Utrecht University

School of Economics

# The European Central Bank's Quantitative Easing Programs:

# A study on how the ECB's monetary policies have remained within their legal mandate

Applied Economics Research Course

Bachelor Thesis

**Researcher:** Ben Sarfati

**Student Number:** 5595010

**Email:** b.w.c.sarfati@students.uu.nl

**Supervisors:**

Dr. Andrea Minto

Dr. Rients Galema

**Word Count:** 6400

**Date:** 28th June 2018

# Statement of Originality

I, Ben Sarfati (5595010) herewith declare to have written this document and that I am responsible for the content of it. I declare that the text and the work presented in this document is original and that no sources other than those mentioned in the text and its references have been used in creating it.

Utrecht University School of Economics is responsible solely for the supervision of completion of the work, not for the content.

## Abstract

The sovereign debt crisis has tested the resolve of the Eurozone, its members and the European Central Bank. With inflation expectations turning deflationary and interest rates at the zero lower bound, the ECB is left with nothing but the unconventional tools of monetary policy. The purpose of this paper is to analyse, from a legal perspective how the ECB has used its powers to achieve price stability without contravening the European Treaties. I argue that, in substance, Quantitative Easing despite the criticisms over its legality and the claims that the ECB may be overstepping its mandate, has remained a lawful monetary policy tool, with an extensive legal basis that justifies the ECB's actions. A data analysis of key government finance statistics related to the fiscal situation of three Eurozone members revealed that there has been no significant improvement in their debt situations since QE began. Even with the presence of fiscal reforms in the investigated countries, there were no sizeable changes in their debt levels that could link the Expanded Asset Purchase Programme to direct monetary financing. To this end, whatever monetary policy measure the ECB may conjure up, it is highly unlikely the ECJ will ever strike down one of these programs, especially if it serves to stabilise the Eurozone. The absence of evidence to corroborate the monetary financing claim to the ECB's asset purchases may only serve to reinforce the notion that their decision making is well within the rule of law.


## Table of Contents

# 1 Introduction

The housing market crisis that began in the United States in 2008, unfortunately spread like a disease across the rest of the world, with the Eurozone facing its own sovereign debt crisis in 2011. The high level of interconnectedness between financial institutions globally would prove to be a systemic risk for financial markets. It ultimately led to many American banks and financial firms receiving government support, getting bailed-out or nationalized but in the Eurozone it was governments themselves who were at risk of becoming insolvent. The Treaty on the European Union states in Article 126 that Member States (MS) must avoid excessive government deficits (*TFEU, 2009a*). The debt crisis put the stability of the Eurozone at risk with several countries requiring debt restructuring and in some cases receiving substantial loans from the International Monetary Fund and Member States, thereby failing to fulfil their budgetary commitments outlined in the treaties.

When the conventional tools of monetary policy are rendered ineffective in stimulating economic recoveries, central banks must consider other options. When nominal interest rates hit the zero lower bound, a phenomenon called a "liquidity trap" (*Krugman, 1998*) may arise, as rate changes no longer provide the necessary impetus to boost aggregate demand. Amongst their options are Open Market Operations (OMO) and the slightly more unconventional tool that is Quantitative Easing (QE). OMOs are liquidity providing measures where banks bid for liquidity on short-term securities and assets (*ECB, 2018a*). Economist Alan Blinder defines QE as "increasing a central banks balance sheet to ease liquidity and credit conditions" (*Blinder, 2010*). This is done by acquiring long term government bonds, securities and other various assets. This should increase price on government bonds thus decreasing their yield and lowering interest rates. In theory, these lower rates coupled with a bigger supply of money should promote borrowing, investment and consumption. The unconventionality that surrounds quantitative easing stems for one, from its irregular use by central banks but also the doubts concerning the legality of it and its actual impact on economic growth. On the other hand, quantitative easing has successfully helped the Bank of Japan, the Bank of England and The Federal Reserve in combatting recessions. However, in the Eurozone QE is opposed by some countries, notably Germany. Issues have been raised about the legality of the ECB's quantitative easing programs in light of their mandate.

The QE programs the ECB has put forward have drawn some criticisms due to the fact that they may fall under the realm of economic or fiscal policy; an area the ECB should not be intervening in. Notably, the Outright Monetary Transactions Program (OMT) which was created in 2012 to combat the sovereign debt crisis. The program's legality was put into question when it the German Constitutional Court put forward a claim to the European Court

of Justice (ECJ) that the OMT program would be a violation of their mandate and of Article 123 TFEU concerning monetary financing (Case C-62/14, para 9. 2015).

This paper will assess how the European Central Bank's Quantitative Easing policies have remained within their legal mandate without violating the EU treaties. The guiding EU law principle of legal certainty will be explored within the context of QE to dispel the the legal doubts concerning the Art. 123 TFEU prohibition on providing monetary financing to member states. The analysis will consider from a legal perspective the framework that governs the ECB and its QE programmes. Primarily, an understanding of the goals of QE as laid out by the ECB is key in order to see if these goals have been reached. Although, if MS are issuing their debt on the markets, it is of special interest to determine if the beneficiaries of the QE programmes have seen any improvements in their government deficits; which of course would be a violation of the EU treaties if these improvements were linked to purchases of government bonds.

There will be a key focus on how the ECB's actions remain within the monetary policy realm without violating EU law. In order to contribute to the growing literature about the ECB and QE, my analysis will be two-fold with a primary focus on the legal perspective but coupled with a data study of key government finance statistics to determine if QE has amassed to monetary financing. I aim to create a bridge between the legal analysis and the incorporation of economic elements throughout the paper. Within the QE literature, studies investigating the possible linkages between QE and its impact on fiscal situations of member states is yet to be conducted. The data will be derived from three Eurozone members: Italy, Portugal and Spain. This topic is particularly relevant in society as QE is an ongoing ECB action that has proved to be a solution but also a source of friction between Member States, over the ever-expanding scope of the ECB

The paper is organised as follows: Section 2 connects the literature on QE to the investigation at hand. Sections 3 will outline the legal framework governing the ECB and its QE programs. Section 4 will present the data and explain the methodology. Section 5 presents the results. Lastly, section 6 concludes the paper.

