju, ZDA) in Evropske Unije (v nadaljevanju, EU) na finančno krizo leta 2008. Tako ZDA kot EU predstavljata pomemben del svetovnega gospodarstva, njihove ekonomske politike pa so v marsikaterem pogledu zgled ostalim državam. Namen magistrske naloge je ponuditi usmeritve pri oblikovanju prihodnjih ekonomskih politik in se pri tem osredotočiti na dva ključna vidika oblikovanja politik v obdobju finančne krize leta 2008.

Najprej želim ugotoviti razloge, ki so ZDA omogočili hitrejše okrevanje v primerjavi z EU. S primerjavo in analizo sprejetih ekonomskih politik ZDA na eni in EU na drugi strani bom preučil razlike v hitrosti okrevanja teh dveh držav (Schnabl & Stratmann, 2019).

Nadalje želim v magistrski nalogi ugotoviti, ali so ZDA in EU v okviru politik za reševanje finančne in ekonomske krize naslovile prave težave, ki so povzročile nastanek krize. Pokazal bom, da se niti ZDA niti EU niso odzvale ustrezno, in da so bile njihove politike škodljive, hkrati pa želim ugotoviti, kaj je ZDA omogočilo, da so iz krize izstopile hitreje.

Da lahko celostno razumemo in analiziramo učinke določenih politik, je potrebno ugotoviti in nasloviti prave vzroke za nastanek finančne krize, ki se med ZDA in EU pomembno razlikujejo, kljub razlikam pa lahko ugotovimo, da so povezani z intervencijami države v gospodarstvo. Razlogi za pojav finančne krize v ZDA namreč izhajajo iz poseganja države v nepremičninski sektor, medtem ko so vzroki za nastanek krize v EU povezani z naraščajočim javnim dolgom perifernih članic EU (Norberg, 2009).

Ustreznost odziva na finančno krizo lahko presojamo šele, ko identificiramo prave vzroke za njen nastanek. V magistrski nalogi trdim, da so razlogi za nastanek finančne krize leta 2008 naslednji:

- V devetdesetih letih prejšnjega stoletja so ZDA zasledovale politiko, ki bi nižjemu sloju omogočila lažji nakup lastniških stanovanj. Z opiranjem na zakon Community Reinvestment Act (Zakon za povečanje dostopnosti posojil prebivalstvu, v nadaljevanju CRA) in v sodelovanju s finančnimi institucijami kot sta Freddie Mac in Fannie Mae ter drugimi zakonskimi akti so ZDA prisilile komercialne banke, da so izdale drugorazredna hipotekarna posojila posameznikom z nizkimi ocenami kreditne sposobnosti. Fannie Mae in Freddie Mac sta drugorazredna hipotekarna posojila odkupovali od komercialnih bank, ki so tako lahko izdajale še več posojil (Sowell, 2009).

- Za Portugalsko, Italijo in Grčijo sta bila značilna visok delež zaposlenih javnem sektorju in močna vloga države v gospodarstvu. Države so si za financiranje državnih programov in politik izposojale sredstva po visokih obrestnih merah (BBC, 2012).

- Po terorističnem napadu 11. septembra in poku tehnološkega mehurčka v istem letu je ameriška centralna banka (FED) z namenom spodbuditve gospodarske aktivnosti znižala obrestne mere na zgodovinsko nizko raven 1 % (Woods Jr., 2009, 79–82). S tem je postalo zadolževanje ugodnejše, kar je omogočilo zalet prej omenjeni politiki spodbujanja nakupa lastniških stanovanj. Hkrati je bilo mnogo posojil v tem obdobju izdanih po variabilnih obrestnih merah, ki so bile vezane na referenčne obrestne mere ameriške centralne banke. Ko je FED zaradi skrbi pred pregrevanjem gospodarstva zvišal obrestno mero iz 1 % na 4,25 %, so posojilojemalci z variabilnimi obrestnimi merami postali nezmožni odplačevati posojilne obveznosti (La Monica, 2005).

- Valuta evro temelji na monetarnem sistemu heterogenih držav, ki nimajo skupne kulture in homogenega ekonomskega sistema, kar zmanjšuje mobilnost delovne sile in otežuje koordinacijo monetarnih politik. Euro ima tako strukturni problem, ki pa ga ameriški dolar nima (Friedman, 1997).

ZDA in EU so sprejele različne ukrepe za zajezitev finančne krize, vendar spodnji seznam ukrepov priča o tem, da niti ZDA niti EU nista naslovili izvornih razlogov za nastanek krize.

- ZDA so zasledovale Troubled Asset Relief Program (Program reševanja finančnih institucij s slabimi terjatvami, v nadaljevanju TARP) in spodbujale nakup finančnih institucij v težavah. Tudi za EU so bili značilni programi reševanja finančnih institucij z najbolj odmevnim programom reševanja irskega bančnega sistemu. Hkrati je EU reševala celotne ekonomije držav kot so Grčija, Irska, Portugalska in druge (Bagus, 2010).

- Mnoge države EU so pripravile sheme za spodbujanje infrastrukturnih projektov, medtem ko so ZDA v letu 2009 sprejele paket ukrepov za okrevanje imenovan American Recovery and Reinvestment Act vreden 787 milijard ameriških dolarjev (Sowell, 2009).

- ZDA so v odzivu na finančno krizo sprejele ukrepe za spodbudo gospodarstva, medtem ko so države članice EU, še posebej Španija in Grčija, sprejele varčevalne ukrepe, s katerimi so želele obrzdati državno potrošnjo z namenom povečanja stabilnosti v prihodnosti (Loren Friedman, 2010).

- Kljub temu, da je se je Evropska Centralna Banka (ECB) sprva odzvala z restriktivnimi ukrepi, sta tako FED kot ECB kasneje zasledovali podobno ekspanzivno monetarno politiko, saj sta obe centralni banki znižali obrestne mere z nameon spodbuditve gospodarstva (Look, 2018).

V magistrski nalogi ugotavljam, da je bil odziv ZDA na finančno krizo mnogo hitrejši kot odziv EU. ZDA so se enako odzvale tudi v primeru tehnološkega mehurčka leta 2001, ki je kasneje pripeljal še do nepremičninskega mehurčka. Prav tako so bili programi reševanja finančnih institucij v težavah izvedeni hitreje, s čimer so ZDA stabilnost trgov zagotovile prej kot EU. Nadalje ugotavljam, da niti ZDA niti EU niso naslovile pravih vzrokov za finančno krizo leta 2008. ZDA niso dopustile stečaja Fannie Mae, Freddie Mac in drugih državnih družb kot je United States Department of Housing and Urban Development (Urad za stanovanjski in mestni razvoj, v nadaljevanju HUD) (Sowell, 2009). Države članice EU niso reševale makroekonomskih neravnovesij v perifernih državah, kakor tudi niso sprejele zakonskih aktov za omejevanje zadolževanja (Bagus, 2012).

Sprejeti ukrepi za spodbujanje gospodarstva v ZDA so utrdili vlogo države gospodarstvu. Varčevalni ukrepi v EU so do neke mere pripomogli k zmanjšanju državne potrošnje, vendar niso dosegli zmanjšanja proračunskih primanjkljajev. V splošnem lahko trdim, da sta se tako ZDA kot tudi EU na finančno krizo odzvale z državnimi intervencijami, ki so bile glavni razlog za njen nastanek. To ima pomembne posledice za prihodnost in lahko vodi celo v naslednjo gospodarsko krizo.