UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

UNIVERSITY OF SARAJEVO
SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

MIA ZEČEVIĆ

UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

UNIVERSITY OF SARAJEVO
SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

THE CAUSES AND CONSEQUENCES OF THE EUROZONE DEBT CRISIS WITH SPECIAL REFERENCE TO THE OPTIMUM CURRENCY AREA THEORY

Ljubljana, September 2019 MIA ZEČEVIĆ

AUTHORSHIP STATEMENT

The undersigned Mia Zečević, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEBLU), author of this written final work of studies with the title The causes and the consequences of the eurozone debt crisis with special reference to the relevance of optimum currency area theory, prepared under supervision of prof. dr. Sabina Silajdžić

DECLARE

1. this written final work of studies to be based on the results of my own research;
2. the printed form of this written final work of studies to be identical to its electronic form;
3. the text of this written final work of studies to be language-edited and technically in adherence with the FELU's Technical Guidelines for Written Works, which means that I cited and / or quoted works and opinions of other authors in this written final work of studies in accordance with the FELU's Technical Guidelines for Written Works;
4. to be aware of the fact that plagiarism (in written or graphical form) is a criminal offence and can be prosecuted in accordance with the Criminal Code of the Republic of Slovenia;
5. to be aware of the consequences a proven plagiarism charge based on the this written final work could have for my status at the FELU in accordance with the relevant FELU Rules;
6. to have obtained all the necessary permits to use the data and works of other authors which are (in written or graphical form) referred to in this written final work of studies and to have clearly marked them;
7. to have acted in accordance with ethical principles during the preparation of this written final work of studies and to have, where necessary, obtained permission of the Ethics Committee;
8. my consent to use the electronic form of this written final work of studies for the detection of content similarity with other written works, using similarity detection software that is connected with the FELU Study Information System;
9. to transfer to the University of Ljubljana free of charge, non-exclusively, geographically and time-wise unlimited the right of saving this written final work of studies in the electronic form, the right of its reproduction, as well as the right of making this written final work of studies available to the public on the World Wide Web via the Repository of the University of Ljubljana;
10. my consent to publication of my personal data that are included in this written final work of studies and in this declaration, when this written final work of studies is published.

Ljubljana, September 5th, 2019 Author's signature: Zecevic Mia

TABLE OF CONTENTS

LIST OF GRAPHS

LIST OF TABLES

LIST OF SCHEMES

LIST OF ABBREVIATIONS

EU – European Union

EMU – European monetary union

OCA – optimal currency area

EMS – European monetary system

ECU – European currency unit

ERM – European exchange rate mechanism

ECB – European central bank

ESCB – European system of central banks

SGP – Stability and growth pact

ECOFIN – Economic and financial affairs council

EDP – excessive deficit procedure

MMF – money market funds

IMF – international monetary fund

ESM – European stability mechanism

EFSF - European Financial Stability Facility

NATO - North Atlantic Treaty Organization

GPS - Global positioning system

ECI - Economic Complexity Index

UK – United Kingdom

INTRODUCTION

We all witnessed the hard times during the period of 2008 until 2013 and onwards for some countries. 2008 was marked as year when the serious crisis hit the world-wide nations with no excuse, from the biggest to the smallest economies. At this point world is almost recovered from the economic crisis, however, a lot of questions have been raised during the crisis about the way national economies were conducting policies regarding their own economies. The crisis was labeled as hardest crisis ever since due to the fact that existence of big and strong world economies such as European Union (hereinafter: EU) were brought into question. The crisis which has began as banking crisis, i.e. subprime mortgage sector crisis in United States (hereinafter: US) has spilled over to the world nations turning into the sovereign debt crisis. Majority of EU economies were involved in such crisis due to the unsustainable debt levels which were made by their "luxurious governments living". The spillover effect couldn't had been stopped at any point, so after it started in US it spilled over to Ireland, Portugal, Spain, Germany and eventually ending in Greece from 2008 until now economist worldwide have discussed the reason crisis has hit so bad which has raised questions about the sustainability of the previous manner of conducting national economies. Euro zone was especially interesting for the economist since EU, thus European Monetary Union (hereinafter: EMU) was upcoming world force. Indeed, euro zone itself, regardless the EU, was seriously jeopardize and therefore it was subject to different discussions because it was obvious that previous policies therefore, both monetary policies and fiscal policies have had to adjust to such exceptional circumstances.

The conventional literature review on this subject establishes a general consensus that the main reason for the crisis is that euro zone turned not to be the optimal currency area (hereinafter: OCA), therefore, the non-fulfillment of the Maastricht convergence criteria which were set to gain OCA under the roof of euro, or even more, those criteria itself, because they might have been unachievable for most of the European peripheral countries which are strategically important for EMU.

Main problem which is going to be explored in this thesis is sovereign debt crisis which has taken over the Euro zone. The aim of the research is to explain what indeed happened, what were the consequences of such crisis, what can be done in order to minimize its consequences and eventually what will be the faith of the EU and EMU.

Therefore, we will discuss if the non-fulfillment of the OCA criteria was the most obvious reason of the crisis hitting this hard analyzing the OCA criteria of the core euro zone countries: Germany, France, Netherlands, Belgium on the one side and peripheral countries: Italy, Spain, Ireland, Greece, Portugal on the other side, of course with the accent on the Greece. The aim of such analysis is to see if the euro zone was, indeed, the optimal currency area.

So, the objectives of the master thesis are to explain what were the theoretical implications for the creation of the euro zone, what have been the main arguments of the political goal for the creation of Single Currency Area, the evolution of financial crisis, causes and characteristics, explain the relevance of OCA theoretical premises in understanding the causes and the consequences of the debt crisis in the euro zone, to critically assess the importance and the consequences of a failure to ensure production factor mobility and fiscal transfers , thereby discussing the relevance of continued and pressing problems, to analyze the relationship between the OCA premises, Maastricht Treaty and Stability and growth pact (hereinafter: SGP) criteria, to draw conclusions regarding the causes and consequences of the crisis and propose key policy implications resulting from the systematic review of the literature on the matter.

1 EVOLUTION AND CREATION OF EMU

EMU is advanced degree of economic integration of EU, which implies a common monetary policy and closely coordinated economic policies of the Member States. EMU is based on a common market products and services that is necessary for its good functioning, because variation in the exchange rate between the currencies of the Member States hampers the interdependence of capital markets, perturbation of agricultural markets and prevent common industrial market to fully consolidate the internal market.

EMU was established to bring prosperity and stability across Europe. It is a cornerstone of the EU. Today the EMU is facing a fundamental challenge. It needs to be strengthened to ensure economic and social welfare.

1.1 Establishment of EMU

In August 1978 European Council Meeting at Bremen officially approved the concept of a European Monetary System (hereinafter: EMS), which was adopted and came into force in March 1979.

At that point, the EMS had three basic components (Weiler & Kocjan, 2004):

- artificial currency: the European currency unit (hereinafter: ECU), which unlike euro was only used for internal accounting purposes of the Memeber States, so this currency was forerunner of the euro as the actual currency of the union,
- exchange rates which was allowed to fluctuate under the certain boundries and
- a system of credit and loan reserves with the aim to stabilize Member State currencies in times of crisis

However, this system had a lot of flows, what culminated with devaluation of the currencies during the 1992 alarming the need to make changes and move ahead toward an EMU (European Commission, 2015). Even though in the first few years there were made many realignments of the currency in the EMS, it wasn't understood as the flow of the system rather as the adjustment period which was overcomed thanks to a mixture of converging inflation rates, and interest rate management which targeted the exchange rate (European Commission, 2015). Nevertheless, this experiance was the good background for the formation of the EMU since community members already had experience in overcoming the short term volatitily of exchange rates between the European Community currencies. In general, the idea of creation of the EMU was born due to thought of many economists that national monetary autonomy was inconsistent with the Community's objectives of free trade, free capital movements and fixed exchange rates such statement whereas such statement was confirmed by the event which has hit the ERM in 1992 - 93, causing the withdrawal of the Italian lira and the pound sterling (European Commission, 2015).

The aim of creation of the EMU in Europe was the freedom of movement for persons, goods, services and capital, as well as irrevocably fixed exchange rates between national currencies and a single currency. If we wanted such system to work out there had to be set a common monetary policy and it required a high degree of compatibility of economic policies and consistency in a number of other policy areas, especially in the fiscal field (Balino and Cottareli, 1994). Its formation should have provided price stability, balanced growth, converging standards of living, high employment and external equilibrium as well as it should have represented the final result of the process of economic integration in Europe. United Europe meant the single market, where all barriers had to be removed in order to provide the free movement of goods, services, people and capital because the full benefits of the internal market would be difficult to achieve with the relatively high business costs due to the existence of several currencies and unstable exchange rates.

In June 1988, the European Council had a meeting in Hanover where the Committee for the Study of Economic and Monetary Union was set up, chaired by the President of the Commission, Jacques Delors, including all European central bank (hereinafter: ECB) governors.

That meeting resulted with the report defining the monetary union objectives (Moussis, 2011):

- complete liberalization of capital movements,
- full integration of financial markets,
- irreversible convertibility of currencies,
- irrevocable fixing of exchange rates, and
- possible replacement of national currencies with a single currency.

Since it was impossible to implement all these objectives of the monetary union at ones, it meant that these objectives had to be implemented gradually. Therefore, report indicated that it could be achieved in three stages starting from economic and monetary coordination to introduction of the single currency and an independent ECB, and in the end implementing the rules which must be obeyed when defining budget spending, therefore for limiting the national budget deficits. Therefore, the EMU emerged from three stages (European Commission, 2015):

- Stage 1 (1990–1994) - Complete the internal market and remove restrictions on further financial integration:

    - The liberalization of capital movements by removing the remaining restrictions on the volume, which was done by the end of the 90's.
    - the introduction of new forms of cooperation between the national central banks through the installation of that mandate in the rules of operation the Board of Governors of Central Banks of the Member States.
    - the freedom to use the ECU, the forerunner of the Euro, and the maintenance of a range of foreign exchange rates in relation to the ECU +/- 2.25%.
    - strengthen economic convergence among Member States.
    - the convergence criteria of Maastricht.

- Stage 2 (1994-1999) :

    - Establish the European Monetary Institute to strengthen central bank co-operation and prepare for the European System of Central Banks (hereinafter: ESCB).
    - Plan the transition to the euro.
    - Define the future governance of the euro area, the SGB.
    - Achieve economic convergence between Member States.

- Stage 3 (1999- onwards):

    - Fix final exchange rates and transition to the euro.
    - Establish the ECB and ESCB with independent monetary policy-making.

- Implement binding budgetary rules in Member States.

1.2 Maastricht Treaty

The idea of a common currency area first was initiated in the 1969 by the European Commission to integrate Europe's monetary policies, whereas the Werner Report published in 1970 outlined steps for cooperation in economic and monetary policies. So, the idea of creation of EMU took place during the following decade, whereas the idea by the establishment of the EMS by 1979, which linked exchange rates between member states.

One of the first reports that have suggested integrated public finances in integrated Europe was the MacDougall Report (1977). The report suggested integration of fiscal policies among the member states because in such way greater integration could have been seen, whereas such arguments were the basis for the introduction of the fiscal coordination of the member states (so far monetary economic union has only unique monetary policy whereas the fiscal policy is left to the national economies to take care, true, with some boundaries which have been set by introduction of the Maastricht criteria as well as with the attempt to coordinate the legislation of the national economies with the unique legislation model of the monetary union).

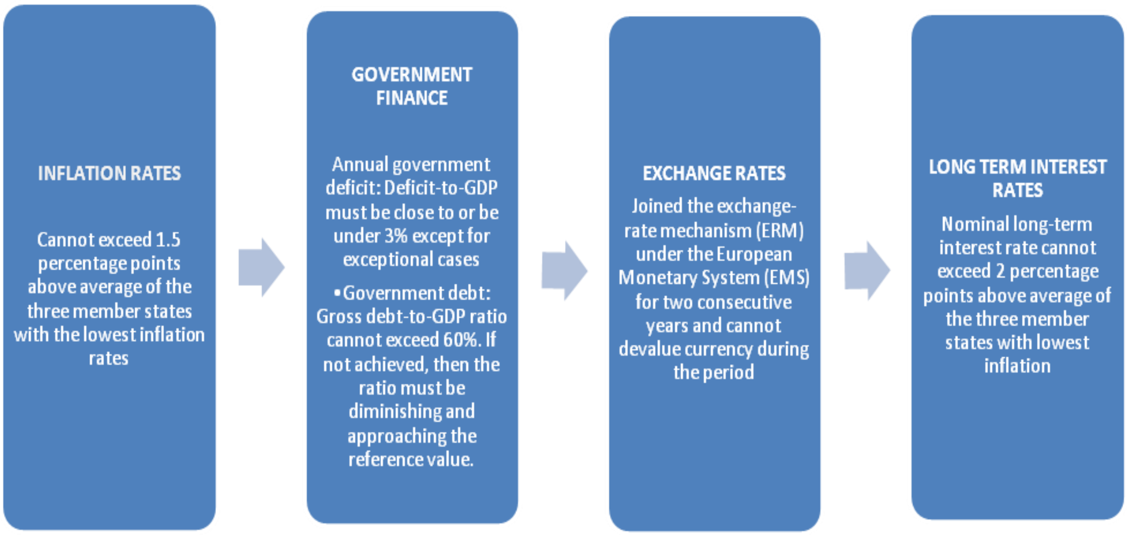
The need for fiscal coordination advocates as well Robert Mundell in his seminal 1961 paper on OCA suggesting that if we wish to have successful monetary union, fiscal transfers are sin qua non between the area with the price and wage volatility because that would be the only way through which such economies would be able to adjust for regional shocks its economies have faced with. However, fiscal coordination is not easy to be achieved due to the fact that all member states have their own national identities which differ from any other country in the union, but with no doubt such idea must see the light of the day if the existing divergences among the states are to be avoided. The question that could be interesting for the further analysis is why is so hard to coordinate fiscal policies among the states or even more how hard is to obtain not only monetary union but as well the fiscal union. The Maastricht treaty criteria were just an attempt towards fiscal coordination whereas with only few criteria to be satisfied was hard to achieve.

Namely, the euro as the single currency of the monetary union was established by the provisions of the 1992 Maastricht Treaty. This Treaty was the basis for the creation of the single European currency: euro. Member states needed to fulfill set criteria: rules on budget deficit levels, debt levels, low inflation, and interest rates close to the EU average, in order to enter into the monetary union.

As already mentioned three stages for the creation of EMU were outlined by the Delor's Report from 1989 whereas the criteria for economic convergence, which countries are obliged to fulfill in order to qualify for entry into the monetary union, as part of the third stage of the EMU were enshrined in the Maastricht Treaty, adopted in 1993.

For economic and monetary union to provide a framework for "one market" as the euro zone was to be and to avoid disruption, it could be achieved only through a high degree of convergence before introducing the single currency. Therefore, the Maastricht convergence criteria were introduced.

Scheme 1: The Maastricht convergence criteria



Source: European Central Bank (2015)

The aim of four main Maastricht convergence criteria were to achieve (European Central Bank, 2015):

- high degree of price stability, which is to be achieved through a rate of inflation being close to the three best performing Member States in terms of price stability;
- the sustainability of the government financial position; which is to be achieved by putting limits on a government deficit;
- the observance of the normal fluctuation margins without devaluing against the currency of any other Member State throughout at least 2 years showing that EU country could manage its own economy with no need to devaluate its own currency;
- the durability of convergence achieved by the participation of member State in the Exchange Rate Mechanism of the EMS.

These criteria were designed to ensure that a new economic force, so called euro area, could appear on the worlds market with the single currency as stable, sound and sustainable area reflecting economic policy convergence and a resilience to economic shocks. Thus, purpose of setting Maastricht criteria was to ensure price stability within the euro zone whereas no country could harm the stability of the single currency.

Even though the Maastricht Treaty obliged EU member states to adopt the euro as soon as they would meet certain monetary and budgetary convergence criteria, this didn't apply to all countries. Namely, the United Kingdom and Denmark were granted "opt-out" exemptions, meaning they wouldn't have to enter the monetary union upon the fulfillment of the convergence criteria. They were exempt from the third stage of monetary union, so they are not obliged to fulfill convergence criteria, unless they decide to adopt euro. This "opt-out" clause was made up their own request. Besides these two countries Sweden didn't adopt euro since it didn't' meet all of the monetary and budgetary requirements of the convergence criteria, whereas on a referendum in 2003 rejected the introduction of the euro.

The main purpose of the convergence criteria was to ensure that all Member countries have their fiscal conditions harmonized and by lowering their debt and deficit levels maintaining them at the approximately same level would avoid the situation in which one's country bankruptcy would lead to the bankruptcy of entire monetary union. Moreover, the Article 104b in the Maastricht Treaty (renumbered TFEU Article 125 by the Treaty of Lisbon) strictly forbids the transfer of funds between member states due to the aspiration to avoid the situation in which fiscally irresponsible states would misuse their membership in union at cost of the states which have taken care of their budget expenses and thus be able to borrow money at the lower interest rates and then transfer it to those states which would enjoy the benefits of union with their spender behavior.

A lot of countries did not meet all of the reference values for entry in the euro zone regarding the government finances, e.g. Italy had a debt-to-Gross domestic product (hereinafter: GDP) ratio of 113.6 % in 1999, but fell from 137.8 % to 113% between 1993 and 1999) but the Treaty gave the possibility that if countries were approaching the specified levels of each condition, they could be considered to have satisfied the condition. The idea behind this condition was to force the countries to cut down on its debt levels without having to delay the launch of the new currency, but only if it was appraised that if they were able to do it in the short period of time. The fear of project failure made authorities to except Italy in membership. Therefore, the convergence criteria seemed as stimulating for the countries with the high levels of debt and deficit since it enabled those countries, such as Italy and Greece, to cut down on their public expenditures and debt levels whereas only by fulfillment of the convergence criteria countries were able to benefits of the monetary union: lower borrowing costs, low inflation, exchange-rate stability for engaging in external trade, and expanded trade within the EU's internal market. Foregoing sounds like countries that have not met the criteria were strategically important to the euro zone for which they were allowed membership. But what was the purpose of the set criteria if not to achieve convergence among the countries with the aim to have strong national economies forming a strong unique union, otherwise the same do not serve the purpose for which they were set.