## 2 Literature Review

Ever since the ECB began delving deep into their array of monetary policy tools, they have often been met with criticisms for the unconventionality of some of their initiatives. Criticisms ranging from the supposed legality of some QE measures or the fact that the ECB is dealing with fiscal policy issues. One QE initiative that was met with condemnation was the Outright Monetary Transactions Program (OMT) announced in 2012 by the ECB. OMT would involve the ECB buying up Eurozone countries' short-term sovereign bonds in the secondary markets, in the hope of reducing market interest rates and thus turning itself into a lender of last resort (*Saraceno, 2015*). However, it was not to be a free lunch as adherents to the program had to follow stricter fiscal and budgetary measures to receive assistance from the ECB. The German Constitutional Court in Karlsruhe requested a preliminary ruling from the ECJ over claims that the OMT program was a breach of EU law as it would constitute illegal monetary financing. The main article infringements put forward were that the OMT decision would exceed the ECB's mandate as listed in Articles 119 and 127 TFEU and a violation of Article 123 TFEU (*Novak, 2014*). It must be noted that the OMT program has not yet been activated, but the mere fact that it was announced produced "desirable stabilising effects both on volatility in the bond markets and on extreme spreads between the debts issues by Member States", explains Petr Novak from the European Parliament Think Tank (*Novak, 2014*). The program involves the ECB purchasing public debt instruments on the secondary market, however a provision in Council Regulation No 3603/93 states that "purchases on secondary markets must not be used to circumvent the objective" of Article 123 TFEU (*Council regulation EC No 3603/93*). Therefore, the legal structuring of the OMT program was crucial, it had to be in line with certain EU law principles such as proportionality, subsidiarity, conferral of powers and legal certainty.

A monthly bulletin published by the ECB in 2012 details how the OMT complies with the EU treaties. The OMT much like the Asset Purchase Program (APP) has the aim of achieving the primary objective of price stability; the guiding objective of all monetary policy measures. The OMT was deemed necessary to restore the functioning of the monetary policy transmission channel (*ECB, 2012*) and seeing as government bonds play a crucial role in this transmission, intervening on this market to "mitigate medium-term risks to price stability" (*ECB, 2012*) was a warranted action by the ECB. Moreover, the Statute of the ESCB Article 18 states that the use of outright purchases of bonds as conduit for monetary policy is within the remit of the ECB (*Article 18.1 2016*). It would seem rather contradictory for their Statute to contain provisions that could not be upheld in court. The statute of the ESCB makes it

clear on what the institution can do; a commitment to legal certainty[1]. The subsidiarity principle is certainly fulfilled, as the ECB is the most versed and capable of intervening during Euro area recessions, better than the Member States could on their own. The principle of proportionality is crucial when the ECB considers interventions, they must act in a manner that is relative to the issue being dealt with. In this case, OMT would have only been used to achieve the price stability objective. OMT was proportional in the following ways; it would be terminated once the objective was reached and it only involved the purchase of short-term bonds which retain a closer link to monetary policy than long term ones[2] (Case C-62/14, 2015). Additionally, there were strict conditions to be adhered to before receiving aid via the OMT program. The case Gauweiler v Deutscher Bundestag lends itself well to the literature; paragraph 5 from the judgment states that "full compliance with macroeconomic adjustment programs" (Case C-62/14, para 5. 2015) by member states was mandatory, not only does this show the conditionality of the OMT program but also it's proportionality. The ECB would not provide outright help, it would be measured and only if the MS concerned were abiding by the adjustment programs.

The OMT could not infringe upon the fiscal discipline of member states in the sense that it did not impair the progress of Member States pursuing long-term structural budgetary reforms (*Novak, 2014*). The court clearly stated that the OMT program did not infringe upon the principle of proportionality (*Novak, 2014*). The OMT purchases would not have an equivalent effect of primary market bond purchases opined the ECJ (Case C-62/14, para 9. 2015) as well as saying that such a policy tool would not provide Member States with an incentive to not pursue "sound budgetary policy" (*Novak, 2014*). The OMT decision is crucial as it offers clarity on what the ECB's power is within EU law. Such a judgment by the ECJ has the potential effect of shielding the institution against possible challenges to the legality of the QE initiatives it began to pursue in January 2015.

While QE may be a monetary policy tool, one must recognize the political aspect at play and politics must be practical when it involves 19 different governments. It is improbable the ECJ would ever disapprove of a QE program that would serve to stabilize the Eurozone. The existence of the Euro, at the time was dependent on action by the ECB and the ECB did what was necessary in spite of Article 123 TFEU; an opinion shared by Advocate

[1] The legal certainty principle states that laws must be certain, clear and precise and the legal implications must be foreseeable. The ESCB Statute was amended after 2012, some time before the ECB began the QE programs. It clearly states what is and what is not within the ECB's legal remit.

[2] Governments finance themselves with long-term bonds instead of short-term ones.

General Cruz Villalón (*Morici, 2015*). Peculiarly, the apparent absence of literature surrounding the legality of the ECB's actions may only serve to reinforce the notion that their decision making is within their legal remit. One paper that aims to fill the gap in the literature is *The Law and Economics of Quantitative Easing* by Andrew Johnston and Trevor Pugh. They make a clear distinction in saying that QE amounts to indirect monetary financing as opposed to direct financing. They state that the money the Treasury[3] raises is in fact created by the Bank of England (BoE) and their bond purchases has relieved the government from more expensive borrowing on capital markets (*Johnston, 2014*). According to Johnston & Pugh secondary market purchases amount to indirect monetary financing, similar in the way a re-mortgage is monetary financing (*Johnston, 2014*). The refinancer, in this case the BoE, discharges the borrower's obligations, the borrower being the British government, to its creditors and acquires the claims on the borrower (*Johnston, 2014*). In short, the central bank pays the bondholder the market price for the bond and thus acquires a claim on the Treasury – an example of financing an entity (*Johnston, 2014*). In the case of the UK, when the Treasury is borrowing money, it must pay interest but when a BoE subsidiary is the lender, the interest paid is returned to the Treasury – a circular flow of payments financing the debt of the government, one of Johnston's and Pugh's findings. When considering QE by the ECB, their extensive bond purchases not long after they have been issued by governments may incentivize third party entities to purchase these bonds on primary market auctions. Knowing they will be bought up again instantly may allow for a capital gain for investors and hasten the process of providing financing to governments which could fall in the category of circumventing Article 123 TFEU. This supposition is easily quelled when one considers the issue limit the ECB has placed on their bond purchases as well as the minimum waiting time between the issuance of government bonds on the primary market and their purchase in the secondary market (Case C-62/14, para 8. 2015).

