THE EURO

LIGHTS AND SHADOWS

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1. Introduction

With the sign of the Maastricht Treaty, a politico-economic union was created – The European Union (EU). Member States of the EU embarked on its project for a common currency, the Euro, with the objective of price stability and financial integration within the among the Member States. The birth of the Euro is an outcome that resulted from countless failures of the fixed exchange regime from the past. As they were preparing for the adoption of the Eurosystem, Member States decided to give up on their national currencies and hand over control of their monetary policies to a shared European System of Central Banks (ESCB). *(Krugman, 2003)* However, this lost of sovereignty over their monetary policies consequently have now become too costly for many Member States' economies.

The adoption and management of the Eurosystem was considered a success during the first few years before the crisis appeared. Most of all, in the sense that the Eurosystem overcame the problems that appeared from the Exchange Rate Mechanism (ERM) system: such as exchange rate instability; problems of reputation and speculation from rapid devaluations of some currencies and their frequent realignments. *(Darvas, 2008)*

As we see in Europe's experience, the effects of joining a fixed exchange rate agreement from divergent countries are complex and depend crucially on both microeconomic and macroeconomic factors. *(Obstfeld, 2011)* The European experience of adopting the Euro raises several questions. In this paper we will discuss about: why and how Europe came to the conclusion of setting up a single currency. And see how Euro is, in the end, the result from overcoming the weaknesses of previous controlled exchange rate systems.

The Eurozone crisis is also an outcome of adopting the new monetary union. We will discuss how overcoming the previous problems created weaknesses that led Europe to the current crisis.

Thus, our discussion of Euro will shed light not only on the forces promoting greater unification of national economies – lights – but also on the forces that make a country ponder the choice to join it – shadows.

2. Monetary integration contextual background

The following two parts are the contextual economic backgrounds of the European monetary integration and the creation of the Euro: how the end of Bretton Woods system came out as a decision of an intra-European exchange rate.

Back in the past, the European Community (EC) countries had a general dislike for floating exchange rate regimes due to its negative impact on trade, investment flows and exchange rate volatility. *(Baldwin, 2012)* When exchange rates are floating, countries could depreciate their national currency against other currencies permanently. On one hand when their prices devalue, exports are fueled creating an increase in competitiveness; on the other hand, importing goods becomes more expensive leading to inflation. *(Mankiw, 1992)* EC countries not wanting to experience the same inflation issue of the German hyperinflation event back in 1923, hoped to adopt the fixed exchange rate regime so that they could control the fundamental issue, the inflation, of the economy they are in. *(Krugman, 2011)*

2.1. Lessons from the Bretton Woods System

The Bretton Woods system and its collapse (1971-1973) contributed lessons to the creation of the Euro. In this system, the US dollar was the center reserve back by gold and all other currencies fixed to the US dollar. Fixed exchange rate does overcome the uncertainty of changes in price that of the flexible exchange rate regime. However, it also requires that the currencies must always be pegged to the value set and they must put all their effort in maintaining their parity (±1% with respect to dollar). A big amount of reserves are needed in order to maintain the parity. In contrast, not having enough reserves becomes a great problem because you are not able to keep the parity. *(Baldwin and Wyplosz, 2012)*

Then what happens when countries can no longer keep the parity due to exhaustion of reserve? An answer could be an exit of the system, or to set a new parity. In the case of US, a new parity was set when it was not able to keep its parity due to an increase in

inflation and exhaustion of reserves.[1] US could not possibly break down the fixed agreement – as a reserve center, US had to fulfill its word for a reputation reason. US dollar devaluated against the gold and declared a new parity as it was short in reserves. *(Eichengreen, 1992)* The positive side was that US kept its compromise of fixed exchange rate; however, on the negative side, this action created a precedent and left room for further possible devaluations. Reputation issue is extremely important since it is directly related with speculation because low reputation gives room for investors to speculate.

Regardless the fact that the US dollar was reserve currency, its reputation broke down. All currencies pegged to dollar were forced to import the inflation US was creating. Currencies one by one started to float against the dollar because they could not constantly fix their exchange rate each moment in time, while at the same moment import inflationary problems from the US. *(H. Rankin, 1995)*

This leads to one principal conclusion: in the fixed exchange rate regime, when the center reserve currency creates reputation problems, this could influence negatively on all the economies that are pegged to the anchor, endangering the whole system.

2.2. The European Monetary System and the European Currency Unit

The end of the Bretton Woods system led the EC countries to create a new monetary alternative – the European Monetary system (EMS). The EMS was a target zone exchange rate regime built on the concept of stable but adjustable exchange rates defined in relation to the newly created European Currency Unit (ECU) – a currency basket based on a weighted averaged of EMS currencies. The ECU also reflected each country's economic importance, its share of international trade and its commitment in the system's financing facilities. The aim of this monetary system was to preserve the intra-European exchange rate stability. *(Mongelli, 2008)*

[1] Exhaustion of reserves due to excessive spending on wars.