Going back to the times when union was formed, there will be noticed that only few countries met all of the conditions, whereas majority of the member states haven't satisfied referent criteria prior to accession to the EMU. Moreover, at the time of 1999 only 11 countries fulfilled required criteria, whereas other countries were denied their accession to the single currency due to their inability to satisfy given criteria. However, the interesting fact is that Greece was some kind of an exception because it joined the union two years later with no criteria satisfied yet. Why Greece was given such advantage compared to other countries which haven't satisfied criteria as well but weren't given the possibility to access the union and will such decision cost the whole union during the crisis is left to be seen.

Nevertheless, there were a lot of discussions regarding "loose" criteria for entering the EMU since "loose" criteria for entering the EMU could eventually have its consequences. If the main idea behind the creation of the Maastricht convergence criteria was to create a stable union, then by stipulating the condition when the countries were approaching the specified levels of each condition are considered to have satisfied the criteria, the stability of the union potentially could have been brought into the question. Therefore, with no dilemma we might say that such criteria already faced its consequences during the last financial crisis, what will be discussed later on.

1.3 SGP

SGP pact is a set of rules whose aim is to promote stricter rules regarding fiscal policy of the Member States which was introduced in 1997. So, beyond the Maastricht convergence criteria regarding fiscal policy - policies in taxation and government expenditure- once country joined the euro, SGP criteria pursue sound public finances and coordinate their fiscal policies.

The idea behind the SGP was to limit the possibility that some governments would exert inflationary pressures on the European economy especially those periphery countries which had more interest to join the EU. Therefore, if such scenario would come true, with no ability to finance excessive debt in public markets, it could lead to monetary financings by central banks, as well as the debt-ridden countries could overspend and eventually seek support from other, core countries. Therefore, according to the article 104c governments of Member states are required to avoid excessive deficits whereas the executive body of the EU - European Commission- had a task to monitor deficit levels of each country and if deviations from the reference value appear it is obliged to report to the Council of the European Union, a body of national ministers from all member states.

The SGP criteria were the extended hand of the Maastrich Treaty criteria with the goal to put under the control the budget deficits of national economies. Therefore, the SGP became the tool by which the fiscal coordination of the national economies was tried to be achieved in EMU.

The two-major imposed SGP criteria which member states are obliged to respect are:

- annual government budget deficit cannot be higher than 3% of GDP and
- government debt must be lower than 60 % of GDP or at least diminishing and approaching reference value.

According to the SGP all member states of the euro zone are obliged to submit annual stability programs, while the countries outside the euro zone are obliged to submit convergance criteria to the Commission and the Economic and Financial Affairs Council (hereinafter: ECOFIN), whose aim is to see if the current members are able to maintain the given levels of the imposed criteria and for the potential members to see if they are on the way to meet their budgetary objectives in order to join the EMU. The mentioned institutions to whom such reports are submitted further assess the reports (Commission) and then give the opinion about current situation and suggestions for improvement.

If the country doesn't follow the given criteria ECOFIN must ask a member state to adjust its convergence or stability program and then it monitors implementation of the programs. It works as the mechanism which is not allowing the member states to have much space for not respecting the given SGP rules, so if necessary it can make a recommendation to a member state to take prompt corrective measures if the excessive deficit continues to increase or stays at the levels which are beyond the set conditions. Also, ECOFIN has an authority to issue an early warning in order to prevent the excessive deficit whereas the Commission, through ECOFIN, has an authority to give policy recommendations to a member state. For example, France and Germany during the 2003 were approaching the 3 percent limit of its deficit what was alarming and the France got the warning from ECOFIN, but the warning was not issued to Germany, Portugal, and Italy, for which the Commission recommended early warnings. So, the ECOFIN was there to act quickly in order to prevent countries to break the rules. Even though the deficits and debts remained high during the few years when the euro was introducted, levels were coming down after some time. At that point a ECOFIN was given small credibility especially since France and Germany broke the rules in 2005, since none of the member states was willing to impose financial sanctions on a fellow member.

Nowadays a lot of authors agree that the SGP, therefore its mechanism, failed to control government debts and deficits what has been shown with the arrival of the global financial crisis in 2008, where majority of the member countries went into a continent-wide recession, increasing their deficits as countries attempted to inject stimulus into a recessionary economy, as well as they faced higher unemployment and other costs related to economic downturns what all countries justified with the exceptional circumstance embracing Europe. Since the trend of increasing deficit continued in 2009 of each country there were raised questions about the effectiveness of the Maastricht criteria and the Stability and Growth Pact in preventing such crisis. In the 2011 almost all countries were involved in the Excessive Deficit Procedure (hereinafter: EDP) (European Commission, 2011). Countries like Belgium, Greece, Italy, and Portugal already had high debt-to-GDP ratios before the crisis, whereas their debt levels increased dramatically during the period of crisis. Greece as the forefronter of the parade experienced high increase ending up with a value greater than 177%. It is interesting fact that according to the data from eurostat Greece had the lowest debt level in 1980 when it recorded 22,6% and it was the lowest debt level ever. On the other hand, Ireland was an interesting case: before the crisis began Ireland fulfilled all the SGP criteria, but when the crisis hit the banking sector, in attempt to save its financial sector government was forced to became more indebt reaching the level of 100% of the GDP by the end of the 2011. All the countries ignored the set limits by the SGP whose main aim was to make sure that member states in such situations, like the debt crisis, could be able to avoid these oscillations but during this last crisis it failed in its role why the role of SGP has been called into question.

1.4 Basis of the EMU

Bearing in mind the aim of establishment of the EMU, therefore the formation of the unique, stable and prosperous area which will through series of measures bring stability and prosperity to the union, basis of formation of such area means that there must be the framework through which the latter will be achieved (European Council, 2012).

- Financial stability thus the bankruptcy of the financial system must be avoided, moreover, financial system must be under the control of the one institution which will perform the supervision under the banks and other financial institutions with the common deposit insurance. If we have 19 different systems which due to the fact that they are part of one union therefore, in a way are interdependent, then failure of the one financial system will imply failure of dozens more. It is important that the financial sector is under the control of one institution in a way that further discrepancies among the country's financial system is removed what will result in the sound and credible financial system.

- Budgetary stability emphasizing the sound fiscal policy making at the national levels whereas the same will be coordinated with fiscal policies of other member countries, or moreover the establishment of the fiscal union.
- Stability of the most important indicators of the healthy and sound economy: sustainable growth, employment and competitiveness. Indeed, the national policies goal should be to seek for strong and sustainable growth and employment since it would be the only way for the national economy to fight back the shocks. Of course, if the union imposes the common economic goals which each national economy must follow in creation of its own economic policy, fostering the coordination of the economic policy at the level of union, in the end there will be seen the strong, sound and long term sustainable union as an upcoming world force.

Such basis is obligatory if we wish to see the unique, stable and prosperous union which will be the number one competitor to the other world forces such as US, China, Russia etc. Namely, moreover, they are sin qua non if we desire the long-term stability and prosperity in the EMU. So far, these elements weren't applied properly what brought EMU into question. Since predicted elements from EU treaties didn't work out in the period of shock where all member states were struggling and were trying to find the path for their salvation with the minimum consequences on their economy (what were able to do only sound and stable economies, not the weak economies such as Greece) we conclude that changes in the current basis of the formation of the EMU.

1.5 The main idea and political goal behind the creation of EMU

Union eliminated the barriers between EU Member States, the market goods and supplies, but did not prevent monetary variations that can create insurmountable barriers even higher than the tariff. The devaluation of the currency of a country the customs union is equivalent to the effects of the customs tariff imposed on all imported products and subsidies of the country. Conversely, the revaluation of the currency one Member States, empisize narrowing exports and stimulate imports, and it is a phenomenon that troubling economic factors of the country strong currency. In both cases the change, or a fall increment the value of certain currencies communitarian causes the risk of changes in case sales partner of the Union on the loan, which is the most common form of sales in international trade.

Foreign exchange risk narrows the interaction of the international financial markets and thereby Economic growth in the EU. If the internal market is divided into autonomous markets, following different policies of the Member States, the benefits of which are expected, especially in the growth and economic stability are much less.

And finally, if we want the common market economic conditions to be similar to those in internal market, it is necessary to eliminate the variation of the exchange rate. Therefore country State of the common market must provide an integral and irreversible convertibility of the fixed exchange rate or, better yet, to accept the single currency. The single currency allows a real comparison of prices on the internal market; becoming one of the main currency exchange and reserves in the world and allows Europeans control of imports from third countries in their own currency.

When we say EMU, we can notice two separate parts of one whole which would have to be implemented in parallel. Before we set the main goals behind the EMU, let's see what would have to be separate goals, thereby economic and monetary goals by itself.

A monetary union represents currency area in which policies are managed jointly with one common goal: attain and coordinate macroeconomic objectives. According to the Delor's Report from 1989 three necessary conditions are tailored for a monetary Union:

- the assurance of total and irreversible convertibility of currencies;
- the complete liberalization of capital transactions and full integration of banking and other financial markets;
- the elimination of margins of fluctuation and the irrevocable locking of exchange rate parities (Committe for the study of EMU, 1989).

On the other hand, economic union according to the Delor's report from 1989 can be described in terms of four basic elements:

- the single market within which persons, goods, services and capital can move freely; competition policy and other measures aimed at strengthening market mechanisms;
- common policies aimed at structural change and regional development; and
- macroeconomic policy coordination, including binding rules for budgetary policies (Committe for the study of EMU, 1989).

The goal is to achieve a totaly free movement of capital, which can be achieved only in conditions of integrated market. If free movement of capital is not seen, there is no chance to create an integrated market with a single curreny. Therefore, a single currency will enable union to become a strong player on the worlds scene, whereas within the union, with no exhange rate risk and transactional costs all countries would benefit. And for such system to work out there must be a wide network of institutions with the ECB on the top which will enable that all union functions as it is planned. A lot of authors think that a transfer of monetary power to the ECB will ensure that unions citizens have more faith in the unions integrations and its purpose. From such reasoning we will conlclude that goal of EMU's creation means following:

- an integrated monetary system;

- a single currency, the Euro, instead of 28 different currencies;
- an institutional structure, with a ECB on the top of piramide.

All these ideas about strenhgethening the European countries itself migh be labeled as a minner goal of the union, whereas the main goal is a strong Europe which will be able to compete with world forces such as US and China. Europe itself has an economicly powerfull countries but compared to the great world's forces individualy they cannot make a huge influence, but with the integrated market, whereas the obstacles within the Europe have been removed, all the Europe will appear as a strong competitor on the world's scene.

1.6 Institutional framework of EMU

For the proper functioning of the union there was needed an institutional framework through which the policy will be executed. Therefore, the new institutions had to be created in order to promote policies which have been accepted by the EMU. Such institutions are: ECB, European Parliament, European Council of Ministers Commission and Court of Justice.

Since the EMU will function as the integrated market with the single currency there had to be created a new monetary institution which will make decisions regarding the implementation of the policies under the EMU centrally instead of such decisions being made independently by different central banks of the member states as it used to be before the idea of integrated market with one currency. Moreover, it would be more efficient to have one central monetary institution because of the growing and rapidly changing market conditions requiring quick decisions to be made, or if we wish quick solutions to the possible upcoming problems to which EMU would face at some point. The Delors Report from 1989 predicted that the new monetary institution should be organized in the federal form and should be called ESCB. Such institutions will be totally autonomous, will operate in accordance with the proscribed behavior pattern by the Treaty and eventually should be made out of national central banks, but with its own balance sheet. The main task of ESCB should be the implementation of the monetary policy and management of the exchange rate of euro compared to the other currencies, whereas the national central banks, as the part of the ESCB, would be assigned task to implement the decisions made upon the ESCB regarding the implementation of the monetary policy following the guideline given by the Council of the ESCB and by the central institution. Namely, the main objectives of the monetary institutions are to enable the proper functioning of the integrated market with the euro as single currency by enabling to the euro to become major reserve and payment currency, disable the vulnerability of the euro by the international speculations, ensure comparability of costs and prices within the EMU with the goal to present a strong new currency.

Since some institutions were already established by the Treaty of Rome, such as European Parliament, the Council of Ministers, the Monetary Committee, the Commission and the Court of Justice, there was no need to establish new institutions responsible for the economic policy implementation, nor just adjust existing ones with the policies of the EMU.

The institutions of the EMU are largely responsible for establishing European monetary policy, rules regarding the issuing of the euro and price stability within the EU: ECB, ESCB, Economic and Financial Committee, Euro Group and ECOFIN.

1.7 Costs and benefits of being an EMU member

Evaluations of the potential economic costs and benefits of a EMU means effects that by joining the EMU country can gain regarding its macroeconomic stability and microeconomic efficiency. The main benefit regarding macroeconomic stability is lower and less volatile inflation while the main microeconomic efficiency benefits are lower transaction costs and lower exchange rate uncertainty what should have effect on higher levels of trade, investment and growth, and, eventually, lead to higher efficiency and welfare of member states.

Most obvious benefits are the reductions of the transactions costs, since the EMU is operating with one currency whose role is to enhance the price transparency as well as to remove price discrimination since no more transaction cost appear to be obstacle while forming the prices of goods and services. Such features should foster competition since everything is transparent.

Benefits of being part of EMU are as follows (Clarke & Daley, 2010; Stankovic, 2013; Tavlas, 2004; Zika, 2006):

- Reduction of the transaction costs
  Elimination of national currencies by introduction of one single currency within the EMU eliminated the transaction costs to which citizens and firms, while traveling within the EMU and firms while importing and exporting goods, were exposed due to currency conversion and accounting calculations, audits and assessment of claims and debts operating in one currency.

- Price comparability

  Citizens are able to compare prices as well as the differences in the prices of goods, services and earnings what makes their life easier if they wish buy things in other countries and if they wish, as a labor force, move to some other country.

- Increased price transparency

  Higher price transparency leads to the price homogenization whereas companies within the EMU will be no longer be able to set different prices for different countries what will eventually lead to the price stabilization, or even more, price reduction by enhancing the competition among the companies operating on the market so called euro zone.

- The allocation of production factors is facilitated

  Since citizens are part of one integrated market with the unique monetary and economic policies it is much easier to reveal more favorable conditions for labor and capital. Therefore, each citizen is able to find solution which suits best to its need. Of course, developed countries such as Germany, Switzerland will be the most desirable ones, whereas less developed countries could possibly suffer from loss of workers as well as capital since the conditions that such countries offer are less attractive.

- Elimination of exchange risk

  Since the EMU operates with one single currency, firms are no longer exposed to the exchange rate risk which makes trade among the countries riskier due to the fact that fluctuations of one currency toward another currency make trade expensive to the traders are no longer forced to manage the exchange risk in the relations between the members.

- Lower interest rates

  The EMU should face following macroeconomic advantage: reduction of the inflation due to the independently implemented monetary policy. Lower inflation means lower interest rate since the investors seek lower interest rates in the areas with the price stability emphasized.

- Structural reforms

  In order to meet the convergence criteria countries had to bring their economies in order, therefore had to made some structural reforms in order to improve their economic outlook what made the whole Europe to benefit from as it made it look as strong economy force.

- Creation of a new global currency reserves

  Reserves are used by the central bank, state and private company to cover future financial needs. As already mentioned euro is second most widely held currency. This shouldn’t be surprising since only currencies that are liquid, stable and accepted as currency in one large economic area, have the potential to become major currencies reserves. Indeed, a lot of authors still think that the euro will replace the US dollar and become a reserve currency number one replacing the US dollar. The euro is stronger and important than all singles currency was. Considering its importance, it will be more often used in transactions, both in the EU and abroad. The introduction of the Euro has hit the dollar, pound, yen and other currencies.

When it comes to the cost of being part of EMU with the creation of the single economic and monetary union, with the ECB on the head and introduction of the single currency arises question of how will member states respond to asymmetric shocks. Member states cannot change the exchange rate or use monetary policy as the tool to overcome its particular problem because of the single currency and single monetary policy. The best example is last financial crisis which has hit all the union indeed, but few countries have been severely hit with no or small measures to overcome this situation. Greece has tried by its own measures throughout savings and cuts of the wages overcome the consequences of the crisis, but it didn't work out so the ECB and money market funds (hereinafter: MMF) had to interfere.

But, even though, by entering the EMU country gives up its right to manage monetary policy, it still has the right to manage its fiscal policy. Therefore, if one country is facing a problem, other countries can raise their own taxes, in order to motivate EMU's citizens to buy goods and services from those countries. Extra raised money can be used to help countries which are facing problems. But will this theory come alive in practice is arguable, moreover, will some country sacrifice and expose its own citizens to the higher taxes? After during the period of 2008-2015, we saw that such theory won't be applied in the practice? We will see throughout this paper.

Even though, the idea of single currency and integrated market with unique monetary policy should be the main advantage of union, still it can be seen as well as disadvantage since member states lose autonomy in the conduct of its economic policies. Countries are no longer able to use exchange adjustments of the exchange rate (appreciation or depreciation) in order to improve their competitiveness. Such disadvantage put countries like Spain in bad position, which used to use monetary policy in order to overcome shocks, whereas during the last financial crisis were not able to do so. On the other hand, conduct of fiscal policy is left to be solve on national levels, however, during the creation of the fiscal policy hands of national economies are in a way tied since it cannot be created separately from unique monetary policy, moreover, it has to be in a coordination with the unique monetary policy. Such demand comes from the fact that national fiscal policy might affect economic conditions in whole union.

2 THE OCA THEORY

2.1 Definition of the OCA

Monetary union is an area in which there are no restrictions on payments, currency exchange rates are permanently fixed, so it is a one area with no boundaries not only in the sense of the geographical boundaries but as well as in the sense of currency, movements of the capital, labor, thus one big country under the roof of the ECB when it comes to the monetary policy.

On the other hand, the non-member countries stay in their own safe zone with their own monetary and fiscal policies setting it with no limits. Monetary union is understood as a zone in which the monetary policy and exchange rates of countries that participate in it are managed in a manner that leads to reaching the objectives of economic policy. Full liberalization of capital movements, the integration of banking and financial markets of the Member States of the same and the elimination of fluctuations in the movement of foreign exchange rates through the irrevocable fixing of the same are prerequisites for its formation.