Within the literature surrounding the legality of QE and the powers of the ECB, Advocate General at the European Court of Justice Cruz Villalón weighs in on the topic. The ECB holds the power to control monetary policy, however matters of economic policy remain within the remit of Member States. Some would say that the current APP is a matter of economic policy but not according to Mr. Villalón, so long as the program is solely focused on maintaining price stability and is disbanded once the objective has been reached (*Morici, 2015*). The ECB has been coy as to the duration of the program, claiming it will go

[3] Her Majesty's Treasury in England

on until needed; at the time of writing, HICP inflation in the Eurozone was 1.9% in May 2018 (*ECB Statistical Data Warehouse*), yet the bond purchases may well go beyond the initial September 2018 deadline the ECB published (*ECB, 2018b*). Villalón further opines that because the ECB has continuously emphasized the program is there to affect monetary policy, they should not be met with such criticism for attempting to curb the recession (*Morici, 2015*). This view was clearly contrasted by Johnston & Pugh where they believe that if "a central bank did not offer justifications couched in monetary policy terms…there exists a serious risk of the intervention falling foul of Article 123 TFEU" (*Johnston, 2014*). It would seem that, according to a EU Advocate General the mere reiteration that a policy is there and only there to maintain price stability is enough to be approved; regardless of the other effects that follow. The ECB is endowed with the utmost independence but on a political level there seems to be a trade off for the ECJ between strictly following the rule of law against the potential dissolution of the Euro area and more importantly, the failure to achieve one of the cornerstones of the Treaty on the European Union to "establish an economic and monetary union whose currency is the euro" (*TEU, 2009*).

The famous monetarist Milton Friedman once said that one way to combat deflation would be to drop money to the population from a helicopter (*Friedman, 1969*). This would force households to spend so long as the government would not take this money back out of circulation with higher taxes (*Friedman, 1969*). This is a form of expansionary fiscal policy to fight deflation and would certainly help in making QE more effective. Cecchetti and Schoenholtz however offer a more modern version of helicopter money that highlights the need for cooperation between fiscal and monetary policy. Helicopter money would "be a *fiscal expansion that is financed by central bank money rather than by bonds"* (*Cecchetti & Schoenholtz 2016*). The central bank would need to credit the Treasury who would then proceed to transfer the payments to individuals or engage in public infrastructure projects. Whilst QE can be the subject of controversy, one cannot discount the importance fiscal policy plays if monetary policy wants to achieve its intended objectives. Ad van Riet discusses this very point in his paper *Government Support to the ECB* (2017), he explains how governments should focus on the supply side of the economy; i.e. structural reforms, removing regulatory impediments, low tax rates and sustained public infrastructure investment (*van Riet, 2017*). One aspect that will be considered is the fiscal path that Italy, Portugal and Spain were on during QE. This is crucial to the analysis as it shows the ECB is not engaging in areas of fiscal policy. Joachim Wuermeling, an executive board Member at Deutsche Bundesbank explains that any form of helicopter money involves "distributional decisions" (*Wuermeling,*

*2018*), and this is the government's domain, not the one of central banks who must remain independent (*Wuermeling, 2018).* It is essential that central governments supplement the ECB's actions with fiscal reforms, just as the the ECB supports the general economic policies of the Union.

## 3 The legal framework of the ECB and QE

The ECB has been able to defend claims against the legality of some of their monetary policy tools by providing an extensive set of legal basis that govern their policy actions. The TFEU and Protocol No.4 on The Stature of the ESCB and ECB provide the main legal framework of the ECB.

First and foremost, the ECB's mandate is laid out in Article 127 TFEU with "the primary objective of maintaining price stability" (*TFEU 2009b*). It continues that "without prejudice to the objective of price stability, ESCB shall support the general economic policies of the Union" (*TFEU 2009b*). Their basic tasks are the following:

- *"Defining and implementing monetary policy of the Eurozone"*
- *"Conducting foreign-exchange operations consistent with Art. 219"*
- *"Holding and managing the official foreign reserves of Member States"*
- *"Promote smooth operation of payment systems*."

(*Article 3 Protocol No.4 2016)*

Financial stability is paramount to the survival of the Eurozone and amongst the articles that aim to guarantee that is, Article 123 TFEU on the prohibition of monetary financing, the prohibition of giving privileged access to financial institutions or central governments (*TFEU 2009c*), the no-bail out clause listed in Article 125 TFEU and lastly the fiscal provisions listed in Article 126 TFEU to avoid Member States running excessive budget deficits (*TFEU 2009a*). Seeing as Article 123 prohibits primary market purchases of bonds, meaning buying straight from governments, the ECB can only buy these government-issued bonds on the secondary market. The legal framework of the ECB remains politically independent; this implies that neither the ECB or the National Central Banks (NCBs) of the Eurozone can take instructions or allow them to be influenced by political institutions of any kind.

The ECB aims for an inflation rate of in and around 2%, but not higher over the medium-run to fulfil its price stability mandate. It does so by altering interest rates when needed (*ECB 2014*). When faced with low inflation levels or even deflation, as it has been in the last few years, a reduction of the interest rates is conducted to induce spending and investment.

The presence of quantitative limits on on the bond purchases are also coupled with limits on issuers and issues alike[4]. On this account, investors buying government bonds in the primary markets will have no assurance that the ECB will purchase them. One criticism of QE was that the ECB's purchases would distort the formation of prices for these bonds however the limits ensure that prices are formed unbiasedly on the primary market. Incidentally, the German Constitutional Court, an opponent of QE actually supported this very argument (*Pacces, 2015*).

Within the context of the Eurozone, QE involves the ESCB buying assets and bonds from both the private and public sector to support economic growth across the Euro area and help the Eurozone achieve levels of inflation close to, but below 2%. The increases in bond prices resulting from banks buying assets with the newly created money should increase liquidity in the banking system, consequently borrowing, investment and spending is induced which contributes to economic growth within the Eurozone. However, when the ECB buys up the bonds, the interest that the government would pay to bondholders is now paid to the ECB. These interest payments are profits, which the ECB then transfers back to the NCBs who are then responsible for sending these profits to their respective governments (*ECB, 2018c*). A process that may be on the verge of monetary financing but within the ESCB Statute, Article 33.1 (b) it states that any remaining profits are distributed to the ECB shareholders, i.e. the NCBs in proportion to their paid up shares[5]. The NCBs can either use the profits for their own operations or transfer it to the government. This could be seen as financing government budgets in the sense that money that was supposedly earmarked for interest payments is repatriated to the central government who then use it how they see fit. However, we see that the legal structuring allows the ECB to avoid legal condemnation as their actions are clearly defined within its statute. Moreover, this repatriation of money allows governments to use the funds for public expenditure, thus benefiting euro area

[4] Limits include a max of 33% of outstanding bonds by a single issuer. Purchases can include a max of 25% of each bond issue.

[5] NCBs shares are defined by the ECB's capital key. The capital key share of each NCB is determined by the equally weighted value of a MS's GDP and Population. (*Article 29 Protocol 4*)

taxpayers; hardly a cause for claiming the ECB is acting illegally. Hence the legal framework proves its necessity and importance in allowing the ECB to fulfil its mandate of price stability and contributing to overall stability in the Eurozone.