Within the EMS, currency fluctuations were controlled through the Exchange Rate Mechanism (ERM). As you can see on Table 1, a parity grid of bilateral rates was calculated on the basis of these central rates expressed in ECUs, and currency fluctuations had to be contained within a margin of fluctuations ±2.25% around the central parity; with exceptions for few Members States whose economies display weak fundamentals that made impossible to keep a so narrow parity had a band of ±6%: the Italian lira, the Spanish peseta, the Portuguese escudo and the pound sterling are these few exceptions due to their high inflation rates and internal political difficulties. Due to these different parities, ERM faced critical situation known as the ERM crisis of 1992-93. As a consequence, in mid 1993, the bands were widened to ±15% in order to counter speculative pressures, but by 1996 all currencies had moved back to their original fluctuation margins. *(The European Commissions, Economic and Financial Affairs, 2010; Baldwin and Wyplosz, 2012)*

Table 1) Fluctuation bands of the ERM Member States

EU-15	Date of incorporation	Fluctuation band
Belgium Luxembourg Denmark Germany France Ireland Netherlands Italy	13/03/1979	±2.25%
Spain	19/06/1989	±6%
Great Britain	08/10/1990	
Portugal	06/04/1992	
Greece	14/03/1998	
Austria	09/01/1995	±15%
Finland	12/10/1996	
Sweden		

Source: EC convergence reports 1996-2014

EMS contained two important characteristics that could surmount the weakness of the Bretton Woods system and to avoid the same mistakes made:

- The first safety valve is the ECU, a basket of currencies, as the anchor currency of the system. The EMS was designed to be a symmetric system, that no currency played any special role. With a currency basket as anchor, EMS detaches the fundamental problems of one currency at center of the exchange rate system infecting other economies that are pegged to it. *(Krugman, Obstfeld and Melitz, 2011)*
- The second safety valve is the intervention mechanism, the responsibility of both strong- and weak- currencies to intervene when the rates exceed the band of fluctuation. EMS was not a fixed exchange rate regime; it adopted a target zone regime which means that it was not necessary to intervene each and every time to fix the parities. They would only have to intervene when the rates reaches or goes out of the fluctuation band. Once the exchange rate of a currency reached 75% of the maximum fluctuation margin authorized, the currency was considered as 'divergent'[2] and the country had to take remedial action through interest rates and fiscal policy adjustments. In the event of the maximum fluctuation margin being reached, central banks had to intervene by buying or selling the currency to avoid the margin being exceeded. Even though there would be interventions, the currencies involved in the EMS were required to comply with the predefined fluctuation band around the central parity. *(The European Commissions, Economic and Financial Affairs, 2010)*

2.2.1. The European Exchange Rate Mechanism (ERM)

The exchange rates could only be changed by mutual agreement between participating Member States and the Commission – an unprecedented pooling of monetary sovereignty. Theoretically, this model seemed that it would adjust the system to perfection.

[2] The necessity for the divergence indicator was questioned in the initial stages of the EMS. Written Question No. 323/83, 26 O.J. EUR. COMM. (No. C 219) 17 (1983) (Parliamentary question to the EC commission).

Table 2) ERM realignments

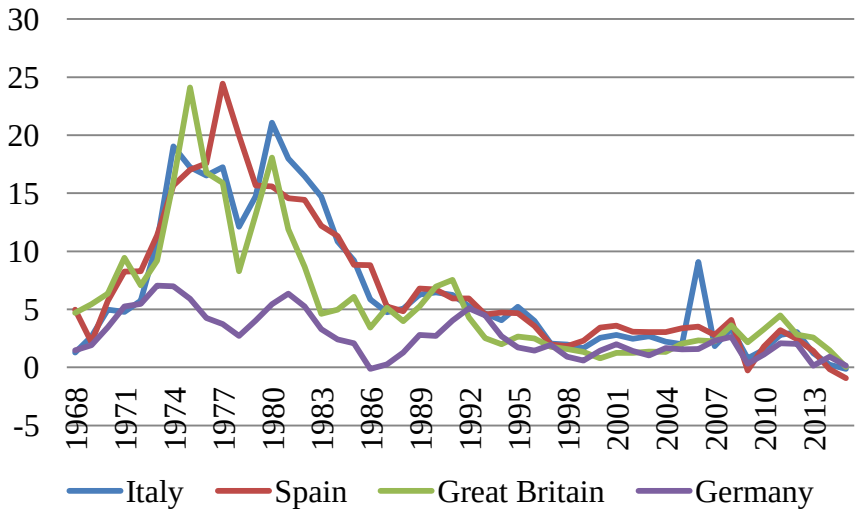
Dates	24.9.79	30.11.79	22.3.81	5.10.81	22.2.82	14.6.82
No. Currencies involved	2	1	1	2	2	4
Dates	21.3.83	18.5.83	22.7.85	7.4.86	4.8.86	12.1.87
No. Currencies involved	7	7	7	5	1	3
Dates	8.1.90	14.9.92	23.11.92	1.2.93	14.5.93	6.3.95
No. Currencies involved	1	3	2	1	1	2

Source: European Economy data

However, in practice as we can observe in Table 2, from the introduction of EMS in 1979 until 1987, realignments occurred no less than 12 times, which is very frequent: once every eight months. *(Baldwin and Wyplosz, 2012)*

As mentioned earlier in Section 2.2, there were two different bandwidths in this system: the narrow ±2.25% and wider ±6% just for countries like Italy, Spain, Portugal and the UK. Allowing this wider variation made a greater sacrifice of exchange rate stability but gained more room to choose their own monetary policies. This essentially turned into a weakness of the EMS and a sustainability problem of this mechanism as they adopted the strategy of competitive devaluation.