The currency union is one of the forms of monetary union in which the Member States adopting the common currency waive their own. The currency union, understood in this way, shall be appointed as a full monetary union or joint currency area.

The integration of capital markets, represented by the absence of all control, the conversion of current or capital transactions within the territory of the Union, that the final goal of full convertibility of capital transactions, and the union of foreign exchange rates, are the basic components of the monetary union.

One of the major reasons of embracing the monetary union is to reduce economic uncertainty, i.e. reducing uncertainty and risk in business. This uncertainty is reduced if participants on the market in their operations do not have to take into account possible changes in exchange rates. If they don’t insure themselves against risk in a way not being able to foreseen the movement of the exchange rate, there may be some large financial losses for market participants. Entering the union that risk disappears, allowing businesses to entry to foreign markets, and it all can be seen through the affect of increased competition and the efficient production and distribution because the national markets in the EU are much more connected.

Complete union of foreign exchange rates is a form much closer to the introduction of the single currency, and it is supported by the existence of a common central bank and a common foreign reserve. The central bank provides a relatively floating exchange rates against the currencies of non-member countries. The mechanism of joint foreign currency reserves automatically solves the imbalance of the payment system between the Member States, so that surpluses assist in shortage.

Bearing in mind that the currency area characterizes the area with a fixed exchange rate or the single currency area, it can be concluded that each country with its own currency represents a single currency area. The key question is whether such a scope is an optimal and whether the country had more benefit from the integration into the broader currency area. The answer to the second part of the question is given, among important theorists in this area, by McKinnon who says that the small and open economic systems will benefit more accepting a broader currency area, but use their own.

OCA is one that can simultaneously achieve full employment, low inflation and balance of payments. If the Member is unable to achieve these three objectives simultaneously, then for that country we cannot say that it represents an optimal currency area.

In the context of the union of more members optimal currency area would be the one in which the well-being of a country participating in the same will be increased at the expense of the welfare of another country participating in the currency area. This implies maximizing welfare. The point of entry into the optimal currency area is to increase the welfare of the citizens of that area above the levels that are enjoyed outside. Generally, a lot of authors define OCA as optimal geographical area with the single currency and fixed exchange rate.

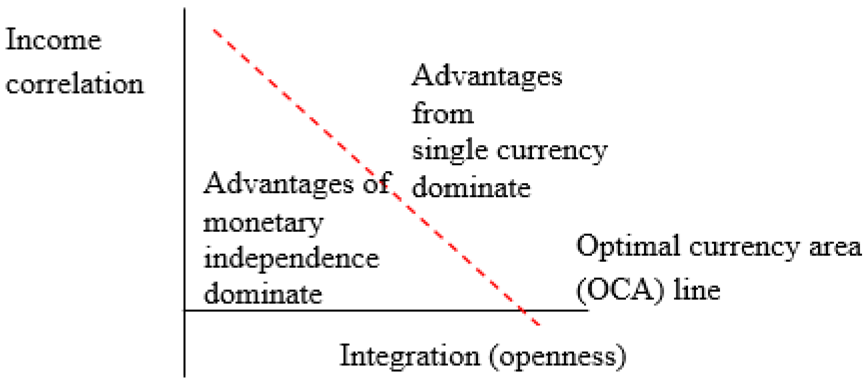
There are several characteristics of OCA, which will be discussed below. Free mobility of factors of production is one of the characteristics of OCA. Hence, market integration with single currency facilitates mobility of factor of production. Therefore, the market forces of supply and demand will affect the need for certain factor of production what will eventually lead to the efficiency and welfare of the union. Of course, results might have not been seen immediately, or moreover in the short run, however in the long run mobility of the factor of production will increase due to the elimination of the existing barriers. For instance, at the beginning of existence of EMU, for instance, labor mobility might lack or won’t be at the expected level due to the barriers like cost of living in another country, cultural barriers, language barriers and etc. According to Mundell (1961) labor mobility is one of the most important criteria of OCA since labor mobility has an impact on the price and wage flexibility. Such reasoning it is explained by the fact that market forces of supply and demand will eventually have impact on the wage and prices by shifting labor demand from one to another country.

But, even though, the price and wage stability are supposed to be one of the characteristics of the optimal currency area, such flexibility is not seen in practice. McKinnon (1979) argues that wage flexibility, perfect labor mobility doesn't always exists. Indeed, De Grawe (2010) has represented wage flexibility and labor mobility on the example of France and Germany: unemployed workers from France will seek job in Germany what will eliminate the need to decline wages in France or increase in Germany, as well as it will solve the problem of unemployment in France and eliminate inflationary pressures on wages in Germany. However, McKinnon argues such approach and advocates that perfect labor mobility usually doesn't exist why the wage flexibility won't be seen. Fiscal integration is another characteristic of OCA. Namely, fiscal transfers from less developed to developed areas, therefore, the redistribution of the money across the area, would help to overcome certain shocks in the area. However, such action seeks the need of political integrations as well as willingness of all member countries to such actions. However, majority of the developed countries probably won't accept that some countries rely on their wealth. Political integration is another characteristic of optimal currency area which is sin qua non because only with politically integrated market common policies of the area could be achieved.

In order for the theory to become operational, economists need a parameter with which to measure factor mobility, or openness, or diversification, in order to draw the physical borders of the OCA. Such measures are the extent of trade among the members of a region, and the correlation of their incomes. As these measures become higher it is sign to pursue the currency area. Below will be presented a simple graphic illustration which was presented by Frankel (2013). This graphic has three main dimensions:

- Economic integration (openness);
- Income correlation;
- Flexibility of each country participating in the currency area.

Graph 1: Openness, Income Correlation and OCA



Source: Frankel (2013).

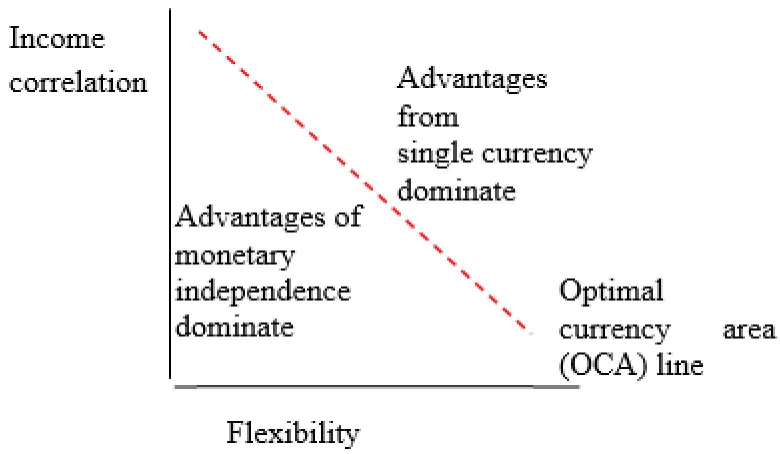
In the assessment of the benefits of being part of currency union, main role have degree of economic openness and the correlation of the incomes. For those countries with a high level of either openness or income correlation among them, we can say that they benefit the most from a single currency. The bigger the degree of openness of the economy, the higher the correlation of income among the potential members of the Union, ie. the more similar incomes, benefits of introducing a common currency dominate. Conversely, the lower the level of mutual trade between the Member States and the higher differences in incomes the advantages of monetary independence dominate.

The degree of economic integration, thus, openness, and income correlation change and develop over time. A lot of authors agree that openness is likely to increase among countries with a single currency, while at the same time there is disagreement about the extent to which income correlation might rise, stay the same, or fall.

We could have two cases:

– if the openness increases that it raises income correlation and, consequently, reduces asymmetry of shocks, what makes EU to move along the upward arrow;
– EU moves along the downward sloping what will produce the opposite effect if the decline in symmetry is high emphasizing that more flexibility for the monetary union is be required.

Graph 2: Income correlation, flexibility and OCA



Source: Frankel (2013).

Another important factor for assessment of the benefits of a single currency area is the degree of overall flexibility. By flexibility we mean capturing price and wage flexibility in the wake of some disturbances or a mobility of labor or some other factors of production.

Combinations of income correlation (symmetry) and flexibility for which the costs and the benefits of a monetary union balance are defined by the points on the OCA line. Since declining degree of symmetry (which raises the costs) needs an increasing flexibility, which represents the benefits of a monetary union, then the OCA line is negatively sloped. The degree of flexibility to the right of the OCA line is large for the given degree of symmetry making the benefits of the union to exceed the costs, whilst to flexibility to the left of the OCA line there is no enough flexibility for any level of symmetry. The OCA line, drawn on graph for the given level of integration (I_1), moves downward with an increase of integration OCA line.

That would mean that with an increase of integration, the benefits of being part of OCA will increase as well, additionally meaning that less flexibility or symmetry shall be needed in order to experience the benefits of OCA.

2.2 Benefits and cost of being part of OCA

Will country benefit from entrance in EMU, therefore, from taking one single currency, depends on the level of the fulfillment of the criteria which enhance the benefits of the single currency area: level of the openness, income correlation among the members, degree of mobility of the production factor etc. As any other arrangement, OCA as the arrangement where country embraces one currency has its advantages and disadvantages. Some countries can immediately experience the advantages of the OCA, but OCA brings some disadvantages as well, but as long as advantages exceed disadvantages each country will benefit. What kind of advantages and disadvantages OCA brings to the member states is discussed bellow.

Main benefits of being part of currency area can be divided into macroeconomic and microeconomic effects. Starting from microeconomic effects, benefits can be seen through absence of exchange rate uncertainty and transaction costs. Moreover, due to the absence of several currencies price transparency will be emphasized which will discourage price discrimination and encourage competition. Eventually result will be strengthening the area which will appear as a strong market on the world scene. Such area will be beneficial since it will ease the trade, eliminate the exchange risk fostering the trade and decreasing the investment risk what will bring new investments into area. Benefits related to the macroeconomic effects will appear through increased growth and stability. Overall benefits shall be seen through price stability, access to the financial markets what will increase access to the external financing in the periods of need for overcoming deficits, employment issues by enhancing labor mobility across union etc. However, random shocks member states won’t be able to avoid, however, the strengthened area will easier handle the consequences due to the benefits which have arose from integrated market.

Main cost of being part of currency area are the costs of transforming from many national currencies to one single currency since it generates costs from switching to a new currency, cost of forming new institutions, training of people etc.

Since the monetary policy is conducted at the central level therefore with the central bank of central national banks on the top, in the period of random shocks, non-of the national economies will be able to conduct the consequences of the shocks since the monetary policy is conducted centrally. Since the currency area represents the integrated market, where the monetary policy is unique and fiscal policies are left to conduct nationally, still there has to be coordination in these two policies. Moreover, if the union has imposed certain criteria in the area of fiscal discipline, national economies might have problems in conducting the national fiscal policies. Such restriction can be very hard to deal with for the countries with the high levels of debt.

If members of union face budget deficits what eventually could result in the unsustainable debt, such situation might have negative effect on the trust in the currency what will end in the decreased trust of investors. If the majority of the member states of union faces the budget deficits, debt might be monetized which can have effects on the interest rate, again, turning in the decreased confidence in the currency.

3. PROS AND CONS OF EMU

3.1 Literature review

In previous section we have discussed the benefits and cost of EMU which have been commonly set when the idea of EMU emerged. However, years of existence of EMU nevertheless have showed that presented benefits, in the first place, didn't turn to be as beneficial as it was thought to be. Even though, during the crisis appeared many authors with different arguments against EMU, it is very interesting to see what authors back in the 90's were arguing when it comes to the establishment and existence of EMU. Hence some authors even in the 90's didn't get along with the given benefits for establishment of EMU. For instance, Velis (1995), Eichengreen (1993) argued that one of the most underlined benefits of EMU: lower transaction cost didn't appear to be beneficial due to the fact that transactions cost which usually origin from tourists and other small cash based transaction in Europe still were large. Velis (1995) also didn't get along neither with another benefit, that is: elimination of exchange risk due to the fact that modern financial markets traders have access to the different instruments which help in hedging the risk such as: options, forward and futures and ect. Moreover, what turned to be very true, he argued as well that the argument of low inflation is not to be that achievable, since asymmetric shocks could cause problems to the state members in the achieving such goal nor that ECB, as the last resort, will be able to help such members. In general, Velis (1995) argued two major reason against EMU that is: inability of national economies to fight back asymmetric shocks due to the fact that they surrendered their national autonomy of monetary and fiscal policies whereas one single monetary policy is most likely not to be a good fit for different national economies, therefore such unique monetary policy can fail in offseting shocks to which national economies might be exposed to. Reason for inability to fight back shocks lie in the fact that more mobile economies are more likely to respond to the asymmetric shocks, however Europe has low cross-border flows of labor and if we add a higher degree of rigidity in the form of regulation, labor costs, and geographical specialization then it is obvious that European nations still display a degree of local economic idiosyncrasy so the shocks will hit single economies which will not have tools to fight it back.

All this, Velis points out, will result in the high cost to EMU with the inability of national economies to resist the shocks they will be exposed to. His second argument against EMU is about inability of national economies to pursue domestic tax and spending decision due to the control of fiscal policy that was set by Maastricht rules whereas loss of policy autonomy may cause troubles to the national economies in facing their local government needs and ECB might not be able to respond to the local needs of national economies as well. These arguments also advocated Rusuhuzwa and Masson (2012) suggesting that national inability to fight against asymmetrical shocks due to loss of a direct control over instruments of monetary and exchange rate policy which are useful tools in resolving problems of asymmetric shocks is the main disadvantage of EMU.

Some authors (Velis, 1995; Eichengreen, 1993) argue that besides economic and monetary union there must be as well political union, whereas this so called "trinity" will bring prosperity and sustainbility to the EMU. Political legitamicy is something EMU lacks, which due to european nationalities will not be achieved ever, what makes this argument to be against EMU.

According to Butti and Sapir (2002) and Frankal (2013) main arguments against EMU lie in non-accountability and non-transparency of ECB which will never work as efficiently as national banks would, deficiency of the financial supervisory of ECB whereas there is doubt that in upcoming crisis EMU will not be able to respond efficiently the crisis.

Traditional benefits of EMU: lower transactions cost, the reduction of price uncertainty and increased price transparency, the elimination of speculative attacks, the costs savings on exchange rate stabilization, the elimination of shocks caused by separate currencies, the elimination of competitive devaluations, the transfer of resources between regions experiencing dissimilar economic disturbances, which are advocated by many authors (Talvas, 2004; Grabner, 2003; Zika 2006; Jurak 2007; Rusuhuzwa & Masson, 2012; Stanković, 2013) may not turned to be beneficial for all countries for the reason authors such as Velis (1995) or Eichengreen (1993) advocated back in 90's. Such arguments which appeared to be true, since majority of countries experienced exactly those deficiencies of EMU during the last crisis, brought into questions benefits that have been set when EMU was about to be established.

However, even though nowadays all set benefits of EMU are taken into question, still they cannot be neglected due to the fact that many empirical studies supported such statements. For instance, Rose (2000), Baldvin (2006) and Micco, Stein and Ordoñez (2003) have shown that trade among countries of one currency area is much higher than amongst countries which are not member of the unique currency area, whereas Lane (2006) argues that one currency union should create a deeper liquid financial markets integration and should lead to a higher cross-border investment through equities and foreign direct investment what will make capital to be allocated effectively and thus help in overcoming shocks. Some authors advocate that not only mentioned well known benefits would be the reason for some countries to be part of EMU therefore the reasons that will make most of the countries to support the establishment and sustainability of EMU but there are some other reasons such as goal to achieve macroeconomic stability, political reasons as well as the entrance would enable them to be one step closer to negotiating of favorable trading arrangements, either globally in the World Trade Organization.

It is important to be aware of the importance of understanding and implementing the OCA theoretical premises in avoiding asymmetrical shocks and therefore forming, indeed, an optimal currency area what forming an EMU was all about. While advocating the creation of euro zone Mundell explained the ability of usage of one currency in area to offset the effects of asymmetrical shocks through few premises which at that moment were made only in theory. His accent was at the production factors mobility (capital and labor mobility), fiscal transfers as the way to offset asymmetrical shocks opposed to the methods which are commonly used by the countries with their own currency. However, many authors pointed out that EMU was never to become optimal currency area due to the different economies in a sense of its growth and economic power (Radović, 2009; Rodrik, 1998) and that Maastricht Treaty and SGP criteria (Koureta and Vlamis, 2010), as tool whose purpose was to bring closer the economies which formed the euro zone, were set too ambitiously, moreover were doomed to fail in its purpose at the very beginning. So, if the Maastricht Treaty and SGP criteria as convergence criteria failed to bring economies closer, what was the starting point in becoming the optimal currency area, than the OCA premises hadn't any chance to succeed on such ground and in the end its purpose to offset the asymmetrical shocks couldn’t have been seen. Therefore, if such criteria cannot be fulfilled that there is a huge question mark upon the reasons of existence of EMU.

3.2 Structural problems of the EU economy

The structural problems can be seen through the heterogeneity of the countries forming the EMU such as differences in the economic development, economic growth and the mechanism of economy functioning. Radovic (2009) and Rodrik (1998) emphasize the countries creating the EMU should have similar level of economic development, economic structures, tendency to inflation, inflation rates, convergent levels of budget deficit and public debt in relation to GDP and similar legal system. On the other hand, according to De Grauwe (2010) the lack of macroeconomic coordination makes the competitiveness, development, labor mobility and capital even more difficult for the peripheral countries. Failures in the way the EMU was designed, constructed and implemented are seen as a structural problem.