A key article provision contained within Protocol 4 that effectively shields the ECB from being condemned for operating in areas of fiscal policy is Article 21 – *Operations with Public Entitie*s. In short, it states that the ECB and NCBs are prohibited from purchasing debt instruments from the following institutions: "Union institutions, bodies, offices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings" (*Art. 21 Protocol 4)*. However, it is provision 21.2 that allows the ECB to figuratively bypass its mandate. It states that the ECB and NCBs may "act as fiscal agents" for the institutions mentioned above. Effectively, this allows the ESCB to act as a proxy for fiscal operations of Member States.

It is apparent that the ECB had accounted for the possible challenges they would face when they decided to engage in QE. The extent of the treaty provisions provides a legal backing for any vilifications the ECB's policies may be confronted with.

# 4 Data and Methodology

The research question aims to investigate how the ECB's actions have remained lawful and within their powers despite concerns over the monetary financing prohibition. The previous section pinpointed regulatory measures that ensure the ECB is acting within its mandate and ultimately, the ECJ is yet to disapprove of any monetary policy programs proposed by the ECB.

One way to subjugate the concerns over monetary financing would be to analyse specific Government Finance Statistics (GFS) to see if QE has contributed to financing government debts. Within this section I will analyse a handful of GFS indicators published by the ECB to see if there exists a link between the public sector bond purchases[6] and the debt situations of Italy, Portugal and Spain[7]. I have chosen these three countries as they faired worse than other MS during the crisis and have also been amongst the biggest sellers of government bonds. The data will first present in aggregate values, the amount of bonds these

[6] The time frame considered encompasses the Extended Asset Purchase Program

[7] Italian, Portuguese and Spanish nations will be abbreviated to the "IPS nations" throughout the paper.

countries have sold. Next, the GFS indicators will be discussed for each country since the start of the QE measures in 2012 up until April 2018[8].

Alongside examining this data, it is also key to present the data relevant to the ECB's objectives. Namely analysing the inflation rate to see if it has reached the desired levels as well as sovereign bond yields of the aforementioned countries. The latter was the main objective of the PSPP, which has been the subject of some controversy.

***Table 1 – Amount of public-sector bonds sold (euro millions)***

| Country | Amount |
|---|---|
| Italy | 341 179 |
| Portugal | 33 099 |
| Spain | 241 601 |

The three countries amount for approximately 31% of all public sector bond purchases by the ECB since the PSPP started in 2015. A detailed per country per month breakdown of the PSPP purchases can be found in Appendix 1. 31% over a period of three years does in fact represent a big chunk and indeed as we will see the IPS nations have seen positive changes in their debt situations. However, as the data shows, in a first instance the PSPP goal has been achieved above all and the debt situations have shown improvements, but the changes can hardly be fully attributed to bond purchases. This will be explained further.

***Table 2 – Fiscal Indicators***

| Fiscal Indicator | Relevance |
|---|---|
| Government debt (% of GDP) | If monetary financing has occurred than debt levels should be considerably lower. |
| Fiscal deficit (% of GDP) | We would expect a reduction in this indicator if QE has helped govt. finance their deficits |
| Primary Deficit (% of GDP) | If borrowing is cheaper then less is required to meet government expenditures, thus this indicator should decrease. |
| Borrowing Requirements (% of GDP) | The amount a MS must borrow to correct a deficit. If deficits are already decreasing, then so should this indicator. |
| 10YR Bond Yields (%) | The rate of interest at which a government borrows based on their creditworthiness and ability to pay debts. QE aims to bring the yield curve down so we should expect a gradual decrease. |

[8] Data is only available up until this point, the shorter time frame acts as a possible limitation as the effects of QE are not immediate and may only materialize in the longer-run.

The following explanations focus on the data in Tables 3, 4 and 5 within Appendix 2. These tables display the statistics relevant to the indicators in Table 2.

Given that the aim of QE and more specifically the Public Sector Purchase Program is to bring down the yield curve, inspecting the sovereign bond yields first seems the most appropriate in order to see if that goal has been reached. The sovereign bond yields represent the rate at which the government borrows, therefore a decrease in this indicator would allow governments to finance themselves and repay their debts at a cheaper cost. Looking at the sovereign bond yields for 10YR bonds in Italy, Portugal and Spain we see that since 2012 this value has gradually decreased and at present time none of these country borrow at rate higher than 2%. Previously the IPS nations all borrowed at levels above 5% in the first years of QE. In this respect, the PSPP has been able to achieve its objective of bringing down the yield curve. 10YR bonds depict the likelihood a country will repay their debts; thus a lower rate would signify fiscal soundness.

If the rate at which one borrows decreases, then one would expect the borrowing requirement to decrease. This implies that a central government requires a lower percentage of its GDP to correct a budgetary deficit. Tables 3, 4 and 5 in the appendix section display a gradual decrease in this indicator since 2012. In the first target year, the IPS nations had borrowing requirements of 5.2%, 9.1% and 14.5% of GDP respectively. Come year end 2017, their requirements have lowered to 2.7%, 1.2% and 3.8% of GDP, a noticeable improvement although largely attributable to the reduction in sovereign bond yields. It has reduced the borrowing costs hence central governments require less of their GDP to correct deficits.

There are without doubt forces at play that would influence the fiscal positions of these member states, but if we take into account what the monetary financing prohibition implies; this would mean there is an improvement in the debt levels of a country. The most suitable statistics to then analyse in this case would be government debt, fiscal deficit and primary deficit. Tables 3, 4 and 5 display the relevant data.

The data concerning the government debt of the IPS nations shows that they actually all increased, except in Portugal. Italy has had almost a 7% increase in its debt relative to GDP since 2012. Portugal had levels of 126.2% of GDP and in 2017 the number has barely decreased to 125.7%. As for Spain it has shown a 14.7% increase in government debt since 2012. If the ECB was financing government debts, then we would at least expect a gradual downward trend however that is not present. Portugal did finally reach the 2% deficit as

allowed in the treaties in 2016, which can be seen as a consequence of the new government that took power. The reversal of austerity measures that were in place from 2011 – 2015 and had stymied economic growth were now removed by the new administration lead by Antonio Costa (*Hockenos, 2017*). If QE is going to be the victim of condemnation, then one must also account for the counterfactual that is the fiscal path the IPS nations were on or developed to complement the aid that QE provides. Therefore, an improvement in debt situations could very well be due to important structural reforms by central governments. Referring back to an earlier ECJ opinion, the effects of QE are not sufficient as to induce countries to no longer pursue sound fiscal policies.

It is imperative in the analysis to see if the ECB's objectives have been reached. We saw that the PSPP has thus far succeeded in reducing sovereign bond yields but has QE, since 2013 managed to achieve price stability? The graph below depicts HICP inflation in the Eurozone from 2013 up until mid 2018.