Figure 1) Inflation rate 1968 – 2015



Source: World inflation data

As you can observe from Figure 1, the highly inflated currencies of Italy, Spain, Portugal, and Great Britain frequently depreciated their currencies to keep their

competitiveness. As their currency devaluated, exporting became easier and importing prices increased breeding additional inflation into the economy. The currencies gained short-term advantages of an economic boom at the long-term cost of higher inflation added to their economies. Since they did not have the ability to get back into stable parity through interest rates and fiscal policies by themselves, there was need for realignments and intervention of Central Banks. *(Krugman, 2011)* However, as drawback to this action, once realignments occur, reputation automatically decreases on a global level inculcating the possibility of a new realignment in the future. In practice, these countries were making bad reputation, and creating chances for investors to speculate, by repeating competitive devaluations and realignments.

These speculative attacks are linked to the 'Solidarity principle' which states that both central banks are forced to intervene and take responsibility to recuperate its parity back into the band mentioned in Section 2.2. However, the probabilities for currencies going out of the bands are much larger for narrower bands (±2.25%) than those of wider bands (±6%); as well as the times of central banks intervening to set the parity. For instance, the central bank of Germany, the Bundesbank, was permanently intervening. Germany was considered as the 'stable' currency and gained high reputation. As its reputation increased, there was high demand for the German mark but supply did not satisfy demand, here again creating room for speculation against weak currencies. *(Higgins, 1993)*

2.2.2. German Monetary Dominance and EMS reputation

With the Single European Act of 1986 pushed for liberalizing financial markets and the removal of capital controls, realignments were rapidly destabilizing. This pushed inflation-prone countries to seek to bring down inflation and thus converge to the low inflation standard of Germany; German-style inflation became the moral reference to emulate. *(Giavazzi and Pagano, 1988; Baldwin and Wyplosz, 2012)* Inflation-prone EMS countries, such as Italy, gained credibility by placing monetary policy decisions in the hands of the inflation-rearing German central bank. Government's decision to peg to the DM reduced both its willingness and its ability to create domestic inflation. While average inflations rates ranged from 4.9% in Germany to 17% in Italy between 1979

and 1983, inflation rates decreased to a range of 1.1% in Germany to a 7.1% in Italy. *(Tietmeyer, 1998)*

2.2.3. The ERM Crisis of 1992-93

Through the removal of capital controls, the intervention obligations were significantly increased. Interventions to support weak EMS currencies became a regular feature. *(Giavazzi and Spaventa 1990)* The period of stability through importing the German style monetary policies, in the context of the free capital mobility, did not last long. After five years of nominal exchange rate stability, in 1992, EMS fell into a severe crisis.

Ulrich Volz (2005) in his HWWA discussion paper (no.323) argues that the causes of the ERM crisis was centered around two lines of explanations: the first- and second-generation models of currency crisis which stress the importance of fundamentals and the shift in investor sentiments (speculation and self-fulfilling prophecies) respectively.

The first-generation model views crises as a result of weak fundamentals. Stable exchange rates should be based on the consistency of policies requirements of a peg. Otherwise, the exchange rates would become unsustainable and revaluation will be unavoidable. *(Obstfeld, 1984)* However, according to Tietmeyer (1998), with the exchange rates nominally stable and diverging prices not sufficiently reduced, and as a consequence to these differences, currencies of lower inflation rates depreciated in real terms, whereas the currencies of less stability-conscious countries in some cases appreciated sharply in real terms. Countries with high inflation and rising labor costs eroded their competitiveness and created balance-of-payment problems, eventually leading to crisis.

Furthermore, Tietmeyer (1998) also stated, “the Danish referendum, from that perspective, suddenly made the markets aware of the pent-up problems of divergence and led to a rediscovery of the exchange rate risk” emphasizing the role of speculation and self-fulfilling prophecies in the crisis. Viewed from this angle, the crisis was not only a result of fundamental weaknesses but also a market perception that the Danish

referendum had moved the EMS from a reputation position of credibility to vulnerability. In addition to slow economic growth and high unemployment, the costs of defending the peg increased substantially. This situation made room for speculators to test the durability of the system and therefore decreased the reputation of EMS. *(Eichengreen, 2001)*

The seriousness of the ERM crisis was also shown through the realignments during 1992. From Sep 1992 to Nov 1992, there were no less than five realignments in two months time (Table 2): including the withdrawal of Great Britain and Italy from the ERM in Sep 1992. *(Baldwin and Wyplosz, 2012)* The following case shows how UK ended up leaving the ERM – also known as the 'Black Wednesday':

> As the drive for the European unification process also hit bumps during the passage of the Maastricht Treaty, which was meant to bring about the Euro and speculators began to eye the ERM. When UK joined the ERM in 1990, it was not in a favorable situation: inflation rate of UK was three times higher than of Germany, interest rates at 15% and economically at a time of unsustainable growth moving on to a bust period. Speculators paid attention to these underlying problems and began short selling the Pound Sterling. George Soros was one of these bearish speculators, accumulating short position of more than 10 billion Dollar worth of Pound Sterling. The reaction of the UK government was to spend billions of Pound Sterling in an attempt to contain the short selling by speculators. They also announced that they would raise the interest rates from 10% to a 15% to try and attract investors looking for greater yield on their currency holdings. However, unfortunately, speculators did not believe that the UK government would hold their interest high for long and kept selling the Pound Sterling. UK was losing all of its currency reserves just to stay in the ERM. As this continued, UK was eventually forced to withdraw from the ERM because they were unable to keep the sterling above its agreed lower limit.[3]