4. DEBT CRISIS AS A CONSEQUENCE OF FINANCIAL CRISIS

4.1 Introduction (the consequences of structural problems)

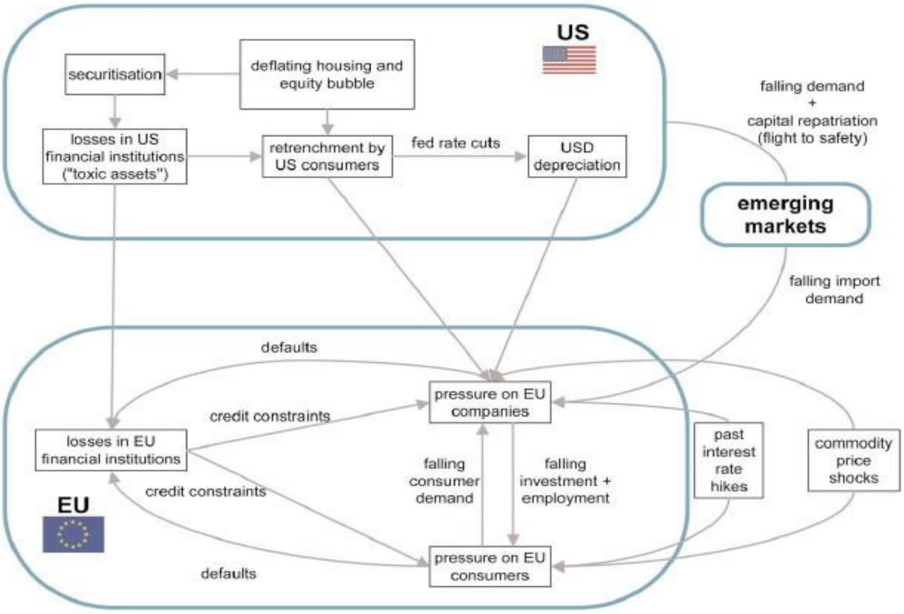
The structural problems have been seen as reason for crisis escalating in EMU by many authors. Common monetary policy is set on the union's level, however economic policy regarding budgetary policies, wage policies, social policies, credit regulations etc. is still in the hands of national policy makers, so when a crisis occurs and hits hardly the peripheral countries, there is no adjustment mechanism in place to deal with such a crisis at union's level. According to Kouretas & Vlamis (2010) the lack of European solidarity was inevitably mirrored in widening Greek spreads to German Bund. De Grauwe (2010) also points out that crisis has exposed a structural problem of the euro zone, therefore, the imbalance between full centralisation of monetary policy and the maintenance of almost all economic policy instruments (budgetary policies, wage policies, etc.) at the national level. Favero (2002), jointly modelling the behaviour of monetary and fiscal authorities in the euro area, concludes that fiscal stabilization was achieved independently of monetary policy. De Grauwe (2010) showed by comparing relative unit labor costs in the euro zone for the period of 1999 to 2009, how just a few countries experienced improvement of their own competitive advantages due to the fact that important economic decisions – about wage agreements, budgetary policies, social policies, credit regulations, etc. – are decided at the national level, so the countries like Germany and Austria which have organized economic system within its national borders it's natural for such countries to experience the benefits of EU, EMU and in the end will fight crisis easily. At the same time countries like Ireland, Greece, Italy, Spain and Portugal saw their competitive positions deteriorate by more than 10%. He also pointed out that countries which have lost their competitiveness experience as well a stronger deterioration of their budgetary situations by comparing the relative unit labor cost of each country (achieved in 2008) and the budget surplus (deficit) in 2008. Furthermore, failure of EMUs institutions as well as self – centered Europe deepened differences among the EMU's countries. Such divergences could lead to the crisis, that's why De Grauwe (2010) emphasizes that a main reason for crisis are the structural problems which must be solved before the next crisis hits.

European debt crisis initially was triggered by the events in the US banking sector. After due to the slowdown of the US economy indebted American property owners were no longer able to repay their mortgage loans, whereas banks around the world, whose investments were associated with these loans, began to lose money.

Lehman Brothers, the fourth largest US investment bank, collapsed under the weight of their bad investments and sparked fears other banks and investors with which it is operated (Wiggins, Piontek & Metrick,, 2014).

The fear that several banks might collapse forced the investors and banks to take exceptional precautions. Banks stopped to lend to each others on the international level, what brought those banks, that were dependent on these loans, to the edge of collapse (Watt, 2008).

Scheme 2: Crisis development



Source: Watt (2008).

European banks which significantly invested in the US mortgage market were hardly hit. In an attempt to prevent the collapse of some banks, governments have tried to help to the many member states of the EU, such as Germany, France, the United Kingdom, Ireland, Denmark, the Netherlands and Belgium. But the cost of the bailout banks proved to be very high. Ireland almost bankrupt and other EU states have not offered financial assistance.

While Europe was sinking into the recession in 2009, a problem which first appeared in the banks began to increasingly affect the government because of concerns in the market that some countries were not able to rescue banks from going into recession.

Investors have begun to pay more attention to state finances. Greece has come under particular scrutiny because of the poor state of its economy and because its government has borrowed almost to double the size of the economy.

Due to the risk of bank failures, healthy public finances have become more important than ever before.

Governments that have accustomed to borrow large sums to finance their budgets every year and which therefore were piled up huge debts had to be suddenly faced with markets that were less willing to lend. The crisis that began as a bank crisis became the sovereign debt crisis (Woods, 2012) and such crisis, which has begun as government crisis of several countries, erupted and brought into question further existence of EMU.

4.2 The evolution of debt crisis

During the period of July - August 2007 the crisis in the US subprime mortgage sector erupted and quickly spilled over to Europe with almost catastrophic consequences. This crisis is often compared to the Great Depression from 1929 where the wellbeing of the major forces in the world: EU and US, was called into question. The spillover effect couldn't had been stopped at any point, so after it started to the US it spilled over to Ireland, Portugal, Spain, Germany and eventually ending in Greece.

The early consequences of crisis erupted in US subprime mortgage sector was shaken money market which has dried up due to the lost confidence in the assets banks were holding, increased risk premiums, doubled US high-yield bond spread etc. System which was collapsing soon affected the financial markets worldwide. Even though economists hoped that crisis won't spill over to other continents, unfortunately it was inevitable. Such events could be predicted due to the fact that if the strongest and the most developed financial system brakes, there is no chance that other, weaker and not that developed system, won't suffer. Soon, Europe was hit where United Kingdom and Germany acted immediately by decreasing their interest rate in order to help the borrowers since financial sector was collapsing. Crisis meant following: "sudden stop" in capital flows, credit contraction, depreciations, insolvencies of borrowers indebted in foreign currency and output declines. Indeed, crisis can be divided in a few phases (Berglof, Korniyenko, Plekhanov & Zettelmeyer, 2009):

- Beginning of the crisis. During the period from July 2007 until September 2008, crisis was the most often used word in the news reporting from US as the potential event on the scene. During these four quarters Europe still was safe zone with no fear that potential events in US could spill over and hit strong Europe. Such thought was supported by the fact that capital flows still were stable, credit growth and domestic demand weren't affected.

- Crisis stepped on the scene. Lehman Brothers collapse triggered the crisis during the period of October 2008, where potential crisis turned into crisis with the serious consequences. Crisis started by decline of the banks flow, liquidity on the emerging market was seriously jeopardized, domestic demand, thus domestic production were declining, domestic credit growth started to weaken. Europe was no longer safe zone, whereas some south-eastern countries were showing the signs of crisis. During 2009 there were no signs of recovery because industrial production was still declining, unemployment rose, effects from financial sector and real sector spilled over to housing sector, corporate insolvency etc.

- Seeking for the way to exit the crisis. Period of 2010–2011 was seen as a period of reforms where all countries hit by the crisis were trying to find way out of the crisis. All countries tried to stabilize their debts levels and perform reforms.

- Signs of recovery saw the light of a day. During the 2012. Euro zone was showing signs of recovery. Economy was more dynamic, fiscal deficits were improving, unemployment levels were decreasing, however, crisis hasn't left yet.

- Ending the epoch of pain. 2013 is seen as year of almost total recovery. Big forces of European countries were already healthy economies as they used to be before the crisis whereas periphery countries who gained credits from International monetary fund (hereinafter: IMF), ECB and other institutions to solve their budget deficit during the crisis, were showing the signs of recovery by strengthening their economies, implementing reforms which have the aim to fix the problems which might have been reasons of crisis spreading that fast and leaving the serious consequences.

- Success at least. During the period of 2014 and 2015 crisis is almost forgotten where relatively encouraging quarters of recovery were seen. Export demand, unemployment decreased, labor market improved, demand for export is increased etc. ECB asset quality review trying to restore confidence in the banking sector.

- GDP of euro zone saw growth, with the predictions of its growth in 2016 for 1,6%. Overall, periphery countries are slowly showing the signs of recovery with the serious structural reforms on the scene.

4.3 Factors that contributed to the eurozone crisis

Some states within the EU were particularly badly hit. For example, Greece faced a debt crisis which called into question the stability of the Eurozone's single currency, the Euro, and the future of the EU's EMU, both being planned for years as the factor of success of the continent Europe.

This crisis is often compared to the Great Depression from 1929 where the wellbeing of the major forces in the world: EU and US, was called into question. But a lot of authors have pointed the finger at single actors: central banks and their 'easy money' policies, greedy Wall Street investors, sleepy regulators. In the end all thans for the crisis can go to the inevitable penalty for ineradicable human sins- called greedy. Some authors point out that one of the factor which could possibly be the reason why the financial crisis started in US hit the European zone that hard is the euro adoption. After becoming a member of EU country cost of borrowing was reduced what caused bigger interest for countries to borrow the money. In the and the weak economies such as Greece riled on the borrowing resulting in the strong increase of the government debt which couldn't be serviced. Don't forget that during 2007 and 2008 banks of core eurozone countries (Germany, France, Netherlands, Belgium) had continued to lend to peripheral countries (Italy, Spain, Ireland, Greece, Portugal). Gross cross-border claims from core to periphery reached 1.5 trillion euro in 2008, representing almost three times the capital of core banks. In the end, greedy steps on the scene again. No matter how cheap borrowing was, everyone should have its own limits considering its financial power. So, why Greece was borrowing that much money knowing that Greek's economy won't be able to produce proper amount of money in order to service the debt?

Nevertheless, if we analyse a Mundell's criteria we can see that in many aspects they are not fulfilled sugesting that EMU represents a 'suboptimum' currency area. Such area obviously won't be able to corespond the crisis and there is much debate about what this means for the future of the Eurozone, will it be able to handle all upcoming shocks.

Some authors agree that Eurozone is facing some crucial problems in its coordination which may have been the reasons of crisis (Clarke & Daley, 2010; Stankovic, 2013; Tavlas, 2004; Zika, 2006):

- Excessive borrowing as one of the first and most dangerous sources of crisis.
  Excessive borrowing in the conditons of slow ecomic growth can make government debt dangerously large since a lack of growth makes it harder for borrowers to pay back loans and interest, because of the enomomy's inaility to produce the money needed to service the debt. Greece is a great example of one economy borrowing too much money without its economy being able to grow enough to pay the money back. Issuing government debt might be great solution to the budget deficits, however at the moment of isuue rare persons think about the way to return money when the bonds are due. Of cource, isuue of government bonds in the eurozone is peace of cake, since ECB and other Eurozone countries appear as the guarantee for the payment of the deb tif the country defaults, so everyone wants to buy such bonds. That means that bonds are sold at small price since Eurozone guarantees its payments so they are clasified as safe instruments. Countries which need money borrow it issuing bond with the little chance of paying it back since ECB is covering their back. That's why countries have been able to borrow cheaply and excessively without making an effort on how that money will be paid off.

- Conflict over who is responsible for bank bail-outs.
  In a sovereign state, the national government that controls the central bank are responsibile for the banks bail-out if such banks are of great interets. However, in the Eurozone there might be a problem, because if some banks survival is important for the wider prosperity and stability of the financial markets, not all countries would agree to provide bail-out funds for jeopradize countries in union.

- Different countries pursue different macroeconomic policies.
  Different countries have different instruments in achieving their own growth. Such different thinking can be serious problem especially when the number of members within the union is increasing. Some contries might want to gain growth by lowering interest rates where as side effect comes increase of inflation, while other countries tend to promote their growth by lowering the inflation. Of cource, such problems especially can been seen between developed and underdeveloped countries, where such discrepancy between countries in euro zone already exists.

- National economic growth occurring at a different rates
  Some countries, as Germany did, could benefit from being part of the Eurozone in the short period. For that reason Germany has been criticised because it supported policies that closely linked the value of the Euro to its own trading needs, while not favouring other countries in the Eurozone. Bearing in mind that Germany exports majority of its good within the Eurozone having no obstacles, controling EMU in its favor shouldn't be surprising. So, in a such way Germany was able to enchourage its economy for a higher growth, making it number one EU's country which was able to resist economic crisis.

4.4 Some other causes of the crisis

Main possible causes of crisis in Eurozone have been named, however, besides those central reasons some other reasons might have, maybe not started the crisis, rather to encourage already started crisis. Such causes might be found in the fact that EMU is supported by several treaties and agreements such as Maastricht Treaty, the GSP and the Lisbon Strategy, where each of it have their own rules to be fulfilled and, of course, it is inevitable that such combination of treaties as well as institutions which are responsible to implement monetary policy of union, to make mess while implementing monetary, fiscal and labor policies at ones. Causes that are considered to be reason for escalation of crisis according to some authors are as follows (Clarke & Daley, 2010; Stankovic, 2013; Tavlas, 2004):

- Transfer of the monetary policy management into hand of the ECB. Creation of the single currency area meant a centralized monetary policy management across the eurozone. Now only one institution across the eurozone, ECB, had the power to target inflation. In order to do so, ECB has undertaken a wide range of conditions, especially in the core countries. As economists we know that low inflation means low interest rates, or specifically that level of the interest rate follows the level of inflation. On the other hand, ECB is against acquiring and managing state debt, but at the same time it didn’t do much for the countries who disobeyed this tendency. However, ECB was the guarantor and protector of the financial interests of the eurozone, even though the question which lies is on whose behalf such protection was made?
- Limited fiscal policy. SGP has limited the fiscal policy of the member states with the conditions that had to be fulfilled. On the other hand, there is tax discrepancy: the eurozone doesn’t have unique, integrated tax system nor fiscal transfers among member states. While core countries could apply fiscal rules with no too much trouble, peripheral countries had to struggle with the budget deficits and they had to apply variety of the ways in order to put in under the control and to fit it in the required levels.
- National competitiveness depends on conditions of the work and labor market. Because of the all mentioned constraints, member states had to find a way to improve the national competitiveness. So, the working conditions and performance of the labor markets were the way to do it so. In that sense, the accent was on the greater flexibility of the employment, increasing part-time and temporary work and putting a pressure on the payment conditions. But all thee listed above depended on the welfare of the country, trade, social history and so on. Obviously, core countries could improve their national competitiveness in this way, while peripheral countries had to find some other way, if they could.

Namely, the core countries had much more interest in joining the Eurozone than any peripheral country. In that sense, country that profited the most was Germany. Before entering the euro zone Germany was the most developed country, however, entering the euro zone competitiveness of Germany increased. This is especially evident analyzing numbers of export and imports, where Germany majority of its products places in the euro zone and appears to be among the top five exports in the world. Of course, appearance on the world scene is relieved by the entrance in EMU and adopting one single currency. Another experienced advantage of becoming part of EMU are the surpluses from the arrangements of the euro which are used to place on financial markets, thus increased bank lending and foreign direct investments. Hence, the welfare in the peripheral countries is less than in the core countries, and having strong and competitive Germany and other core countries it is hard to achieve competitiveness in the peripheral countries even by putting pressure on the workers in the peripheral countries. Now, peripheral countries were faced with the competitive Germany, and, of course, they were not able to follow its pace. Greece and Spain had high levels of consumption, while Ireland and Portugal invested in the real estates. Across the peripheral countries, household debt rose as the interest rates were dropping by.

4.5 Crisis in Spain

Great financial crisis which has began during the 2007, has woken up in Spain at the beginning of the 2008 and lasted untill 2012 when culminated. At that time, thus 2012, country was not able to finance its spendings and was obliged to seek for the bailout fund of €100 billion from European Stability Mechanisam (hereinafter: ESM). Before the 2008, when the crisis hit Spanish government, unlike Portugal, Greece and Ireland who almost always had too much debt, had under the controll its borrowing, so its indebtness wasn't the main cause of the crisis.

However, from 2007 to 2011, Spanish governement increased its expenditures by a cumulative 6% of GDP following trend of the rest of the memeber states of euro zone. Its expenditure in 2011 represented 15% of GDP, and at such level was below the euro zone average of 50% of GDP. On the other hand, revenues deacresed by 5.4% of GDP from 2007 to 2011. Such decline was higher than in any other country of euro zone where the reasons of such decrease can be found in the housing crisis which was earning revenues by taxes. Such events, made unemployment to rose and tax revenues to decrease.

The main cause of the crisis in Spain was emerging housing market gathered with the unsustainably high GDP growth rate. Spain's economy experienced boom just after entering EMU and the boom was due to the emerging housing bubble which was financed by the loans. Indeed, taxes from the housing market were major part of the governemnt revenues, which were that high that were able to cover really high government's expenditure. However, with crisis starting 2007, housing market collpased and now revenue which made a high precentage of the countries revenue were no longer coming to the cash register. Moreover, government relaxed the supervision of the financial sector, what enabled banks to hide losses and earnings surving misleading information to the investors, regulators, analysts etc. This meant that spanish government was directly financing the real estate bubble.

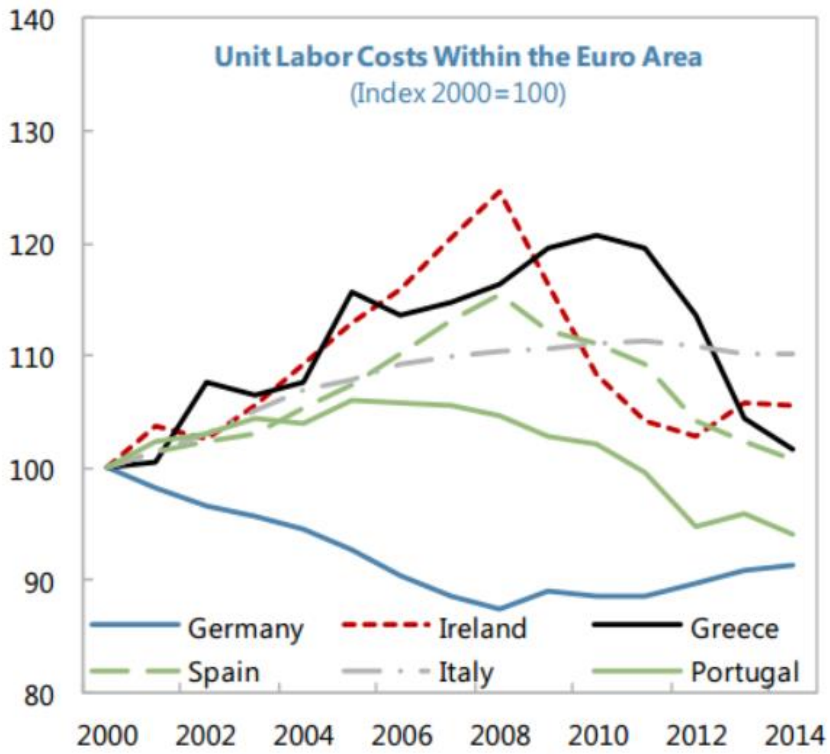
The crash of the banking sector in Spain spilled over to all other aspects of the economy resulting with a strong economic downturn, severe increase in unemployment and bancruptcies of the major companies. Between October 2007 and October 2008, Spain had its unemployment rate climb 36%, at the end of the 2009 it hit 17%, while in in July 2012 unemployment rate was above 20%. Moreover, by October 2013 unemployment rate rose up to 26,7% making it the second country, after Greece, with that high unemployment rate. Since the start of the crisis, the number of unemployed has increased by more than 4 million persons in Spain. Long term predictions weren't optimistic since it predicted further growth of unemployment rate exceeding 50,4% during the 2013. Even though everything seemed to be black during this period, positive fact was that despite the unemployment growth the wages weren't dropping that fast, whereas its level remained above in the other countries of euro zone.