***Figure 1 – Eurozone HICP inflation 2013-18***

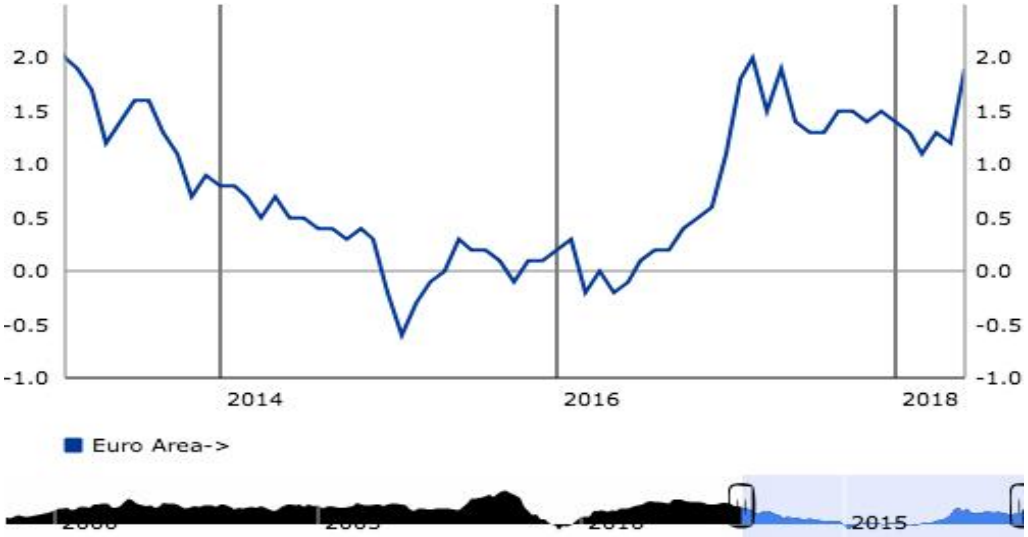


*Figure 1 - Eurozone HICP Inflation 2013 - 2018* (ECB Statistical Data Warehouse)

Looking at figure 1, the period between 2014 and early 2016 can be characterized as deflationary and it even turned negative. However, the existence of a time-lag between policy announcements and the effects that materialize must be accounted for. Since then, inflation has been on an upward trend and the price stability goal seems to have been achieved. The graph indicates a value close to but not above 2%. Jose Gonzalez-Paramo, a former member of the ECB Executive Board stated in a speech that "the achievement of price stability is what we are accountable for, before anything else" (*Paramo, 2011*), as the data shows, the ECB has certainly achieved what it has been tasked to do.

# 5 Results

The data analysed suggests that the ECB's attempts to achieve price stability and reduce sovereign bond yields have been effective. Their goal as laid out in the treaties is to maintain price stability i.e. an inflation rate close to 2%, has been achieved. Inflation forecasts by the ECB suggest in the next 2 years a level of 1.7% and in 5 years' time 1.9% inflation rate (*ECB,2018d*). Ad van Riet shares similar findings of portraying these unconventional measures as instrumental in preventing a deflationary environment thus allowing for a positive forecast on inflation (*van Riet, 2017*). The government finance data in Appendix 2 does not offer conclusive evidence that the ECB's actions have violated the prohibition on monetary financing. Despite the huge volume of purchases and all conducted in the secondary markets, the impact cannot be equated to that of primary market purchases. The ECJ has emphasized this point greatly thereby allowing the ECB to continue these unprecedented bond purchases at a rate they see fit[9]. However, as we have seen there have been claims that the ECB is operating in economic policy areas but the tools it uses are solely of a monetary policy nature and their programs should not be undermined if QE or PSPP is capable of contributing to stability in the Eurozone. A monetary policy initiative like QE should not be comparable with an economic policy initiative solely because it may have unintended effects on euro area stability. This opinion was also shared by the ECJ in the OMT ruling. In addition, the unintended effects have not been detrimental to the Eurozone nor have they been commensurate to actual fiscal policies. The ESCB is tasked to support the "general economic policies" (*TFEU 2009b*) in the EU, without prejudice to price stability. If the ECB manages to achieve price stability and which in itself contributes to revitalising economic growth then their monetary policy actions should be lauded as opposed to being condemned, for having a two-fold effect. The conventional tools of monetary policy were rendered ineffective and when the zero lower bound is reached, one of the only solutions for central banks to affect inflation expectations is to expand the supply of money through the purchase of sovereign bonds. This demonstrates that the predominant focus of QE is aimed towards monetary policy and not economic or fiscal policies.

The research question aimed to understand how the ECB's QE programs remained within their legal mandate and given the extent of the treaty provisions that govern the ESCB, all its actions have remained lawful. The possibility of the bond buying programmes being

[9] See Case Gauweiler vs. Deutsche Bundestag 2015

falsely interpreted as a violation of Article 123, it is apparent that legal considerations were at the forefront of the designing phase. Moreover, after analysing certain fiscal indicators there was no real sign that QE had financed government debts – thus remaining within their legal mandate. Financial risk fragmentation and austerity in the Eurozone has halted public and private sector spending – both of which are complementary for QE to be effective.

# 6 Conclusion

From the outset of the essay, the aim has been to show how the ECB's monetary policy actions have remained within their legal mandate. Claims have been put forward that the ECB was operating outside its mandate or that it was providing monetary financing to Member States' debt. To quell these claims, the legal framework governing the ESCB and QE was extensively analysed. Whether their actions will ever be worth of challenging is a moot point, simply because the ECB's legal scope for conducting its operations is vast. The extensiveness of the treaty provisions has proven to effectively shield the ECB from falling foul of Article 123 TFEU. Notwithstanding, the definitive consequences of the ECJ's ruling in the OMT case which according to EU law, when the ECJ is asked for a preliminary ruling concerning EU law then that judgement will be binding. In order to subjugate the monetary financing claims, data concerning government finance statistics was presented to actually see if QE had had beneficial fiscal effects on Italy's, Portugal and Spain's debt situations. Evidently, there were minor improvements but hardly big enough to be attributed solely to QE. Portugal and Spain both elected new governments just as QE was commencing, which has helped them weather the crisis better than Italy, who for one is yet to pursue structural reforms. QE has been beneficial but had it not been there, the fiscal reforms these Southern-European nations had vowed to pursue are starting to bear fruit. Spain has had three consecutives years of economic growth since the newly elected government and selling of its government bonds. Therefore, the counterfactual to QE acts a defence for the ECB as their actions are being complemented by sound budgetary policies, and these policies have helped the southern nations improve their debt situations, regrettably Italy remains in a shaky state[10]. The literature has vastly criticised the ECB but one must account for the trade off that exists for the ECJ between reprimanding the central bank's actions and avoiding the dissolution of the single currency.