This proved that ERM was truly vulnerable and lost its reputation. These attacks of speculations also prompted other weak currencies leading the Italian lira to pull out of the ERM as well. As the speculative attacks endangered the whole system, and to prevent countries from being pulled out of the ERM, the EU finance ministers and

[3] Tempest, Matthew. 2005. "Treasury papers reveal cost of Black Wednesday". The Guardian (London)

central bankers decided to allow the widening of the currency trading bands to fluctuate within 15% around a central rate. *(Higgins, 1993)*

The ERM crisis of 1992-93 made clear that in a context of free mobility of capital, fixed exchange rates were unsustainable as long as central banks maintained their own monetary policies independently. *(Grauwe, 2006)*

3. The Euro: lights and shadows

3.1. ECU to Euro

When Euro made its debut to the world, it was considered that, as a common currency, it would overcome the previous monetary problems and unite the conditions required for Europe to become an optimum monetary union. *(Monegelli, 2008)*

Europe sought to prevent currencies from independent realignments that were harming the reputation of the currencies as under the EMS. This drawback of the ECU was eliminated through the adoption of the Euro. The Euro was created as a single common currency to overcome the reputation weakness of the ECU. As Euro replaced the ECU, all the Member States participating in the Euro project shares a single currency; speculative attacks between the Eurozone members became impossible. The structure of the Euro was the same as the ECU except the fact that it is a shared currency. The baskets were kept because this was the key mechanism that overcame the Bretton Woods currency centrality problem. There is no more room for the exchange rates to fluctuate between the Member States, they are fixed. *(Darvas and Szapary 2008; The European Commissions, 2010)*

After the abolishment of the capital controls in July 1990, the leaders of the EC countries reached agreement on currency union with the Maastricht Treaty signed on Feb 1992. In order to introduce the same currency, the Member States were to fundamentally converge by accomplishing the reference values of the five economic convergence criteria (that will be described in the subsection 3.1.1.) and be evaluated finally, whether they are to be accepted in the Eurozone or not, in 1999 before the

introduction of the Euro.

Table 3 shows the definite values of a Euro with respect to the exchange rates at which the currency entered the Euro.

Table 3) Fixed Euro conversion rates

€	Currency		
1	BEF 40.3399 (Belgian francs)	1	ITL 1936.27 (Italian lire)
1	DEM 1.95583 (Deutsche Mark)	1	L UF 40.3399 (Luxembourg francs)
1	IEP 0.787564 (Irish pound)	1	NGL 2.20371 (Dutch guilders)
1	GRD 340.750 (Greek drachmas) *2001	1	ATS 13.7603 (Austrian schillings)
1	ESP 166.386 (Spanish pesetas)	1	PTE 200.482 (Portuguese escudos)
1	FRF 6.55957 (French francs)	1	FIM 5.94573 (Finnish markkas)

Source: ECB

Note: these are currencies that joined Euro at the very beginning, 1999

These rates were set so that one ECU equal one Euro. Not all ERM member states moved on to the Euro. UK and Denmark decided not to join the common currency..

The Euro is now legal tender in 19 of the 28 member states of the European Union (EU): Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Apart from these EU members, Outside of Europe, a number of overseas territories of EU members also use the Euro as their currency. The micro-states of Andorra, Monaco, San Marino and Vatican City also use the Euro, on the basis of a formal arrangement with the European Community. Montenegro and Kosovo likewise use the Euro without a formal arrangement. *(The European Central Bank)*

In the Eurosystem, the monetary policy is handled by the European Central Bank (ECB). ECB's priority is to keep stability of the inflation. *(Giannini, 2011)* Otherwise if the fundamentals are not stable, the system breaks down. Thus, all efforts of the ECB are devoted to keep fundamental stability.

The structure of the system requires that these different countries to converge into one economy; the closer it gets to each other, the less costly it becomes to be in the Eurozone. Thus, one of the solution mechanisms that were needed for the adoption of

the Eurosystem, was converging the same levels of fundamentals, and above all inflation. The convergence was planed through the Maastricht Criteria (explained in the following section 3.1.1.). *(Darvas and Szapary 2008)*

3.1.1. The Maastricht Criteria

The treaty consists of including entry conditions for the candidate countries of the Eurozone that was set during the Maastricht conference in 1991. The macroeconomically different countries required to fulfill the reference values required in: inflation, long-term nominal interest rate, ERM membership, budget deficit and public debt. The scopes of these criterions were to guide countries aiming at adopting Euro to achieve the same flow of fundamentals. *(Grauwe, 2009)*

These were the following conditions:

(1) **Inflation rate** no more than 1.5 percentage points above the average of the three countries with the lowest inflation rates
(2) Nominal **long-term interest rates** not exceeding by more than 2 percentage points those for the three countries with the lowest inflation rates.
(3) Candidate's national currency must stay within its ERM-2 exchange rate band of ±15% around the central parity with no **exchange rate realignment** for at least two years.
(4) A **government budget deficit** not in excess of 3% of each country's GDP.
(5) A **public debt** to GDP ratio that does not exceed 60%.
(Baldwin and Wyplosz, 2012)

Fulfillment of these criteria was to be evaluated by late 1997, a full year before the Euro would replace the national currencies. An important element of this agreement is that, the Maastricht treaty contains reference values which must be achieved and kept, or which must not be exceeded. *(Afxentiou, 2000)* The following table shows the reference values of the candidate Member States during the first years of the Maastricht Treaty:

Table 4) Member States during the first years of Maastricht Treaty

	Inflation			Interest Rates			Public Deficit %PIB			Public Debt %PIB		
	1997	**2003**	**Diff.**	**1997**	**2003**	**Diff.**	**1997**	**2003**	**Diff.**	**1997**	**2003**	**Diff.**
Belgium	1.7	1.5	0.2	5.8	4.1	-0.5	-0.2	0.2	0.3	124.8	103.5	-1.0
Denmark	2.2	2.3	-0.9	6.2	4.3	-0.5	0.4	0.9	-0.6	61.2	42.9	-1.9
Germany	2.0	1.1	0.4	5.7	4.1	-0.5	-2.7	-4.2	3.9	61.0	63.8	-0.7
Greece	5.6	3.6	-0.1	9.9	4.1	-0.8	-4.0	-1.7	-0.6	108.2	100.6	0.8
Spain	2.6	3.1	0.1	6.4	4.1	-0.4	-3.2	0.0	-0.6	66.6	51.3	-3.4
France	1.4	2.1	0.1	5.6	4.1	-0.4	-3.0	-4.2	0.1	59.3	62.3	0.0
Ireland	2.6	4.1	0.2	6.3	4.1	-0.6	1.2	-0.9	2.8	65.0	33.5	-2.6
Italy	2.2	2.8	0.1	6.7	4.1	-0.4	-2.7	-2.6	1.7	120.2	106.4	-0.7
Luxemburg	1.5	2.2	0.2	5.6	4.1	-0.6	2.8	-0.6	-0.5	6.1	4.9	0.0
Netherlands	2.0	2.4	0.9	5.6	4.1	-0.4	-1.1	-2.6	2.1	69.9	54.6	-3.0
Austria	1.5	1.3	0.5	5.7	4.1	-0.5	-2.0	-1.0	-1.7	64.7	66.4	-0.3
Portugal	2.9	3.4	1.3	6.4	4.1	-0.4	-3.0	-2.9	1.3	59.1	57.5	1.1
Finland	1.3	1.4	-1.0	6.0	4.1	-0.5	-1.5	2.4	2.1	54.1	44.6	-0.6
Sweden	1.9	2.3	0.9	6.7	4.6	-0.3	-1.6	2.4	-1.1	70.5	51.7	1.5
Great Britain	2.3	1.4	-0.3	7.0	4.4	-0.4	-2.2	-2.8	3.3	50.8	39.6	-3.0
EUR-15	2.1	2.0	0.1	6.1	4.2	-0.4	-2.5	-2.7	1.8	71.0	64.1	0.1
Euro area	2.0	2.1	0.2	5.9	4.1	-0.5	-2.6	-2.8	1.7	74.7	70.4	0.3
Limits	3.0						-3.0	-3.0		60.0	60.0	

Source: EC statistics **diff: difference between 1996 to 1997*

As you can see from Table 4, inflation and Interest rates were on track, however, the problem were the public deficits and public debt, because from the beginning, most of them were not complying with the target value and even got worse through time. This progression towards a unified polity of Europe has had an effect on the extent of fiscal decentralization within the Member States. Table 4 clearly shows that not all countries were compliant with the criteria by 1997. As most of them were not in compliance, they decided to postpone the Euro adoption to Jan 1999. By then 11 out of 12 (exception for Greece) fulfilled the criteria partly through window-dressing measurements and creative accounting. *(Baskaran, 2009; Baldwin and Wyplosz, 2012)*

Regardless the initiative put in place in order to force countries, who want to join the Euro, to respect these limits, more joined after the entry of Greece in 2001. Followed by Slovenia's entry in 2007, Cyprus (2008), Malta (2008), Slovakia (2009), Estonia (2011),

Latvia (2014) and Lithuania (2015) joined the Eurozone. *(The European Central Bank)* The following table is the most recent public debt and budget deficit of the EU Member States under the Maastricht Treaty:

Table 5) Public debt and budget deficit of the EU Member States

Country	public debt to GDP ratio	surplus/deficit (+/-) to GDP ratio
Eurozone	**93.97%**	**-2.27%**
Austria	**85.49%**	**-2.30%**
Belgium	**106.64%**	**-2.90%**
Bulgaria	28.54%	-2.84%
Croatia	86.11%	-5.83%
Cyprus	**105.95%**	**-5.65%**
Czech Republic	41.86%	-1.93%
Denmark	42.92%	0.01%
Estonia	**10.60%**	**0.20%**
Finland	**60.67%**	**-3.26%**
France	**95.57%**	**-3.87%**
Germany	**73.29%**	**0.51%**
Greece	**174.64%**	**-2.13%**
Hungary	76.63%	-2.49%
Ireland	**107.82%**	**-3.60%**
Italy	**132.28%**	**-2.86%**
Latvia	**38.62%**	**-1.24%**
Lithuania	**42.46%**	**-0.92%**
Luxembourg	**24.11%**	**0.15%**
Malta	**67.52%**	**-1.88%**
Netherlands	**68.80%**	**-2.09%**
Poland	50.82%	-2.99%
Portugal	**128.15%**	**-3.71%**
Romania	39.94%	-1.47%
Slovak	**53.92%**	**-2.70%**
Slovenia	**81.19%**	**-4.03%**
Spain	**98.56%**	**-5.11%**
Sweden	44.00%	-1.68%
UK	88.87%	-4.18%

Source: Eurostat

According to the Maastricht Treaty, the national debt should not exceed 60% of the