Such situation caused a strikes all over the country confirming that country has a deep problems which cannot be solved without help of the Troika. Obviously, Spain was in a deep recession to whose development contibuted the lack of the export. Namely, 60% of all export of Spain goes into Eurozone countries, so when the whole area was suffering from the sindrom called recession it meant that money wasnot coming into Spain, forcing many companies to bankrupt while leaving a lot of people unemployed.

As all other countries faced with the crisis and help of the Troika, set of the austerity measures were imposed to the Spanish government as well. It meant that Spain had to deacrease its deficit, whereas Euroepan Commisison required form Spainish government to reduce its deficit to the level of the 3% of its budget by 2016. Spain achieved to reduce its deficit from 4,2% in 2012 to 3,9% of GDP in 2013.

Another sector that had to be reformed was a labor market. The objective of the labor reform was to increase countries competitivness through alignemnt the labor cost with the productivity. Since Spain was not able to increase its export, which has been deacreased in the time of the crisis resulting with the high unemployment as side effect, by devaluation of its currency (due to restrictions on the creation of the monetary policy), only possible way was to deacrease prices of its goods and services. Labor costs seemed as reasonable solution. Among all other eurozone countries Spain was enable to deacrease its labor cost. In that way Spain can increase its export and employment and it can boats with its achievement.

Graph 3: Evolution of the labor cost in the Eurozone countries



Source: Eurostat (2015).

On the graph we can see that Germany's unit labor cost increased from 2008, Portugal's was the closest to the German one. Italy had a constant increasment, while Spain and Greece have a similar trend and decreasment after 2010.

An export-led reforms have their results. During the period of 2012 Spain has averaged 4.3% annual growth in exports and has increased its share of exports to GDP from 31.6% to 34.6%. Since whole economy of Spain was jeopardized during the period of 2008 and 2009, data have shown which sectors were hit the most and if imposed reforms were able to make further improvement in such sectors. Data have showed that contribution of capital goods grew to 53.9% from 21.5%, the contribution of automobiles grew from 3.1% to 34.0%, and the contribution of consumer goods grew from 10.9% to 17.5% whereas the contribution of exports of energy decreased from 8.4% to -12.1%. When it comes to the export of services, numbers have increased 2,7%, tourism has increased 3.9%. On the other hand, GDP has decreased. Spain as export oriented country before the crisis had to increase the incentives to sell the products abroad as it used to do. Such incentive had its result since Spanish export increased 4,3% during that period.

Spanish exports of goods increased by 4.3% in the period January-May 2015 (rate 3.5 higher than in the same period of 2014 points, 0.8%) to 102,916.3 million while French exports increased 2.9% in this period and the United Kingdom (hereinafter: UK) fell 3.5%, although the record of Germany, with growth of 5.7%, exceeded the Spanish brand according to data published by Ministry of economy and competitiveness of Spain.

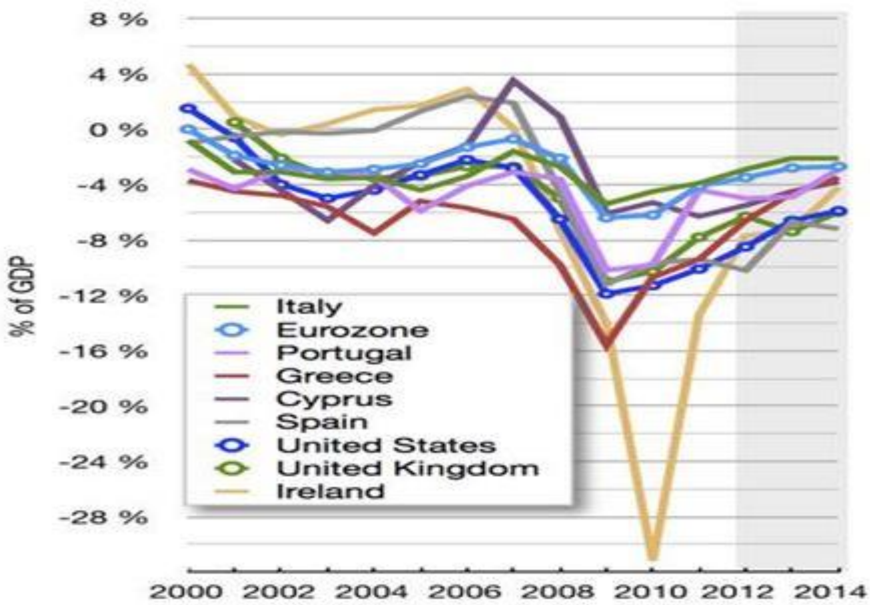
Now, we can conclude that export-led recovery turned as really good solution for the Spanish economy. Economic downturn from the period of 2008-2012 was replaced with the economic upturn, and unemployment was replaced with the increasing employment.

The question is if such measures could be sustainable in the long run. But, for now, Spanish people are to enjoy the reforms.

4.6 Crisis in Ireland

First European country on to which US financial crisis spilt was Ireland. Decade before Ireland was facing a rapid economic growth based on the property markets and foreign investments and of course property bubble had to be financed, so the expansion of the bank lending was the part of the growth. Rapid growth was due to the low-income tax (12,5 per cent corporate rate, the same rate stayed after the crisis as the main element in attracting the foreign investors), low interest rate which made Ireland as the good place where to build properties. So, it was period of growth and it was called Celtic Tiger years (1995-2007). However, the downturn started in late 2007 when country fell into deep recession. The level of unemployment was too high, highest after the 1980s when Ireland was experiencing taught times as well. Similar situation as the one which Spain has experienced: revenues started to decrease losing €2.3 millions of the budget surplus otherwise it would come to the government cash register. Budget deficit was imminent and it was among the highest in all eurozone.

Graph 4: Government deficits



Source: Eurostat (2015)

Since the banks were struggling with the illiquidity, governments had to pump in money in the banks, so the cost of banks rescues, government expenditures Ireland had deficit exceeding 125% of its GDP. Hence, it must be noted that financial crisis in Ireland started by the desicion of irish government to guarantee all the private liabilities of its principal national banks. Such desicion was made under the pressure of the domestic banking sector. After this desicion was made, expenditures, more over, the budget deficit increased from less than 40 to almost 100 per cent and hit the 1205 of GDP during the 2013. That meant a bailout call from the eurozone.

Eventually, Ireland was approved €100 billion bailout funds from European Financial Stability Facility (hereinafter: EFSF), IMF and ECB. Of course, with the bailout funds came austerity measures: all budget decisions must be cleared with the troika, fiscal performance is subject to quarterly reviews and Troika personnel are embedded in the core government departments. However, Ireland is proclaimed as the most successful of all countries receiving bailout funds in implementation of the austerity measures.

According to the IMF's report from February 2015 it seems that Ireland is on the road to the recovery. A large banking recapitalization in early 2011 contributed to a stabilization of the deposits and other bank funding. Market access was progressively regained from mid-2012, such that the government was able to exit the program at the end of 2013 and rely fully on market financing on highly favorable terms. Recovery took longer to emerge, with the first signs seen in job creation during 2012-13. But Ireland's recent economic figures have surpassed even the most optimistic expectations. Growth, at around 5% in 2014, was led by strong exports and investment, and is expected to be highest in the euro zone. Unemployment, unlikely in Spain, has decreased to 11% in 2012, even though it is still high precentage comparing it to the levels before the crisis.

4.7 Crisis in Portugal

During the global financial crisis, Portugal faced with the same problem as Ireland, two great banks collapsed and Portugeese government provided bailout funds for these two banks. During that period debt levels increased and exceeded required levels by SGP. Such situation resulted with the increase of taxes and cutting wages of the public servants. However, during the period of crisis Portugal was dealing with it very well, with no need to seek for the bailout funds until 2011 when funds of €78 billion were required. A lot of economist agree that Portugal wasn't in the same position as other euro zone countries, which were at the door of bankrupcy, and that Portugal was put under pressure of the rating agencies and speculators. During the 2010, Portugal had the best recovery unlike other countries, but Moody's downgraded the rating of the sovereign debt due to the increasing debt levels comparing to its GDP and its deficit.

Namely, Portugal always had a trade deficit (in a period of 236 years, only in seven years Portugal had surplus), but until joining the EU and excepting euro, it could manage it through devaluation of its currency, but now, during the last financial crisis, Portugal, as all other countries which were solving this through devaluation, was not able to avoid the crisis, thus was not able to keep the income account in balance and the country's net external debt position under control. This meant an increase in debt and payment imbalances, leading Portugal to the crisis by the end of 2010. During two-year period Portugal was struggling with the crisis which has ended with the bailout loan from Troika. According to the Troika, main reason for causing the crisis is the „fiscal laxity", so Troika has requred that the primary balance should change from -0.4% of GDP in 2007-2008 (-7.2% in 2009-2010) to +3.2% of GDP by 2016 as well as the trade balance is required to improve by about 13.6 percentage points of GDP between 2007-2008 and 2017. According to the Troika plan, Portugal should achieve a trade surplus of 5.1% of GDP by 2017.

Besides these reforms Troika also required bank reforms which will be conducted through bank recapitalisation. According to the Memorandum of Understanding which was signed with Troika €12 billion of €78 billion bailout funds were allocated to the recapitalisation program.

The Troika (with input from the Bank of Portugal) also required that the eight largest banks reduce their credit-to-deposit ratios[1] from 147% in 2010 (158% for the entire banking system) to 120% by 2014 (Cabral, 2013). In order to lower the ratio, banks might come into temptation to lend money to the clients with bad credit rating who will not be able to repay the loans. Since the consequnces of the crisis are still not repaired and the economy hasn't recovered completely this could lead to another financial crisis. Another worry is that majority of the Portugeese debt is made out of the foreign debt: not only debt is high (130% og GDP), but it is made out of foreign money. Foreign investors might could become nervous because of the fiar they won't repay their own debt (bearing in mind that countries economy is not strong and that even small problem could shake it and cause liqudity problems) what could reflect on the yields of the Portugeese bonds. Rosen yield, means country has to pay higher price for the issued bonds and if it doesn't have money to pay for it, additionaly with no acess to the money, there comes new liquidity crisis followed by the unemployment, economic downturn and high deficit which cannot be repaid without bailout funds. And the circle goes again. A lot of economist are affraid of such scenario and we all should hope that it won't turn from the speculation to the reality since the Eurozone wouldn't be able to handle another crisis.

[1] If the ratio is too high, it means that banks might not have enough liquidity to cover any unforseen fund requirements, and vice verse, if the ratio is too low, banks may not be earning as much as they could be.

4.8 Crisis in Italy

Italy, as fourth- largest economy in Europe, wasn't affected that severly by the last financial crisis as mentioned eurozone countries. What is familiar is that Italy is country which always had a laxity when it comes to bugdet discipline: as the govenment was increasing their spendings, that's how new money was coming through debts, what in the end resulted in accumulated high level of debt. Last financial crisis, since it hit al the world, had to ave some consequnces in Italy as well, since it couldn't be an exeption. High level of Italian's debt was caused by weak GDP meaning that Italy had a low productivity growth which was not able to produce needed money. Such discrepancy could have been resolved by improving the flexibility of the labor market. However, when the crisis came, those flows of the system came to the surfice resulting with the really low GDP (-5.5 per cent in 2009) and unemployment (8.4 per cent in both 2010 and 2011, 10.8 per cent in 2012, and 11.4 per cent in 2013). Luckly, banks were not involved, so country didn't need bailout funds to rescue banks whereas it had opened arms to create its own reforms with no help of Troika. So, Italy was the only country in the euro zone which have saved itself with no assistance of any euro zone country or euro zone institutions. After it was obviuos that crisis is going to hit very hard and that consequneces won't be easy to avoid, the Italian authorities in 2011 adopted two consolidation packages, in July and in August. The reform program was called „Salva Italia“ with the aim to reforme fiscal sistem, including a new round of pension reforms, but also included some growth-enhancing actions, mostly focused on the business environment and liberalisation. During the 2012 two new reform packages were imposed under the name “Cresci Italia” (Grow Italy) and “Semplifica Italia” (Simplify Italy) . Such programs had goal to foster competition in product and service markets and to further improve the business environment, mainly by reducing the administrative burden on firms and citizens. Italia as country known for thr corruption, also imposed measures in order to descourage cooruption in the country.

So, what has Italy done:

- Centralized public procurement since purchase prices of goods and services are extremely differentiated across the country, often without good reason,
- reductions in the number of public staff,
- other cuts of the expenditure,
- pension reforms (tightening of eligibility requirements for early retirement),
- made a plan to sell real-state assets to service debt etc.

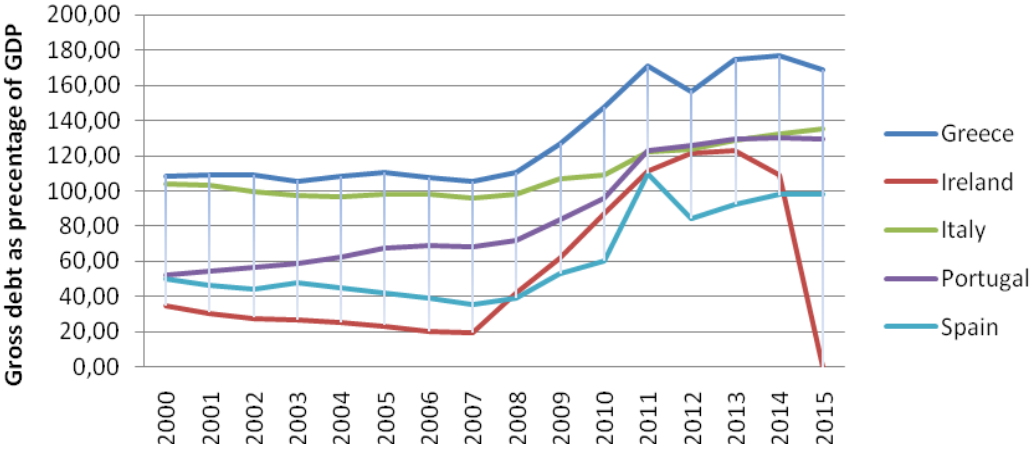
Event though experts argue about the measures that are undertaken to service outstanding debt (because different goverments have the ownership under the labeled assets), they all do agree that Italy has undertaken measures for the future redaction of the debt.

4.9 What is common for all these countries?

Peripheral countries of the EMU has faced a huge problem during the financial crisis. Countries which were severly hit were Greece, Spain, Portugal, Ireland as well as Italy.

The basis of the crisis was the same in all countries: too high level of debt with need to finance bailout of banks (except Italy), what left national cash registers empty! Since the cash registers were empty, governments were not able to service their obligations starting from public spendings to the service of the debt from the issued government bonds. Credit rating beign downwarded increased yield on the goverments bond what adittionaly resulted in increase of the the governments' debt. Whilst, economy was facing downturn. Moreover, banks which were financing the property bubble in Spain, Ireland and Portugal were facing losses making governments to provide bailout funds. After doing so, governments had no income to cover upcoming obligations, what meant call for help of Troika. Each country gained asked funds but with the set of conditions which had to be fulfilled during the certain period. All these countries have faced similar, but of course not in this scope, situations during their existance, however, they managed crisis periods by devalvating their national currencies which by exepting the euro was no longer an option. That is why these particular countries found hard to deal with the financial crisis. And all these countries did whatever they were asked just in order to stay in the eurozone and keep the euro.

Graph 5: Gross government debt of the coutries of Eurozone



Source: Eurostat (2015).

From period 2008 - 2013 gross government debt of these countries has constantly raisen. In 2013 the highest was in Greece with 180% of GDP.

However, simple question (which should be studed with all due attention) arises after the crisis, (which for some countries haven't ended yet): Are the imposed strategies sustainable in the log run? Or the costs of beign part of EMU have become much more clear for the peripheral countries which should consider leaving the EMU? Who would benefit from such decisions: perhipreal countries or maybe core ones as Germany (which has already benefit from peripheral countries by placing budget surpluses into the capital flows of the peripheral countries)?

What is more than obvious is that required reforms can be performed with no protest in times of crisis since people want to get their jobs back, have the healthy economy as they use to at some point, simply to live normal life. However, in the long run, aftet those same people realise that only way to achieve the competititvness of their country is through lowering costs of labor market (although a lot of economist agree that even such measures wouldn't resulted in improved competitivness), which will affect their own wages, then the country will face the resistance of the trade unions, popular organisations, and political parties. Under the such pressure governments won't be able to do much, such protest could potentially market country as country of the high risk, downwarding its credit rating, increasing debt and the circles goes again. The only reasonable option is reform of the Eurozone area! Serious structural reforms must be made, otherwise the idea of strong and unique Europe might fell apart.