[10] See Ad van Riet for a 3-point plan of how Eurozone members can supports the ECB with their own fiscal policies – paper: *Government Support to the ECB (2017)*

The limitations involved within this topic could be drawn from the limited number of government finance statistics analysed when attempting to see improvements in debt situations. Perhaps a more detailed investigation into government finances of one country could bear the results opponents of QE so dearly seek. I would encourage further research into the effects of QE on debt positions as the program is still ongoing and other impacts may only materialise in the longer run. The research only accounted for a small time-frame of five years, perhaps further down the road it would be possible infer linkages between QE and monetary financing.

The needed for cooperation between fiscal and monetary policy has been stressed throughout this paper. There have been some suggestions for more integration on a fiscal level, although this could be seen as encouraging the profligacy of careless borrowers like Greece or Italy which could lead to moral hazard – an unhealthy concept for a currency union. Renowned French economist Charles Wyplosz stresses this point in his in-depth analysis on the potential creation of a European Monetary Fund[11]. The paper was requested by the European Parliament's Economic and Monetary Affairs Committee, which could signal the Union's intent on finding a solution that insures Eurozone members in case of insolvency without creating moral hazard or contravening the treaties. The Bank's actions are warranted, proportional, lawful and above all, are necessary to maintain the Economic and Monetary Union and in irregular and exceptional times, unconventional actions are sometimes the catalyst for economic recoveries. Since Mario Draghi established a "whatever it takes" attitude for the ECB, the development of QE has proven to be the logical continuation of this stance. The European Monetary Fund represents a somewhat complex and politically difficult solution to envisage but should the EU wish to preserve the single currency than it will require the cooperation of all Member States on more issues than just a common monetary policy.

[11] See Charles Wyplosz – A European Monetary Fund? (2016)

## References


- Article 3.1. Protocol No. 4 on The Statute of the European System of Central Banks and the European Central Bank. (2016).

- Article 18.1. Protocol No. 4 on The Statute of the European System of Central Banks and the European Central Bank. (2016).

- Article 21 Protocol No. 4 on The Statute of the European System of Central Banks and the European Central Bank. (2016)

- Blinder, Alan S. "Quantitative Easing: Entrance and Exit Strategies," Federal Reserve Bank of St. Louis *Review*, November/December 2010, pp. 465-80. https://doi.org/10.20955/r.92.465-80

- Case C-62/14 *Peter Gauweiler and others vs. Deutscher Bundestag* [2015] para. 5

- Case C-62/14 *Peter Gauweiler and others vs. Deutscher Bundestag* [2015] para. 9

- Cechetti, S., & Schoenholtz, K. (2016). *A primer on helicopter money.* (Opinion).VoxEU. Retrieved from VoxEU Retrieved from https://voxeu.org/article/primer-helicopter-money. (A primer on helicopter money)

- Council Regulation (EC) No 3603/93 of 13 December 1993 specifying definitions for the application of the prohibitions referred to in Articles 104 and 104b (1) of the Treaty
- ECB, 2014. Strategy. [Online]
  Available at https://www.ecb.europa.eu/mopo/strategy/html/index.en.html [Accessed June 22 2018]
- ECB, 2018a. Open Market Operations. [Online].
  Available at https://www.ecb.europa.eu/mopo/implement/omo/html/index.en.html [Accessed 14 June 2018]

- ECB, 2018b. Asset Purchase Programmes. [Online]. Available at https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html [Accessed June 10 2018]

- ECB, 2018c. Does the ECB make a profit? [Online] Available at https://www.ecb.europa.eu/explainers/tell-me-more/html/ecb_profits.en.html [Accessed June 17 2018]

- ECB, 2018d. Inflation forecasts. [Online] Available at https://www.ecb.europa.eu/stats/ecb_surveys/survey_of_professional_forecasters/html/table_hist_hicp.en.html [Accessed 19 June 2018]

- European Central Bank. (2012). Monthly Bulletin October. [Bulletin]. Frankfurt. Executive Board of the ECB

- European Central Bank. (2018). Inflation rate (HICP). Retrieved from http://sdw.ecb.europa.eu/quickview.do?SERIES_KEY=122.ICP.M.U2.N.000000.4.ANR
- Friedman, M. (1969), "The Optimum Quantity of Money", in Milton Friedman, *The Optimum Quantity of Money and Other Essays,* Chicago: Adline Publishing Company, pp. 1-50.

- Gonzalez - Paramo, J. (2011). *The ECB's monetary policy during the crisis*. Speech presented at Tenth Economic Policy Conference in Spain, Malaga, 21 October 2011.

- Hockenos, P. (2018). Portugal has emerged as Europe's booming anti-Germany. Retrieved from https://foreignpolicy.com/2017/12/18/portugal-has-emerged-as-europes-booming-anti-germany/
- Johnston, Andrew and Pugh, Trevor, The Law and Economics of Quantitative Easing (July 7, 2014). Sheffield Institute of Corporate and Commercial Law Working Paper Series. Available at SSRN: https://ssrn.com/abstract=2463160 or http://dx.doi.org/10.2139/ssrn.2463160

- Krugman, Paul R. 1998. "It's Baaack: Japan's Slump and the Return of the Liquidity Trap," Brookings Papers on Economic Activity, 2: 137-205. Washington, D.C.: Brookings Institution Press.
- Morici, Wiliam. *Peter Gauweiler et al v. Deutscher Bundestag: The Legal Impetus behind Mario Draghi's Movement for Quantitative Easing*, 3 Cornell Int'l L.J. Online 10 (2015).
- Novak, P. (2014). *The ECB's outright monetary transaction programme compatibility with the EU law (judgement in case Gauweiler C-62/14.* (At A Glance). Brussels: European Parliament Think Tank. Retrieved from European Parliament Think Tank Retrieved from http://www.europarl.europa.eu/RegData/etudes/ATAG/2015/519231/IPOL_ATA(2015)519231_EN.pdf. (Outright Monetary Transaction Programme Compatibility with EU Law)
- Pacces, M. A., & Repasi, R. (2015). *Quantitative easing in Europe: What it is, why it is legal and how it works.* (Commentary). Leiden, Delft & Rotterdam: The European Research Centre for Economic and Financial Governance. Retrieved from http://www.euro-cefg.eu/uploads/cfefg/attachments/EURO-CEFG_Commentary_on_Quantitative_Easing_in_Europe_1__1.pdf
- Saraceno, F. (2012, September 17, 2012). Quantitative easing and lender of last resort: Lots of confusion under the sky. Retrieved from https://fsaraceno.wordpress.com/2012/09/17/quantitative-easing-and-lender-of-last-resort-lots-of-confusion-under-the-sky/