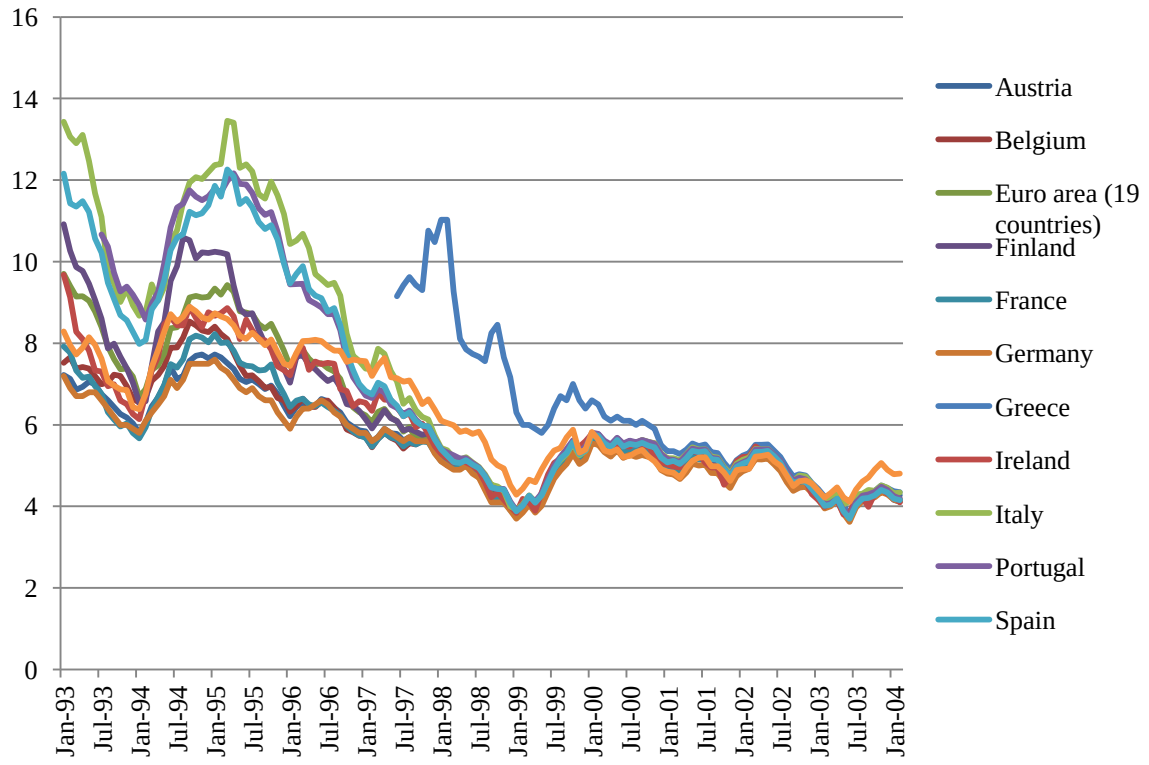
national GDP and the deficit should not exceed 3% of national GDP. However, as you can observe from the table 5, that most of the Euro Member States are no longer fulfilling the target value. The derogation on these criteria creates latent instability magnified by the currency crisis because it would damage the reputation of the Euro and this would show the Euro vulnerability.

3.2. Euro, after 15 years

At this part of the paper, I would like to evaluate the Euro Member States' performance in the Eurozone. We will review their convergence criteria and discuss the problem of the Euro that might have led to the current crisis of the Eurozone.

As the Maastricht criteria aimed, there were clear signs of convergence in interest rates[4] and inflation:

Figure 2) Long term interest rate statistics, 1993-2004



Source: OECD stats

[4] Until the 2008 when the Eurozone crisis broke out

As we can interpret from Figure 2,[5] regardless other macro- and micro-economic factors, inflation is generally converging to the limit established by the Maastricht Criteria. The convergence of the fundamentals was essential in terms of adopting the same currency. If their fundamentals are far from each other, this brings out the tension within the Eurozone from strong and weak economies because they share a common currency. *(Eichengreen, 2010)*

To sustain the Eurosystem, the criteria are to be kept converged as said in the Maastricht Treaty; in contrast, however in reality, the convergence criteria created more transparency in defining the gap between the weak and strong economies. *(Wyplosz, 2000)*

"The reason for implementing fiscal criteria into requirements was and still is a subject of debates." *(Paleta, 2012)* It is remarkable that after entering the Eurozone, fiscal positions of most countries worsened. The fiscal problem is associated with debt and deficit problem. As mentioned earlier, most of the Member States' debt and deficit to GDP exceeds the limits established by the Maastricht criteria and fiscal policies may accommodate the procrastination of these problems by allowing debt cumulating by increasing taxes.

By interpreting the reference values from the previous tables, we can come to a conclusion of signs of convergence in monetary policies controlled by the ECB, and divergence in fiscal policies which are realigned independently by the Member States. With the creation of the ECB and the lost of independent monetary policy authority, at the time of crisis, local governments are only granted the freedom of fiscal policy to react to crisis. *(Jonáš , 2006)* One problem arises right here: all the changed made in the fiscal policy is done independently, there is no unity. As the crisis gets deeper, governments are pressured to perform fiscal policies and as a consequence, create huge debts.

Then do the reference values required in the Maastricht criteria make sense when most of them are not being fulfilling? Could they change the reference value to another? This

[5] The point here is to show: the 'past' inflation-prone countries were also converging.