4.10 The Greek debt crises

The EU member state which has been severely hit by the global economic crisis was Greece. During the 2009 and 2010 it was clear that Greece was hit by sovereign debt crisis. Because of that, Greece was first country of the EU to seek for the bailout funds from IMF, then followed by Ireland in November of 2010, Portugal in April of 2011 and Spain in 2012. So, it was clear that bursting property crisis has become really serious and with the default of the Leman's brother banks time of the long reseccion has began spillion over to the Eurozone countries. Unlike other countries Greece has sought for more bailout funds in the 2012 making it clear that the recession in the Greece is not something that should be neglected and call for waking up of whole Eurozone.

When the Eurozone was established, Greece was initially refused membership of the single currency area, because of its weak economy and failure to meet the required economic criteria. If the Greece wanted to become part of the Eurozone, the Greek Government needed to implement a series of austerity measures to improve its economy and to finally meet the required criteria. However, in 2001 EU revised its opinion and Greece became the 12th country which has join the Eurozone. There were a lot of speculation, especially during the crisis when a lot of economist were trying to find the reasons of Greece beign hit so severly by the crisis, that its report, on the basis of which EU changed its opinion and welcomed Greece in the EU, were false, because there is no logic that country which has fulfilled required criteria was that hardly hit, when these criteria were designed in that way that each country would be able to handle with the upcoming shocks. It is truth that Europe was concerned about the strength of Greece's economy, since the country had not adequately reformed its economy or reduced its public spending, including the huge military budget, but still noone reacted at that time when cosequnces of the crisis could have been prevented.

When the global economic crisis hit, Greece was in a deep problems: it's debt was predicted to grow to 124% of GDP, or €300 billion until 2010. Of course, such predictions finally woke up Greek Government which has cofirmed that its debt will be four timel higher than alloweded level, thus 12,7% of GDP. Due to the lack of fiscal transfers which would cover the gap in budget leaving it at the same levels and investors fear that Greek governemnt won't be able to serve its debt, Greece credit rating was downgraded making any aditional money very expensive.

Greek authorities still didn't want to admit the situation in which Greece was brought in, claiming that deficit levels will be decreased to 8,7% of GDP during 2010 (such levels still weren't satisfing from the convergence crtiteria point of view!) with the tendecy to cut its budget deficit by 2012 to 2,8% of GDP. The measures that were about to be taken were:

- Reduction in social security spending by 10%;
- Cut the expenses on public sector wages;
- Reform of pension and tax system;
- Increase of fuel, tobbaco and alcohol taxes;
- Suppression of coruption and tax evasion etc.

Bearing in mind that such reforms need long period of time to be implemented, it was obviuos that improved economic outlook in Greece couldn't have been seen in that short perod of time what caused that EU Economic Affairs Commissioner Olli Rehn asked the Greek Government to take further measures causinge further downgrading of credit rating eventually reaching 'junk-status' (below 'BBB', according to ratings agency Standard & Poor's) in April 2010. How nad will these reform be implemented at all it will be seen in the near future.

4.10.1 What could the EU do to HELP Greece?

EU member states discussed several possible solutions (Clarke et al, 2010):

- The first possible solution was to let Greece default on its debt, but majority of EU members didn't agree with this preposition since they all thought that it could jeopardize the banks which held their money in the Greece's bankst resulting with the loss of their money. They also were worried that default of the Greece debt could jeopardize the confidence in the euro which was to become word number one currency reserve;

- A second possible solution was proposed by France and it reffered to organizing a bailout for Greece from ECB, EU, or IMF. Again, Member states were concerned that a bailout could jeopardize the credibility of euro, especially bcause proposal included the involment of external international institutions such as the IMF and it could be understood as the signal the failure of the great ‘economic monetary union experiment’.
- A third possible solution was for Greece to leave the Eurozone and return to its old currency, the Drachma. However, none of the Member states tried to get out of the Eurozone, since it was thought that under no circumstances such idea could be realised, and again it would ment that great idea about one untouchable area failed in its impementation.

Obvioulsy default on its debt was never an option, because Athens owes IMF 21.4 billion euros, the ECB 18.1 billion, while the debt to other countries is the total 52.6 billion euros. Berlin claimed a 68.2 billion, France 43.8, Italy 38.4, while Greece owes to Madrid 25 billion. Debt write-offs or part of the debts of Germany and France would not be overly negative effect on the economies of these countries due to the fact that they are the economic locomotive of the entire continent, but they were the ones who were opposed to that solutions with an excuse that will jeopardize the credibility of the euro (again, jeopadized credibility of euro would harm moslty to these countries).

On the other hand, Madrid and Rome do not have the luxury of writing off debt they claim form Greece, because Spain has a high level of unemployment, while Italy itself had large external debt.

The economic results of the program which have been imposed to Greece by the Troika (European Commission, ECB and IMF) 5 years ago are devastating: Greek GDP fell by 25%, while unemployment of young people in Greece is over 60%. No one didn't take repsonisibility nor Troika, nor the European leaders who might have push Greece into this abyss. Troika still demands that Greece achieve a primary budget surplus (excluding interest) of 3.5% of GDP by 2018. World economists agree that its only purpose of punishing Greece and compliance with this requirement leads to a deeper recession. Even with the debt restructuring, Greece remains in crisis - if its citizens in a referendum to vote for the austerity program. And they did.

When it comes to converting a large primary deficit into a surplus, few countries have achieved what Greece has succeded over the past 5 years. The last Greek proposal is largely left to meet creditors, despite the price they would have paid for it already suffering Greek citizens. It should be noted that non of borrowed money has came to them. Much of it was returned to creditors from the private sector, including the German and French banks. Citizens are given the crumbs, but they paid a high price for preserving the banking systems of these countries. In doing so, the IMF and other public money lenders who are looking for money is not required,so every cent they got it will re-lend to Greece.

In January this year the Greek people voted a government that promised to stop the politics which supported the program of savings. To stick to its program, the government would have refused the proposal of the Troika. But she wanted to give citizens the opportunity to decide on issues important to their future. The question of the legitimacy of the referendum is incompatible with the policy of the eurozone, which has never been particularly democratic project. Most of the governments of its member states did not seek the approval of its citizens when their monetary sovereignty put in the hands of the ECB. The Swedish government has asked the its citizens and they told no. They anticipate an increase in unemployment in the case of monetary policy undertaken by central bank focused exclusively on inflation and not enough on the financial stability. This would lead to a decline in the economy, since the euro zone economic model based on power relations and to the detriment of workers.

This what we are now witnessing, 16 years after the establishment of the eurozone, is the antithesis of democracy. We have the European leaders who want to drop Tsipras left-wing government. Of course, it is uncomfortable to be faced with a government that is opposed to the policies that contributed to increasing inequality in many advanced economies and which wants to curb the power of the rich. It seems that European leaders believe that they will bring down the Greek government by forcing it to accept an agreement contrary to its mandate.

On the other hand, a lot of experts in Greece believe that such measures wouldn't be required from Greece and its governments, such pressure wouldn't have been put on the Greece if the government was right-wing government, sending a strong message to the Podemos[2]. Obviously left-wing government is not an option for the EU leaders, just remember that during last four years in almost every country right-wing political parties won including our country, BiH. It seems that suits to the EU to have right-wing parties as the leaders of the european countries.

It's hard to give advice to Greek citizens how should they vote in a referendum on July 5. Both alternatives, to vote for or against Trojka's conditions are difficult and risky.

[2] Podemos is a left-wing political party founded in March od 2014 by university professor Pablo Iglesias. This party gained five memebers in Euroepan Parliament and it is second largest political party in Spain whose gold is to address the problems of inequality, unemployment and economic malaise that was folloed in the wake of the european sovereign debt crisis.

Vote for would and it will since citizens said yes, endlessly prolong the crisis. Maybe the country who has sold all of its lend, who has sold its property and who left all young and smart people, finally will get the debt relief; perhaps as a medium scale economies Greece finally received help from the World Bank. And all that can be imagined only for 10 or 20 years.

On the other hand, vote against could provide Greece the opportunity to comply with its strong democratic tradition and to take its destiny into its own hands. However, the Greeks said yes to the reforms.

4.10.2 Beginning of the Greek debt crisis

The Greek debt crisis which has started in the late 2009 was triggered by the upcoming recession in the Eurozone combined with the structural weaknesses in its economy along with a decade long existence of overly high structural deficits and debt-to-GDP levels of public accounts. Not late after the crisis started in the Eurozone, fear that Greece won't be able to service its debt spread among the investors due to the report on the government’s debt which reported an increase in the debt and high deficit (debt-to-GDP ratio increased from 109% in 2008 to 146% in 2010). Such facts had an influence on the credit rating of Greece, therefore downgrading Greek government bonds to junk bond because of the growing risk that its government won't be able to meet its debt obligations making the private capital lending to increase.

During the 2010 started the Greek worst nightmare: the Eurozone countries, ECB and IMF, have borrowed a € 110 billion bailout loan in order to save Greece from sovereign default and to cover its financial needs requiring an austerity measures, structural measures and privatization of the government assets.

Set conditions had three key points (Sumer, 2014):

- Implementation of the austerity measures in order to restore fiscal balance;
- Privatization of the government assets worth €50 billion by the end of the 2015;

- Implementation of the structural reforms in order to improve competitiveness and growth of the country.

If everything stopped right here Greece might could have change the course of upcoming events. Unfortunately, that was not enough, new amount of money was launched a year later as a second bailout loan of 130 € billion including bank recapitalization package worth €48 billion. With a new, second, bailout loan came a new condition. Private creditors holding Greek government bonds required signing of the deal which meant extended maturities, lower interest rates, and a 53.5% face value loss. Now Greece owed € 240 billion which were launched during the period of 2010-2014.

This proposed restructure of all Greek public debt held by private creditors, which at that point of time constituted a 58% share of the total Greek public debt, would according to the bailout plan reduce the overall public debt burden with roughly €110 billion. A debt relief equal to a lowering of the debt-to-GDP ratio from a forecast 198% in 2012 down to roughly 160% in 2012, with the lower interest payments in subsequent years combined with the agreed fiscal consolidation of the public budget and significant financial funding from a privatization program, expected to give a further debt decline to a more sustainable level at 120.5% of GDP by 2020 according to data published by the European Parliament.

However, because of the worsened recession and inability of Greece to implement required conditions, new tranche was approved by IMF, €8,2 billion which is supposed to be transferred during the period of 2015-2016.

After a revision of the bailout program, new, positive facts have been discovered – Greek economy had an improved outlook, structural surplus during the 2013-2014 along with the decline of the unemployment rate and return to the positive economic growth in 2014. These facts enabled Greek government an access to the private lending, where Greek government sold bonds to the private creditors. But not long after that promising period, a new period of recession came and just in the time of the premature parliamentary elections. In the December of 2014 new government was formed, so called Syrizy-led government, which has refused to respect the terms of the bailout tranches with an excuse that such terms make only harm to the Greek economy. Such behavior of the Greece government made Troika to suspend an upcoming aid to Greece until the new government either accepts the earlier negotiated conditions or comes with an mutual agreement with the updated terms. Of course, with no money to come in a state's cash register, came a liquidity crisis for the Greek government but as well for the Greek financial system with the consequences of decreased stock prices on the Athens Stock Exchange and increased interest rates of the private lending market.

Just after election, the Eurogroup granted a further extension of its technical support of its current bailout program to Greece, with a possibility to renegotiate the terms which have been imposed for the first time but the deadline was until the June of 2015. Greek government due to the fear that it wouldn't be able continue with payment of the public pensions and salaries, tried to renegotiate imposed terms in June 2015. However, Greece didn't have the money to pay the due debt to the Troika, which won't release a new tranche which Greece needs desperately.

The latest report form IMF reported that might have been gaps in financing deficits which had to be find money for: €5.6bn in 2014, €12.3bn in 2015, and €0bn in 2016. Funds must be found to fill this gap either by additional government’s lending from private capital markets, or by additional fiscal improvements through expenditure reductions, increase of the revenue or increased number of privatizations. Since the outlook of Greece’s economy is improving there might be chance to finance the gap from private capital market, thus by issuance of bonds. Depending on the outlook of the economy in the time when the bonds tend to be issued, depends the conditions under which such financial gap will be financed.

The new government attitude towards acceptance of the previously negotiated terms of the bailout agreement, moreover it's opposition towards renegotiation of the terms, had a negative influence on the financial markets resulting in the loss of 30% on the Athens Stock Exchange comparing it to the loss from December 2014, whereas interest rates of the ten-year government bond rose from a low 5,6% in September of 2014 to 10,6% in January 2015.

4.10.3 Main causes of the crisis in Greece

Main causes can be listed as follows (Kouretas & Vlamis, 2010):

- Government spending

The Greek economy was one of the fastest growing in the Eurozone from 2000 to 2007: during this period, it grew at an annual rate of 4.2%, as foreign capital flooded the country. Despite that, the country continued to record high budget deficits each year. Indeed, until 1980. Greek reported budget deficit. During few years in period of 1960–73 Greece recorded slight budget surpluses, however, from 1974–80 had an era with moderate and acceptable budget deficits (below 3% of GDP), whereas after that period, starting from 1980 era of budget deficit has started. During period of 1981-2013 budget deficit was above 3 % of GDP. What was the reason for deficit to appear during that long period of time, and how come nothing has been done to prevent it, rather than stimulate government’s expenditures? Namely, having their own currency and being able to create its own monetary policy, Greece was using monetary instrument like devaluation of its national currency what helped them to finance the borrowing of government. Obviously, no one noticed that such politics might have serious consequences in a future, however, since such politics until the adoption of euro, didn’t show side effects, normally no one didn’t see the problem. But, problems started with adoption of euro and unique monetary policy because devaluation of the currency couldn’t have been used as instrument to help borrowing, even though during the period from 2000 and 2008 Greece still was able to borrow money due to lower interest rates government bonds in euro and a long series of strong GDP growth rates. Serious problems started to occur when the global financial crisis peaked, when the borrowing either was no available at all due to bank illiquidity or due to the high interest rates.

A lot of authors agree that public deficits started with the restoration of democracy in 1974. Namely, after the end of era of right-wing military government, left-wing government wanted to all population treat equally as the rest of the right-wing orientated population. In order to do it, government had to finance military expenditure, public sector jobs, pensions and other social benefits. Of course, such high expenditure couldn't have been covered with income of the non-competitive economy. Moreover, according to the North Atlantic Treaty Organization (hereinafter: NATO) statistics, after the US, Greece is the second biggest defense spender where major suppliers are US, Germany and France. Germany and France, really have a lot of interest in Greece, indeed??? No wonder, they were the ones who stood against Greece default and are fighting for the survival of the Greece with injection of the money through new borrowings of IMF. This is just the best way to control such important economy for the Germany and France as for the US as well. It is important to mention that after a long period of almost 30 years and something right - wing government was selected advocating the reduction of salaries and bureaucracy and the need to redirect much of its current governmental spending from non-growth sectors (e.g. military) into growth stimulating sectors.

– Tax evasion and corruption

One of the problems that economy of Greece’s exposed to is the tax evasion and corruption. To such problem all Mediteranian countries are exposed to like Italy, Spain etc. Tax evasion in combination with corruption leads to the low government incomes than the anticipated. Data confirm that each year Greece has reported lower tax incomes than the anticipated. Since the expenditure of government is planned on the basis of the predicted revenues, if such revenues don’t flow to the cash register than budget deficit is obvious. If such situation is repeated every year than the deficit which cannot be covered from such revenues shall become deep and other sources of financing must be found what can be potential problem for the countries which due to its outlook are nit bale to find new sources of financing gaps. The data from 2013 showed that government collected collected less than half of the revenues due 2012.

According to the propositions of the Greek finance manager as to what must be done in terms of reforms: tax evasion must be reduced with the strengthen tax compliance, in general improve the system of collection of taxes. Greek minister of finance proposed following measures in order to decrease tax evasion:

- Increasing collection system: unification the tax and social security collection mechanism, levy obligation for enterprises to maintain professional accounts, collection of the details and electronic records of all receipts receive.
- Suppression of corruption: adoption of process where individuals have access to the tax revenues, establishment of IT-based audit case management system etc.
- Improving self compliance: oblige professionals and self-employed individuals with a high-risk of tax evasion to conduct their business through IT facilities, enable tax payers to report those who avoid paying taxes, track fuel delivery tank-trucks with a Global positioning system (hereinafter: GPS) etc.

According to the Transparency International's Corruption perception index Greece had a score of 36/100 was ranked as the most corrupted country in the EU. Since one of the bailout conditions was to lower the corruption, Greek government succeeded to improve the rank from 36/100 to 43/100 in 2014. That rank still made Greece as the one of the most corrupted country in the EU, but now followed by Italy, Bulgaria and Romania.
It was speculated that Greece government for many years had reported false data regarding country's official economic statistics. Namely, in the 2010 it was discovered that Greece has paid to the Goldman Sachs and other banks hundreds of millions of dollars in order to hid actual level of debt. Of course, such deals had an aim to enable extra borrowing which will continue the public spending, whereas the reported levels of deficits were false. The revision of the statistics revealed that yearly deficits limits have exceeded the limit of 3% of GDP and debt levels above the limit of 60% of GDP.

– Unsustainable and accelerating debt-to-GDP ratios

If we go back in the history of the Greek budget balance, it will be noticed that during the 1981 Greece started to have fiscal deficit which has remained high for a decade. Indeed, comparing it to the nowadays levels of deficit it was small and treated with the devaluations of drahma. However, devaluation of drahma caused inflation and interest rates to decline. During those years when deficit was reported economy was market by low GDP growth, high structural deficits, high inflation, high interest rates and multiple currency devaluations. However, deficit started to grow ever since 1996 especially after the introduction of euro when Greece lost the ability to control deficit by devaluation, thus by its monetary policy. Statistics have shown that 1999 was the year with the lowest debt since 1980, which later was taken into consideration while considering membership of Greece to eurozone. Unfortunately, debt levels have worsened during

the crisis whereas in 2009 there was an increase in the general government debt to 113.4 % of GDP compared to a figure of 99.2 % in 2008. Debt until 2013 was increasing.
The problem that needed to be solved immediately was the too high structural deficit of the government budget. From 2010 onwards, government made that much effort just to minimize the level of the deficit an make it be at least close to the required SGP levels. Surprisingly, for the first time after the 1973 Greece achieved structural surplus in 2012 which was maintained throughout next years which is important in sense of down warding a debt-to-GDP ratio. Indeed, Greece managed to lower the levels of the debt-to-GDP ratio from 198% to 157%, but it needed to be lowered to 124% by 2020.