- TFEU, 2009a. *EUR-Lex.* [Online]. Article 126 Available at https://eurlex.europa.eu/legalcontent/EN/ALL/?uri=CELEX:12008E126 [Accessed 15 June 2018]
- TFEU, 2009b. *Eur-Lex.* [Online]. Article 127 Available at http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-viii-economic-and-monetary-policy/chapter-2-monetary-policy/395-article-127.html [Accessed 15 June 2018]
- TFEU, 2009c. *Eur-Lex.* [Online]. Article 124 available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT [Accessed June 12 2018]

- TEU, 2009. Eur-Lex. [Online] Article 3.4
  Available at
  https://eurlex.europa.eu/legalcontent/EN/TXT/?uri=celex%3A12012M%2 FTXT
  [Accessed 26 June 2018]

- van Riet, Ad, Monetary Policy Stretched to the Limit: How Could Governments Support the European Central Bank? (2017). ADEMU Working Paper Series, No 75, October 2017. Available at SSRN: https://ssrn.com/abstract=2877329 or http://dx.doi.org/10.2139/ssrn.2877329

- Wuermeling, J. (2018, June) *The role of central banks. The Economist (June 9th – June 15th,* p. 18

# Appendices

## *Appendix 1*

PSPP breakdown of purchases for Year 2015

| | 31/03/2015 | 30/04/2015 | 31/05/2015 | 30/06/2015 | 31/07/2015 | 31/08/2015 | 30/09/2015 | 30/10/2015 | 30/11/2015 | 31/12/2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Austria | 1216 | 1205 | 1314 | 1310 | 1363 | 1064 | 1279 | 1324 | 1411 | 1155 |
| Belgium | 1528 | 1530 | 1656 | 1657 | 1642 | 1362 | 1633 | 1678 | 1764 | 1446 |
| Cyprus | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 90 | 97 | 0 |
| Germany | 11070 | 11148 | 12144 | 11970 | 11975 | 9926 | 11851 | 12195 | 12903 | 10443 |
| Estonia | 0 | 0 | 0 | 5 | 15 | 10 | 8 | 3 | 7 | 0 |
| Spain | 5447 | 5471 | 5909 | 5915 | 5891 | 4882 | 5789 | 6042 | 6334 | 5137 |
| Finland | 774 | 786 | 841 | 836 | 850 | 687 | 825 | 844 | 909 | 734 |
| France | 8757 | 8624 | 9485 | 9426 | 9465 | 8087 | 9485 | 9950 | 10221 | 8267 |
| Ireland | 722 | 735 | 775 | 784 | 771 | 639 | 824 | 809 | 840 | 684 |
| Italy | 7609 | 7585 | 8228 | 8164 | 8248 | 6719 | 8234 | 8365 | 8876 | 7181 |
| Lithuania | 39 | 83 | 123 | 133 | 126 | 143 | 125 | 114 | 117 | 104 |
| Luxembourg | 183 | 205 | 84 | 261 | 80 | 86 | 138 | 6 | 30 | 42 |
| Latvia | 75 | 177 | 205 | 46 | 22 | 23 | 19 | 63 | 31 | 23 |
| Malta | 5 | 53 | 85 | 66 | 24 | 11 | 18 | 11 | 2 | 7 |
| the Netherla | 2487 | 2527 | 2667 | 2663 | 2657 | 2213 | 2603 | 2721 | 2883 | 2191 |
| Portugal | 1074 | 1084 | 1174 | 1164 | 1160 | 966 | 1148 | 1184 | 1248 | 1018 |
| Slovenia | 209 | 219 | 231 | 228 | 232 | 192 | 227 | 245 | 248 | 197 |
| Slovakia | 506 | 522 | 529 | 546 | 442 | 423 | 467 | 377 | 533 | 277 |
| Supranational | 5682 | 5748 | 6173 | 6267 | 6300 | 5393 | 6335 | 6153 | 6650 | 5403 |
| Total | 47383 | 47701 | 51622 | 51442 | 51359 | 42826 | 51008 | 52175 | 55105 | 44309 |
| Book value in EUR millions. | | | | | | | | | | |

PSPP breakdown of purchases for year 2016

| 31/01/2016 | 29/02/2016 | 31/03/2016 | 30/04/2016 | 31/05/2016 | 30/06/2016 | 31/07/2016 | 31/08/2016 | 30/09/2016 | 31/10/2016 | 30/11/2016 | 31/12/2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1348 | 1359 | 1353 | 2060 | 2140 | 1849 | 1878 | 1354 | 1884 | 1959 | 1880 | 1495 |
| 1709 | 1707 | 1710 | 2612 | 2695 | 2341 | 2368 | 1704 | 2377 | 2477 | 2372 | 1867 |
| 0 | 0 | -16 | 0 | 0 | 0 | 0 | 0 | -21 | 0 | 0 | 0 |
| 12347 | 12440 | 12411 | 18985 | 19573 | 16888 | 17247 | 12368 | 17188 | 18016 | 17290 | 13568 |
| 6 | 7 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6107 | 6125 | 6111 | 9318 | 9619 | 9238 | 8453 | 6112 | 8487 | 8827 | 8461 | 6656 |
| 865 | 879 | 871 | 1324 | 1366 | 1224 | 1197 | 871 | 1205 | 1258 | 1206 | 939 |
| 9969 | 9989 | 9852 | 14933 | 15398 | 13683 | 13569 | 9769 | 13609 | 14160 | 13480 | 10689 |
| 782 | 803 | 808 | 1078 | 1112 | 1085 | 986 | 697 | 982 | 1022 | 979 | 648 |
| 8559 | 8499 | 8530 | 12998 | 13442 | 12772 | 11867 | 8476 | 11808 | 12323 | 11707 | 9417 |
| 109 | 109 | 125 | 104 | 113 | 105 | 72 | 48 | 73 | 125 | 99 | 75 |
| 169 | 110 | 144 | 35 | 16 | 26 | 6 | 0 | 10 | 3 | 75 | 34 |
| 41 | 30 | 44 | 76 | 58 | 90 | 27 | 72 | 45 | 90 | 39 | 16 |
| 60 | 21 | 60 | 60 | 66 | 37 | 12 | 11 | 7 | 37 | 99 | 55 |
| 2840 | 2794 | 2759 | 4224 | 4355 | 3781 | 3834 | 2915 | 3842 | 3996 | 3831 | 3041 |
| 1197 | 1214 | 1213 | 1405 | 1451 | 1438 | 958 | 722 | 1022 | 1021 | 1023 | 726 |
| 252 | 280 | 237 | 236 | 242 | 254 | 223 | 153 | 219 | 225 | 216 | 168 |
| 575 | 554 | 433 | 329 | 323 | 233 | 221 | 123 | 133 | 164 | 230 | 216 |
| 6021 | 6437 | 6413 | 8717 | 7706 | 7028 | 6732 | 5117 | 7102 | 7271 | 7157 | 5425 |
| 52956 | 53358 | 53059 | 78499 | 79673 | 72072 | 69650 | 50513 | 69972 | 72974 | 70145 | 55032 |