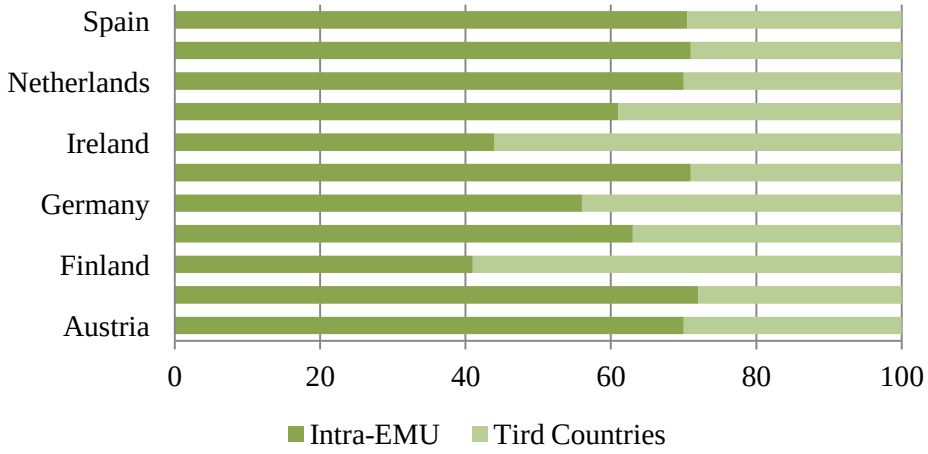
would be a global fall in reputation for the Euro, thus this would not be a wise alternative. *(JONÁŠ, 2006)* Once entered the Eurozone, there is no going back; however what if this was not the case? Just like the case of UK and Italy exiting ERM, what if there was possibility of exiting the Euro? Let us put an example of the most endangered country: Greece.

Recently the possibility of Greece's withdrawal from the Eurozone is rising. Also known as the "Grexit", in the Eurozone context, there would probably be some financial contagion as speculators wake up to the fact that Euro membership is no longer irreversible. *(The Independent, 2015)* Once the reputation of sustainability of the Euro is gone with the Grexit, investors would pull Euros out of the next potential vulnerable Eurozone members like Portugal, Spain or Italy. The reputation issue is extremely important here because the exit of Greece from the Eurozone would mean a trigger to a downfall of the Euro due to the fact that Euro could be seen as impermanent. In a worse case for the Eurozone would be that other nations might want to follow the exit, or even worse, after the exit Greece actually prospered. If this was to happen, then the Maastricht criteria would no longer keep its meaning because the criterions were there to be fulfilled and kept as long as the Maastricht Treaty holds. However, unlike the previous systems where currencies could devaluate and do realignments, this reputation impact on Euro is on a different scale. If the Euro gets weak in the international markets, all the economies of the Member States of the Euro will be affected; in the worst case, the breakup of the system as the previous systems did.

4. Euro from the business perspective

The aim of the monetary union was to trigger market integration and reduce transaction cost (no other currency is needed when conducting business or travelling within the Eurozone), increase cross-border trade and employment and expand markets for business within the Eurozone. As shown in Figure 3, the monetary union did trigger more trade within the Eurozone for most of the Member States.

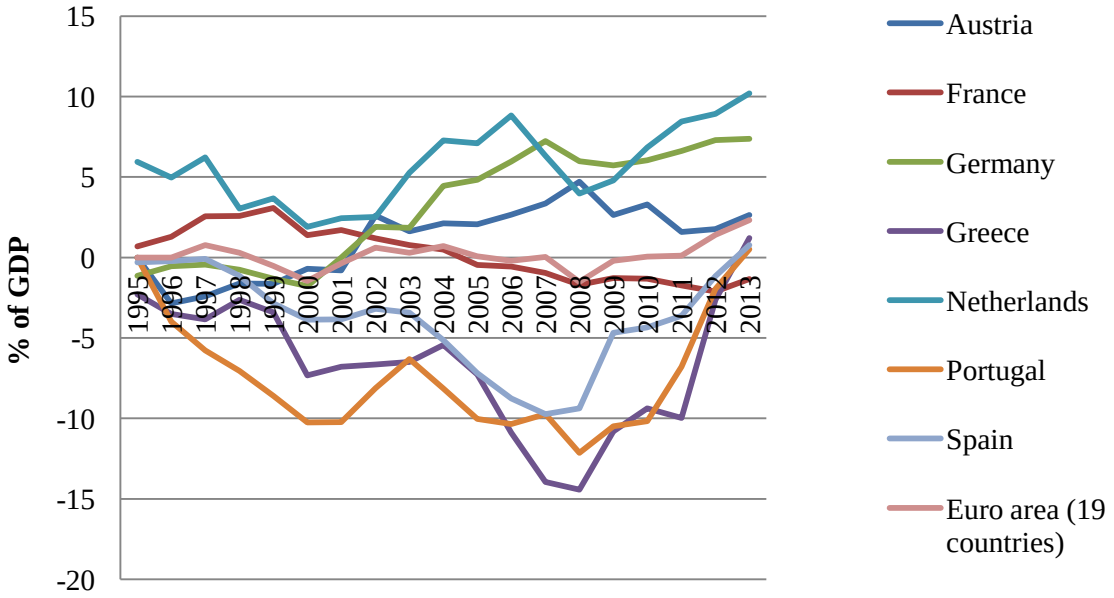
Figure 3) Intra-Europe exports by destinations