- Credibility of financial reporting

Since Greece has almost at no point fulfill all required criteria for entrance in the euro zone, from the first moment Greece applied for membership of the Euro in 1999, there were speculations about credibility of the presented data. Such suspicious was confirmed by the fact that from 2005 to 2009 Eurostat each year noted a reservation about the fiscal statistical numbers for Greece, whereas in the couple of next year it noted that such data were revised and therefore it turned that data are worse than previously presented data by Eurostat. Each year for mentioned period as well as later predicted numbers about GDP growth, budget deficit and the public debt worse data appeared later on. Such behavior could mean only one: something is not okay. Numbers about GDP growth presented by Greek national statistical agency appeared to be wrong, thus it was worse than the anticipated. Therefore, Greek ministry of finance emphasized the need to return good faith in national statistic services, on whose data investors make decisions about investing in the economy. After all, real figures mean transparency which is set to be one of the main goals of EMU, since only on the basis of the transparent data new solutions, reforms, or whatever we called them, can be made.

5 UNDERSTANDING THE CRISIS IN THE MANNER OF NONFULFILLMENT OF THE OCA CRITERIA?

5.1 What was happening with the OCA criteria during the crisis?

5.1.1 Labor mobility

The movement of laborers is based on a difference in resources between countries, so when one country needs workers, they can go in other countries which have deficit. Mobility of the workers among the countries is called international labor mobility. The standard assumptions in the trade literature are that factors of production are freely and costless mobile between firms within an industry and between industries within a country but are immobile between countries, in other words, factors are assumed to be immobile across borders. Often most workers remain in their native country due to immigration restriction but sometimes workers migrate across borders violating immigration laws. According to Robert A. Mundell (1957) if the countries want to realize all the gains from international exchange and globalization, countries need to either trade freely or allow factors to move freely between countries.

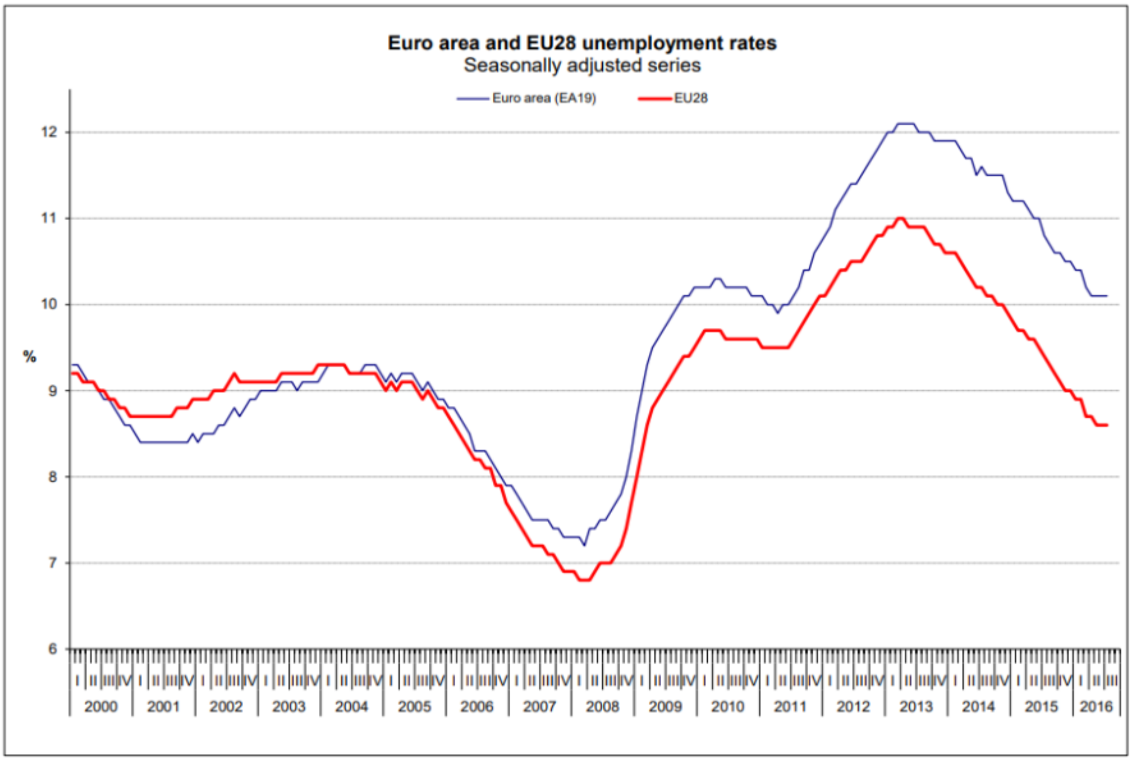
Now, recall that one of the main idea behind the creation of EMU was creation of the single market within which persons, goods, services and capital can move freely. However, due to some other obstacles such as differences in languages, cultures, social security systems rather than national borders control are discouraging EU residents in their labor mobility. Aim of labor mobility is to dislocate workers from one county into another country when due to shocks unemployment in the country grows. That was exactly the idea behind the creation of the EMU, therefore if one country in the euro zone was hit by crisis its workers can freely and costless move to some other country within the euro zone, what will balance economic shock. Now, if the labor mobility is limited, there is no way of balancing economic shocks by the labor migration within the euro zone. If this is true than the labor mobility as the one of criteria of the OCA will lack.

What was happening with unemployment and labor mobility during the period of 2008-2015?

According to the data from Eurostat in the beginning of 2005 unemployment started to decline, until the first quarter 2008 when EU-28 unemployment hit a low of 16.1 million persons (equivalent to a rate of 6.8 %) before rising sharply when the economic crisis started to wake up. By the mid-2010 the unemployment level went up by more than 6.6 million (equivalent to a rate of 9.7 %) while in the following three quarters there was a decline in unemployment rate and we all hoped that was a sign of an end of the crisis and of a stable improvement in labor market conditions in the EU-28. But, we were wrong: since the second quarter 2011 and until the first quarter of 2013 unemployment steadily increased taking it to the record level of 26.4 million, corresponding to a record rate of 10.9 %. Since then the rate has started to decrease, reaching 9.9 % at the end of 2014. This was the highest unemployment rate since 2004 when it reached 9.2% of total labor force.

The unemployment rate in the euro area (EA-18) had the almost the same trend as in the EU-28, so during the last crisis unemployment increased, with the exception of the period between mid-2010 and mid-2011 where it temporarily declined, what can be seen on the following graph. During the 2013 the unemployment rate was at 19.2 million while in the second part of 2013 and in 2014 started to decline (it reached 10.2 % in 2014, decreasing for 0.7 percentage points compared to 2013).

Graph 6: Unemployment in Euro area -19 and EU-28



Source: Eurostat (2016).

Based on graph 6 we can see that unemployment in both Euro area -19 and EU-28 had significant decreasment from period 2006-2008. In the period of crisis, in 2008 until 2013 was the highest reaching more than 12% in Euro area and 11% in EU countries.

According to the Eurostat's data unemployment rate rose in 6 Member States between 2013 and 2014, dropped in 19 and remained stable in France, Croatia and Luxembourg (Table 1).

Table 1: Annual average unemployment

Country	**Annual average unemployment rate between 2013 and 2014 (percentage points)**
Italy	+0,6
Finland	+0,5
Cyprus	+0,2
Austria	+0,2
Belgium	+0,1
Netherlands	+0,1
Hungry	-2,5
Portugal	-2,3

Ireland	-1,8
Spain	-1,6
Bulgaria	-1,6
United Kingdom	-1,5

Source: Eurostat (2016).

Long-term unemployment is one of the main concerns of policymakers and not just because of its financial and social effects on personal life but also because long-term unemployment could negatively affect social cohesion and, ultimately, may slow down economic growth. What is even worst, the youth unemployment rate in EU-28 was more than double the overall unemployment rate in 2014 (22.2 %), while in the euro area was even higher, reaching unemployment rate at 23,8%.

Table 2: Precentage of youth unemployment rate in peripheral countries

Country	**Precentage of youth unemployment rate (%)**
Spain	53.2
Greece	52,4
Croatia	45.5
Italy	42.7
Cyprus	35.9
Portugal	34.7
Germany	**7.7**

Source: Eurostat (2016).

Since early 2010 many euro countries have shown signs of gradual economic recovery, but stabilization in the peripheral countries still didn't come. The unemployment is far higher than in some core countries such as Germany, where unemployment in 2010 was only 7.1%. During the 2010th as the year when economic crisis has culminated the countries which have been severely hit by the crisis have registered the highest unemployment rate. Unemployment rate in Spain was 20.1%, while in Ireland, Greece and Portugal unemployment levels in 2010 were similarly above average, ranging between 12 and 14% according to Eurostat data.

On the basis of given statistics, we conclude that migration of the labor force should have been high, since some countries have faced high unemployment rate while others, such as Germany faced decrease in the employment but it was just for a short period of time after which it has recovered very fast. Since this high unemployment has been caused by the economic shock, it means that labor mobility contributes to an optimal allocation of economic resources and it ensures a quick adjustment of labor markets (Stankovic, 2013). Therefore, as we already stated labor mobility could help to avoid the domino effects the euro zone is experiencing. Given the huge differences in unemployment rates between eurozone countries it is expected to have the high labor mobility, which is because of the removed border barriers enabled, what it makes even easier to perform. Nevertheless, labor mobility remains low in whole Europe.

5.1.2 Openness of the economy

Most authors agree that openness is likely to increase among countries sharing a single currency (De Grauwe & Mongelli, 2005; Rodrik, 1998; Rose, 2000; Stankovic, 2013; Tavlas, 2004; etc.). One of the postulates that have been discussed among the economists is whether the openness of the country's economy means that country is eligible to be the optimal currency area (Zika, 2006; Rodrik, 1998; Mongelli, 2008; Jurak, 2007; Furruter, 2012; etc.). The openness of an economy can be judged on the ratio of tradable to non-tradable goods. Tradable goods are those that can enter into foreign trade, while non-tradable goods cannot enter into foreign trade due to factors such as high transportation costs. Therefore, tradable goods are ones which have been produced domestically, and they can be exported or substituted by foreign imports.

Since it is not possible to determine which goods are tradable and which are non-tradable, it is more appropriate to use the actual volume of exports and imports when determining the degree of openness of a national economy. Some economists have developed this idea further and defined openness as the ratio of exports and imports to the GDP (Rodriguez, 2007). The ratio of exports to GDP measures the proportion of domestic production that is exported, and the ratio of imports to GDP measures the proportion of domestic spending devoted to foreign goods. The average of these two ratios gives an idea about the trade openness of a given country towards all or some of its major partners:

$$\textit{Trade openess} = \textit{export} + \textit{import} / \textit{GDP} \quad (1)$$

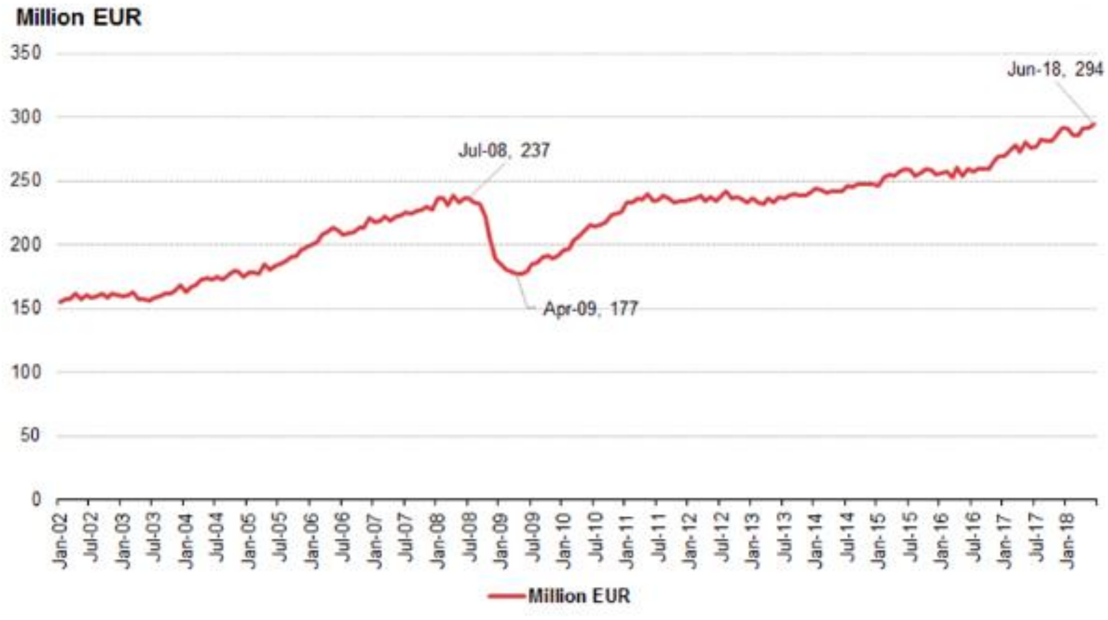
According to the formula presented above, open economy represented by the trade openness means high participation of exports and imports in the total production of goods and services. Interpretation of the formula goes like this: "If the ratio is higher in country A than in country B, it means that country A has an economy more open to international economic flows than country B and if ratio grows over a period of time it means that country A is becoming more open (McKinnon, 1963). There are economists who think that this measure should also be seen as measure of other elements of international flows, such as capital migration, and especially foreign direct investment, trade in services and migration of labor. On the basis of this postulate McKinnon defined OCA as combination of all international flows, therefore as a group of countries not only closely linked by trade, but also by investment flows. Therefore, the fixed exchange rate area, like eurozone area, will survive and all the countries will benefit from it if the degree of output and factor trade among the euro zone countries is high.

Krugman and Obstfeld (2009) defined an OCA as group of regions in which its economies are linked by the trade within the eurozone area as one of the factors. In the 1999 when the EMU was created the intra trade in EU was between 10 to 20% which was far lower than the intra trade in US (which as well represents an OCA) meaning that this amount of intra trade, as one of the arguments of the OCA theory, hasn't been high enough when the EMU was formed.

What are the trends regarding intra trade?

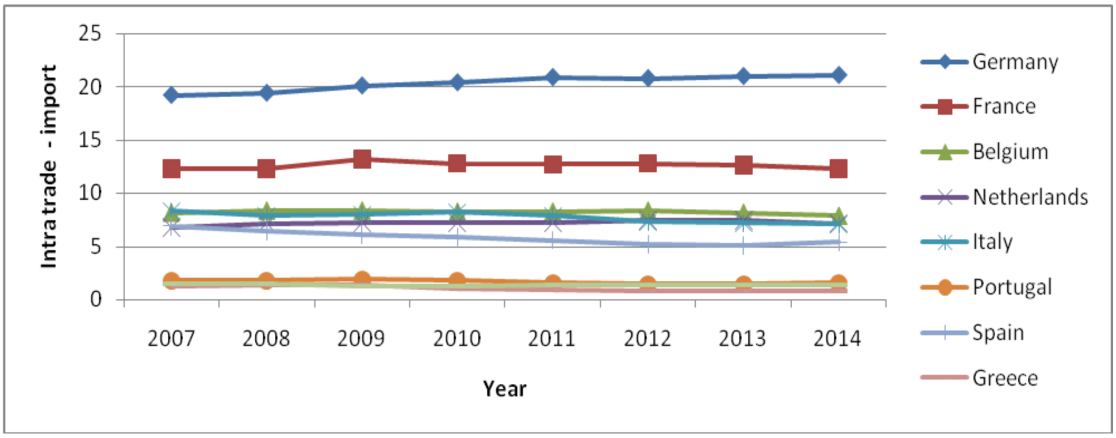
When it comes to the export within the EU, from the following graph we can see that in 2002 and 2003 the level of exports of goods was fairly stable, but then a period of rapid increase has come between 2004 and the third quarter of 2008. From the fourth quarter of 2008 to the end of the second quarter of 2009 there was a sharp decrease in the value of exports of goods due to the "problems" which EU was facing, but again the value of exports of goods began to increase in the beginning of 2011 to onwards.

Graph 7: Intra trade trends



Source: Eurostat (2018).

Graph 8: Intra trade import within the Member States (% GDP)



Source: Eurostat (2017).

Based on a graph 8 and detailed description given in table 3 we can see that the highest import as percentage of GDP in 2014 had Germany (21,1) and the lowest Greece (0,8).

Table 3: Intra trade import within the Member States (% GDP)

Year	Germany	France	Belgium	Netherlands	Italy	Portugal	Spain	Greece	Ireland
2007	19,2	12,3	8,2	6,8	8,3	1,8	6,9	1,3	1,5
2008	19,4	12,3	8,4	7,2	7,9	1,8	6,4	1,4	1,5
2009	20,1	13,2	8,4	7,3	8	1,9	6,1	1,4	1,3
2010	20,4	12,8	8,3	7,3	8,2	1,8	5,9	1,1	1,3
2011	20,9	12,7	8,3	7,3	7,9	1,6	5,6	0,9	1,4
2012	20,8	12,8	8,4	7,5	7,3	1,5	5,2	0,8	1,4
2013	21	12,6	8,2	7,5	7,2	1,5	5,1	0,8	1,4
2014	21,1	12,3	7,9	7,2	7,1	1,6	5,4	0,8	1,4

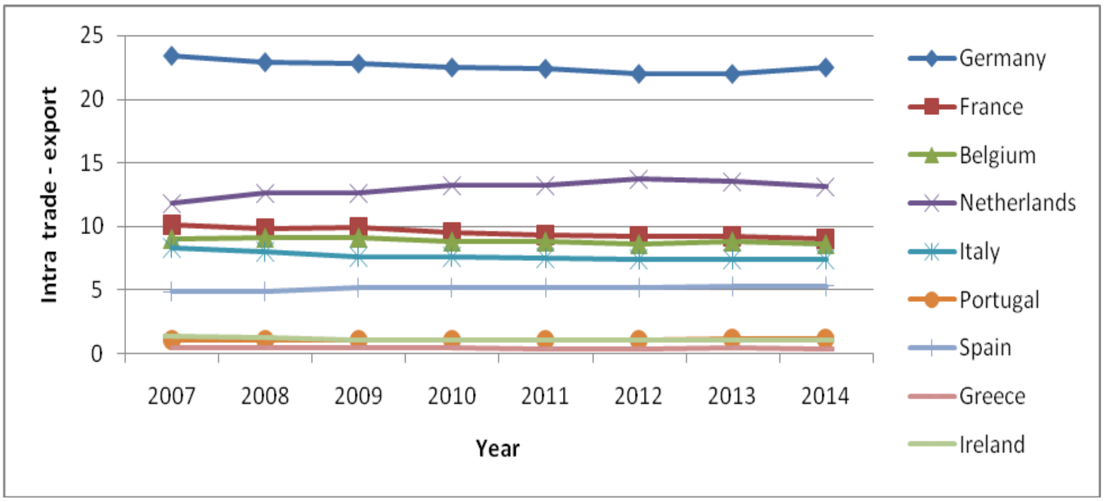
Source: Eurostat (2017).