PSPP breakdown of purchases for 2017 and 2018

| 31/01/2017 | 28/02/2017 | 31/03/2017 | 30/04/2017 | 31/05/2017 | 30/06/2017 | 31/07/2017 | 31/08/2017 | 30/09/2017 | 31/10/2017 | 30/11/2017 | 31/12/2017 | 31/01/2018 | 28/02/2018 | 31/03/2018 | 30/04/2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1970 | 1888 | 1958 | 1562 | 1494 | 1492 | 1524 | 1223 | 1466 | 1451 | 1446 | 1287 | 549 | 584 | 552 | 631 |
| 2489 | 2370 | 2398 | 1973 | 1880 | 1886 | 1925 | 1544 | 1852 | 1831 | 1824 | 1658 | 713 | 757 | 714 | 801 |
| 0 | 0 | 0 | 0 | 0 | -34 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17713 | 16960 | 16977 | 12490 | 11919 | 11892 | 12169 | 9803 | 11676 | 11551 | 11562 | 10660 | 4823 | 5078 | 4765 | 4718 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8789 | 8367 | 8459 | 6599 | 6043 | 6202 | 6312 | 5086 | 6111 | 6010 | 5986 | 5966 | 2655 | 2824 | 2758 | 3103 |
| 777 | 726 | 730 | 674 | 636 | 643 | 654 | 528 | 202 | 1052 | 616 | 634 | 280 | 296 | 280 | 542 |
| 14240 | 13558 | 13707 | 11303 | 10769 | 10799 | 10054 | 9270 | 11050 | 10488 | 10439 | 9224 | 3978 | 4224 | 3990 | 4565 |
| 547 | 557 | 565 | 522 | 516 | 518 | 599 | 488 | 577 | -32 | 1171 | 691 | 407 | 431 | 410 | 567 |
| 12302 | 11785 | 11890 | 9761 | 9419 | 9323 | 9623 | 7657 | 9204 | 9121 | 9077 | 7958 | 3421 | 3638 | 3422 | 3971 |
| 70 | 65 | 75 | 57 | 52 | 38 | 59 | 4 | 29 | 60 | 69 | 62 | 72 | -201 | 3 | 42 |
| 10 | 74 | 67 | 49 | 81 | 56 | 61 | 47 | 55 | 39 | 30 | 73 | 27 | 25 | 27 | 40 |
| 39 | 56 | 65 | 43 | 27 | 36 | 28 | 25 | 27 | 48 | 29 | 7 | 54 | 47 | -59 | 29 |
| 29 | 49 | 30 | 12 | 13 | 16 | 11 | 27 | 21 | 15 | -24 | 21 | 7 | 5 | 31 | 4 |
| 4021 | 3825 | 3869 | 2977 | 2642 | 2650 | 2698 | 2174 | 2599 | 2574 | 2562 | 2368 | 1055 | 1123 | 1063 | 1290 |
| 688 | 656 | 663 | 526 | 504 | 498 | 517 | 414 | 494 | 489 | 488 | 516 | 461 | 489 | 462 | 623 |
| 160 | 152 | 150 | 113 | 119 | 159 | 166 | 141 | 159 | 164 | 254 | 237 | 108 | 115 | 109 | 127 |
| 334 | 301 | 294 | 233 | 211 | 237 | 220 | 60 | 178 | 228 | 137 | 194 | 187 | 141 | 137 | 170 |
| 7185 | 6818 | 6919 | 5417 | 5166 | 5194 | 5257 | 4347 | 5096 | 5084 | 5081 | 4629 | 2107 | 2225 | 2109 | 2407 |
| 71362 | 68208 | 68816 | 54311 | 51491 | 51607 | 51875 | 42839 | 50795 | 50174 | 50747 | 46184 | 20905 | 21801 | 20774 | 23631 |

## *Appendix 2*

### ***Table 3 – GFS Indicators Italy***

| Country | | Italy | | | | | |
|---|---|---|---|---|---|---|---|
| **Fiscal Indicators** | Years | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Government debt (% of GDP) | | 123.4 | 129.0 | 131.8 | 131.5 | 132.0 | 131.8 |
| Fiscal Deficit (% of GDP) | | - 2.9 | - 2.9 | - 3.0 | - 2.6 | - 2.5 | -2.3 |
| Primary Deficit (% of GDP) | | 1.3 | - 0.3 | - 0.3 | - 0.1 | - 0.1 | 0 |
| Borrowing Requirement (% of GDP) | | 5.2 | 5.0 | 4.5 | 2.3 | 3.1 | 2.7 |
| Sovereign Bond Yield (%) | | 4.50 | 4.15 | 1.76 | 1.60 | 1.82 | 2.00 |

***Table 4 – GFS indicators Portugal***

| Country | | Portugal | | | | | |
|---|---|---|---|---|---|---|---|
| **Fiscal Indicators** | Years | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Government debt (% of GDP) | | 126.2 | 129.0 | 130.6 | 128.8 | 129.9 | 125.7 |
| Fiscal Deficit (% of GDP) | | -5.7 | -4.8 | -7.2 | -4.4 | -2.0 | -3.0 |
| Primary Deficit (% of GDP) | | -0.8 | 0 | -2.3 | 0.2 | 2.2 | 0.9 |
| Borrowing Requirement (% of GDP) | | 9.1 | 4.4 | 3.9 | 3.2 | 5.0 | 1.2 |
| Sovereign Bond Yield (%) | | 6.28 | 5.51 | 2.02 | 2.54 | 3.91 | 1.93 |

***Table 5 – GFS Indicators Spain***

| Country | | Spain | | | | | |
|---|---|---|---|---|---|---|---|
| **Fiscal Indicators** | Years | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Government debt (% of GDP) | | 85.7 | 95.5 | 100.4 | 99.4 | 99.0 | 98.3 |
| Fiscal Deficit (% of GDP) | | -10.5 | - 7.0 | - 6.0 | - 5.3 | - 4.5 | - 3.1 |
| Primary Deficit (% of GDP) | | - 7.5 | - 3.5 | - 2.5 | - 2.2 | - 1.7 | - 0.5 |
| Borrowing Requirement (% of GDP) | | 14.5 | 6.6 | 6.5 | 3.8 | 3.7 | 3.8 |
| Sovereign Bond Yield (%) | | 4.94 | 3.80 | 1.60 | 1.74 | 1.43 | 1.57 |