Source: CHELEM database

The EMU members did benefit from increased trade within the Eurozone, competitiveness increased as firms benefited from economies of scale and scope, and investment and consumption were boosted by low interest rates. *(Mckinsey, 2012)*

Figure 4) Current account balances



Source: OECE stats

However, not all the members benefited and to different degrees. At the surface, the Euro area did not seem to have problems in this respect, since creditor countries' (i.e. Germany) surpluses compensated other member states' deficits, thus it looked like they were all doing well in general. But beneath the surface, as shown in Figure 4, competitiveness was distinguished into: "good imbalances" that foster convergence through high investments and productivity growth (as in Germany); and "bad external imbalances" due to countries that fail to boost investment rates when there is capital flow (such as in Greece and Portugal) or those that concentrate into non-tradable goods sectors like infrastructures and construction (as in Ireland and Spain) where potentials for productivity growth is limited. *(Eichengreen, 2010)*

A key issue of the Eurozone membership is that German exports are much more competitive within the Eurozone than if Germany had its own currency. Germany has shown the strongest productivity growth in the Eurozone area. This competitiveness is reflected in a large currency account surplus. Without the membership of the Euro, Germany would have more expensive exports, higher unemployment rate and lower economic growth. Pettinger, an economist, stated "This is the nature of a single currency – some will be 'winners' some will be 'losers'".[6]

Germany became the "have-it-all" country within the Eurozone. Other weak economies cannot follow up to Germany's level of competitiveness and unemployment rate. Some economy analysts criticized that Euro was creating more divergence than before when countries had their own currencies, and only a minority benefited from this system. This outcome is a contradiction of the original purpose of the creation of a single monetary union.

In order to limit the size of these imbalances, the ECB and the EC have demanded that the southern countries to sharply reduce their budget deficits. This has thrown these southern countries (PIIGS) into further severe recessions with high unemployment (budget deficit, an outgrowth of the trade deficit). However, this 'division of level of economies' makes it tricky for ECB, as it tries to enhance growth in the ailing

[6] Economicshelp.org – "Germany and benefits of the Euro" by Tejvan Pettinger

economies while heading off inflation in the healthier ones (to raise the price of their output relative to the price of output in southern Europe). *(CEPR, 2013)*

There is no exact answer to the balancing of this issue. However, a possible view is more integration within the Eurozone is needed. These fiscal differences that have been endangering the Euro (in the absence of a mechanism that enforces fiscal discipline of each Member States) should be managed as well. Though, no one really knows if the following assessment is right or not, the experience until now has shown that a monetary union cannot last long without a political union. The imbalances of the Member States and the Eurozone crisis have certainly shown the limits of a monetary union not backed by deep political integration. *(Baldwin and Wyplosz, 2012)*

5. Conclusion

Europe's experience of creating a new single monetary union and a single monetary policy is very unique. Through the repeating processes, 'of facing problems of a system, collapse, and creation of new system to overcome the previous weaknesses' has brought Euro as the ultimate monetary solution and outcome of Bretton Woods to Europe. However, after the adoption of the Euro, Member States started to struggle from the single currency, problems and tensions within the Eurozone was rising to surface. This has been creating many issues and doubts about Eurosystem's stability. *(Majone, 2012)*

This work is evidence that Euro is not an ultimate solution, but only another stepping stone that is needed in order to cross the stream and get closer to what Europe really seeks – full convergence, Europe as a whole. Though, however, taking into account that full convergence and synchronization is practically impossible from what we have observed, Euro just might be the closest to what Europe seeks for now. But the crisis has become too profound and the gaps between the economies are getting wider. As the gaps get wider, it loses the objective of sharing one currency. A major lesson from monetary unification history is that is an evolutionary process -EMU and the Euro will evolve in the future. *(Bordo and Jonung, 1999)*

There have been recent signs of recovery of the Euro area. The Spanish economy grew 0.9% followed by a 6% in France from the prior quarter 1 of 2015. The overall Euro area grew by 0.4%, best performance in four years. Unemployment rates decreased but are still at a high 11.3%. In April, inflation rate rose back to 0.0% and has grown to 0.3% in May. The main reason is due to the Quantitative easing (QE) in Europe started from March. ECB said it was ready to buy over 1 trillion Euro of sovereign and asset-backed bonds between March 2015 and September 2016. The European QE has quickly depreciated Euro against other currencies: down by 19% against dollar and by 10% against its trading partners' currency, however it is expected to fall furthermore. *(The Economist, 2015)*

The devaluation of the Euro is good news to the weaker members in the Eurozone, who struggled from competition, to boost their exports. At the same time, cheaper Euro means imports become costlier, and inflation rises. However, many experts say that

even with the European QE, meeting ECB's target inflation rate of 2% would be hard to achieve. The problems of debt and deficits are not yet directly impacted through the QE; nevertheless, QE is expected to create space for other reforms. *(The Wall Street Journal, 2015)* Some analysts think that a new system will emerge at the end of the QE, whether that will be a result of deflation, outright default of inflation or the real erosion of capital, but at the moment looks like Greece is only the starting point. *(The Economist, 2015)*

While the European QE's outcomes are not clear, one thing for sure is that this is only a temporary Ringer's solution. Which member by the end of the day would have accumulated the most of the 1 trillion Euro of the QE? And who is going to bear the burdens? It might seem like a recovery for now, but it would turn out to be stagnation or a deeper step into the tunnel.

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