Table 4: Intra trade export within the Member States (% GDP)

Year	Germany	France	Belgium	Netherlands	Italy	Portugal	Spain	Greece	Ireland
2007	23,4	10,1	9	11,8	8,3	1,1	4,9	0,5	1,4
2008	22,9	9,8	9,1	12,6	8	1,1	4,9	0,5	1,3
2009	22,8	9,9	9,1	12,6	7,6	1,1	5,2	0,5	1,1
2010	22,5	9,5	8,8	13,2	7,6	1,1	5,2	0,5	1,1
2011	22,4	9,3	8,8	13,3	7,5	1,1	5,2	0,4	1,1
2012	22	9,2	8,6	13,7	7,4	1,1	5,2	0,4	1,1
2013	22	9,2	8,8	13,5	7,4	1,2	5,3	0,5	1,1
2014	22,5	9	8,6	13,1	7,4	1,2	5,3	0,4	1,1

Source: Eurostat (2017).

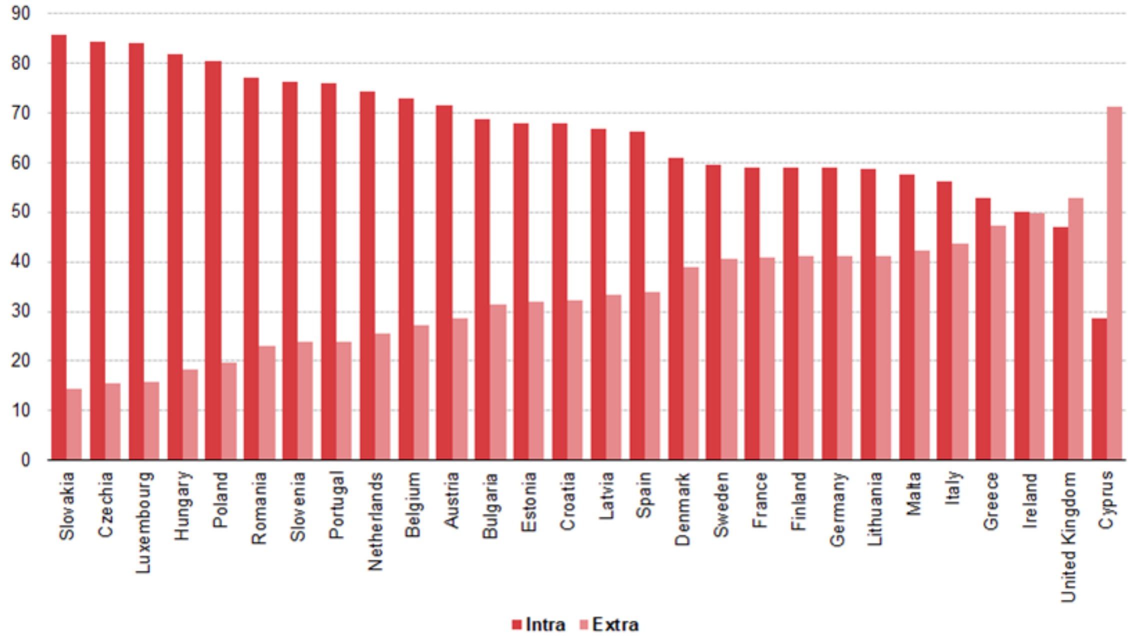
Graph 9: Intra trade export within the Member States (% GDP)



Source: *Eurostat (2017).*

On the basis of the data presented in the tables and graph 9 we can see that the value of export within the Member States has increased for Netherlands, Spain and Portugal, while other countries have faced slight decrease during the period of euro crisis, although comparing it with the years before 2008 these countries exports and imports within the Member States was increasing. Therefore, we might say that the intra trade in EU has increased over the years, comparing to the 1999 when the value of the intra trade was pretty low but until 2008 when it started to decrease although that trend is connected with the crisis which had an impact to the overall decrease of export and import.

Graph 10: Comparison of intra and extra trade (share %)



Source: Eurostat (2017).

On the previous graph it can be seen that amount of overall amount of export and import happens within the EU, thus countries have traded goods more with the Member States rather than with the countries outside the EU. This was the main aim of forming the EMU and EU in the first place, so this fact shouldn't surprise. There are only three exceptions in EU: Greece, UK and Malta, whereas Greece and Malta are exceptions in the EMU.

From all presented facts the question which arises is: if the intra trade is constantly declining, regardless of how minimum decline was, then most important EMU's goal, as of the OCA, goal of „free trade and mobility factors" is violated.

Now let's recall few facts: first the EU is a huge single market, where the major reason of its creation is that Member States achieve most of their trade within the Union (Rose, 2000; Micco, Stein & Ordonez, 2003; Stankovic, 2013). The single currency should solve the problems of different exchange rates and contribute to Europe's joint appearance on the international market (Rose, 2000). By facilitating exchanges and investments, euro-zone countries should have almost majority of its export and import do within the EU or EMU boundaries otherwise its reasons of joining to the Union as well as the reason of the existence of the Union would lack.

From all the data presented above, intra trade has been increasing until the period of crisis when it started to decrease, therefore the share of the total amount of exports and import of mentioned countries within the EU and EMU decreased in that period meaning that even though all the conditions for perfect function of EMU and EU were set majority of the Member States do not benefit from it.

Bearing in mind that the fixed exchange rate area, like euro zone area, will survive and all the countries will benefit from it if the degree of output and factor trade among the euro zone countries is high as well as Krugman and Obstfeld (2009) definition of an OCA as group of region in which its economies are linked by the trade within the euro zone area as one of the factors we can say that this criteria was fulfilled until the crisis, but crisis jeopardize fulfillment of this criteria as well.

Since the accent of this work is on the countries which have been severely hit by the last crisis, the mentioned ratio as the measure of the openness of one country's economy, will be calculated for those countries. Thus, ratio will be calculated among the core Eurozone countries: Germany, France, Netherlands, Belgium on the one side and peripheral countries: Italy, Spain, Ireland, Greece, Portugal on the other side. Since the Germany is ranked 3 with an Economic Complexity Index (hereinafter: ECI) of 1.89482, the openness of the peripheral countries will be calculated regarding its import and export to Germany.

Since the euro was first adopted in 1999, we shall analyze the openness of the mentioned countries in the period before the adoption of the euro. The euro area was made up of 11 of the then 15 EU Member States, then Greece joined in 2001.

Table 5: Trade ratio as measure of openness of economy in period of 1990-2000 (% GDP)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Belgium	121	118	114	108	113	116	118	125	124	124
France	42	43	42	40	41	43	44	48	49	49
Germany	**46**	**48**	**45**	**41**	**42**	**44**	**45**	**50**	**52**	**53**
Greece	40	39	39	37	36	37	37	39	42	48
Ireland	105	107	110	117	127	136	139	143	158	160
Italy	36	34	35	38	41	46	43	45	45	45
Netherlands	106	107	104	101	105	110	113	119	117	118
Spain	36	36	36	37	42	45	46	51	53	55
Portugal	65	60	56	54	57	60	60	62	64	63

Source: own work.

The highest ratio of trade to GDP as economists call it "openness ratio" has the Belgium, Netherlands and Ireland, whereas if we compare all other countries, since they all have lower ratios, we can say that before the adoption of the euro these countries were less opened then those three with the highest level of the ratio. Now, since all these countries which have entered the euro zone comparing it to the countries with the highest ratio haven't been that opened, but on the other hand all these countries didn't have that low ratio especially if we compare it among themselves. Such analysis will suggest that trade openness as the OCA criteria is fulfilled. Moreover, analysis through years has shown that these countries have become more and more opened suggesting that this OCA criteria as well as the statement that more opened economies create an optimal currency area is fulfilled.

Table 6: Trade ratio as measure of openness of economy in period of 2007-2014

	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	151	158	136	151	162	164	164	165
France	56	57	50	54	58	59	59	59
Germany	**79**	**81**	**71**	**79**	**85**	**86**	**85**	**85**
Greece	57	60	48	53	58	61	63	68
Ireland	146	152	159	174	175	191	190	/
Italy	55	55	46	52	56	56	55	56
Netherlands	133	136	120	136	146	155	156	155
Spain	57	56	46	52	58	59	60	62
Portugal	70	72	61	67	73	76	78	79

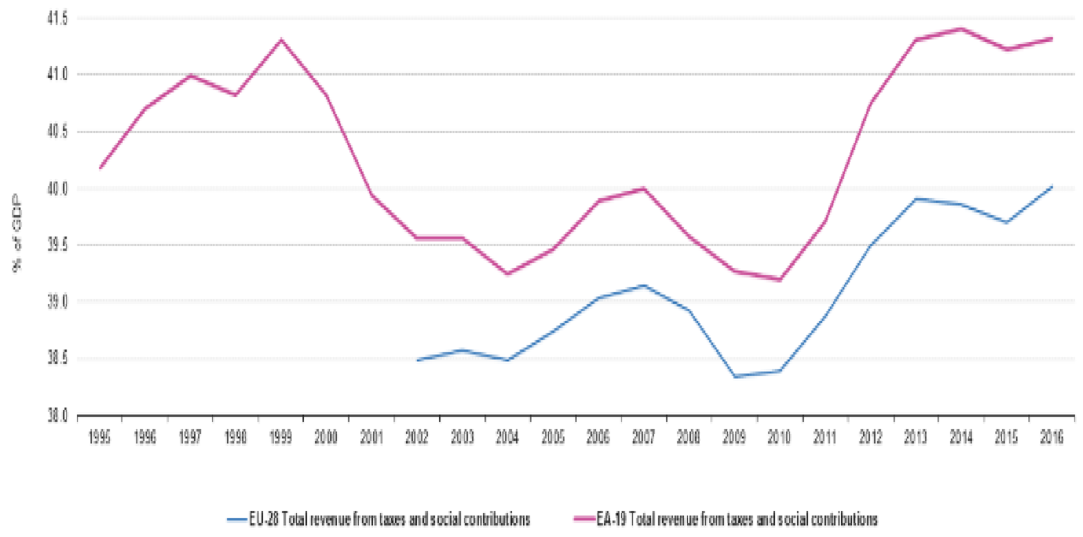
Source: own work.

Analyzing the given ratios, we can conclude that most open economies are: Netherlands, Belgium, Ireland, medium opened are: Germany and Portugal, whilst France, Greece and Spain are those with the lowest ratio. Now, compared to Germany we shall say that Netherlands and Belgium and Ireland are more opened economies.

5.1.3 Fiscal transfers

Fiscal equalization is a term describing the mechanism by which the central government reduces inequalities arising from the unequal distribution of income to lower levels of government. Reducing income differences on lower levels of central government seeks to reduce the differences in consumption. There are two kinds of fiscal equalization: vertical and horizontal. The main instrument of vertical fiscal equalization transfers is in the form of revenue sharing, and of horizontal fiscal equalization grants. The difference between revenue sharing and grants is the fact that the capacity increase revenue from local taxes is not sufficient to fund public services at the lower levels of government and the central government share tax revenues that have a broader tax base in a certain percentage of the lower levels of government. If the revenue sharing basis vertical fiscal gap, the central government may allocate additional grants. The main purpose of awarding grants to the achievement of horizontal fiscal equalization which aims to help poor local governments in financing public services. The grants are based on measurements of fiscal imbalances (which includes calculating the fiscal capacity) to the local units with below-average fiscal capacity.

Graph 11: Total revenues made of taxes and contributions



Source: Eurostat (2017).

Based on the graph above from 2002 until 2017 both EU and Eurozone had increasment of total revenues from taxes and contributions. In 2002 EU had 38.5% and Eurozone 39.6%, while in 2017 respectively 40.2% and 41.4%.

The main reason for vertical fiscal equalization are differences in the income and expenditure allocated from higher levels of government and lower levels of government. Most of the major tax is the responsibility of the central government while increasing responsibility for financing expenditure on the regional and local governments, as well as the size of vertical inequalities often appear on the lower level of government. If local units increase the level of consumption at the same time do not increase the tax rate, the vertical gap is increasing (Lane & Tornell, 1996). Therefore, revenue sharing must be regulated so as to close the fiscal gap due to the low ability of local units to increase their own income or effectively reduce expenditure (consumption). Effective sharing of revenue offset the vertical inequality and the gap between the defined responsibility to lower levels of government expenditure and revenues remitted this exactly what happened to the euro zone countries? Indeed, presented above shows why fiscal transfers are set to be one of the main criteria of OCA, however such transfers are imagined to function in the union formed of the countries of same or at least approximately equal strength, but when the area is consistent out of countries of different power than such transfers might have not serve its purpose (Ngai, 2012). Going back to the EMU, convergences criteria, as its name says, are set with the aim to gain countries with the same or at least approximately same economic strength where such EMU would represent an optimal currency area with the fiscal transfers which would serve their purpose without questioning if the weaker economies live on the budget of strong economies.

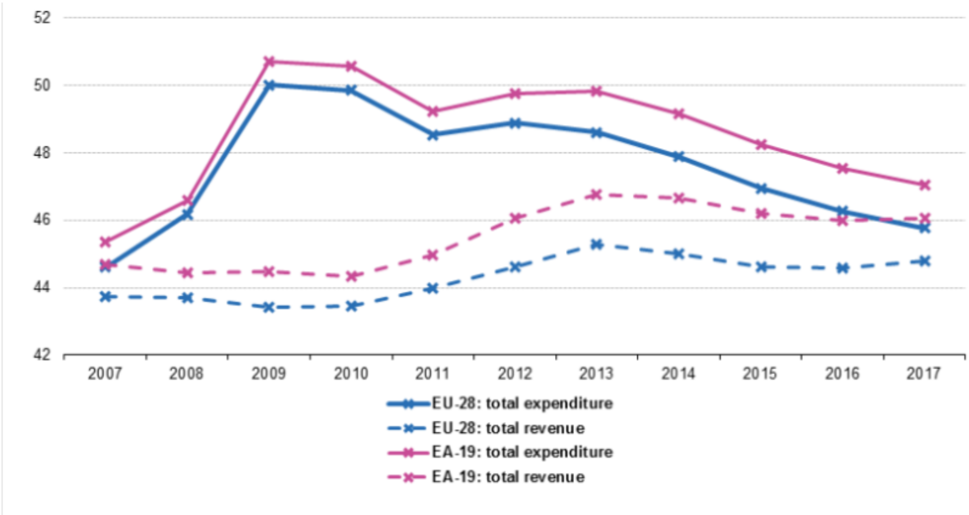
Table 7: Total revenues as percentage of GDP per country

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU													6.1	0.2	-7.3	4.3	4.2	3.6	1.8	3.3
EA													5.9	1.4	-4.3	2.5	4.0	3.0	2.2	2.5
BE		1.4	2.4	4.9	4.4	4.8	2.9	4.0	1.6	5.7	3.9	4.5	5.0	4.1	-2.9	5.5	5.3	4.7	3.3	1.3
BG		-26.6	12.5	43.5	4.9	14.4	8.2	1.4	17.4	16.4	9.6	11.9	26.1	11.5	-11.3	-2.1	5.4	6.0	5.6	1.5
CZ		11.1	4.3	5.3	4.5	8.1	12.5	18.7	3.6	10.5	12.9	11.9	13.3	12.2	-10.5	6.7	8.3	-0.2	-0.6	-3.4
DK		4.9	3.5	4.4	7.0	4.7	1.2	1.9	2.2	6.3	8.5	2.5	3.3	-0.2	-3.8	5.2	2.0	3.9	3.2	8.6
DE		0.5	-0.9	2.8	5.2	1.9	-1.9	0.2	1.4	0.0	1.3	4.7	5.1	2.8	-2.9	1.3	6.0	3.5	2.6	3.6
EE		22.0	19.8	11.5	2.8	9.6	10.4	14.5	11.1	12.6	11.4	22.3	23.1	2.3	-4.7	-1.0	7.3	8.1	5.4	7.5
IE		13.5	19.7	7.4	15.0	15.8	5.0	8.6	10.8	10.2	9.2	14.6	4.7	-9.9	-13.9	-3.2	3.1	3.5	4.3	8.6
EL		:	:	:	:	:	:	:	:	:	:	:	9.5	4.7	-4.1	-1.1	-3.3	-2.0	-5.8	0.2
ES		8.9	3.8	8.1	9.4	9.1	6.9	8.3	7.0	10.2	11.2	10.6	8.4	-8.4	-10.1	5.2	-1.1	0.3	1.2	2.7
FR		6.2	1.9	4.2	6.1	3.6	3.5	1.9	2.6	4.7	5.1	5.5	3.7	2.5	-3.7	3.5	5.7	4.2	3.3	1.9
HR		:	:	:	:	:	:	:	6.1	6.9	8.6	11.8	10.1	8.7	-7.3	-0.9	-3.1	0.1	0.8	-0.7
IT		16.4	10.3	0.4	3.8	2.8	4,9	2.7	3.9	2.4	2.3	7.0	7.3	1.0	-2.5	1.5	2.0	3.2	-0.6	0.6
CY		2.1	4.2	14.7	8.6	17.8	10.3	4.0	9.6	10.7	15.0	10.6	21.6	4.1	-10.1	3.8	2.0	-2.3	-7.1	4.2
LV		9.7	28.1	15.0	8.2	15.0	5.8	5.8	1.7	12.0	18.8	29.5	29.0	6.4	-24.6	-3.4	13.0	11.8	4.0	5.0
LT		27.0	55.0	17.7	2.2	14.4	4.5	9.6	8.4	11.9	16.0	18.1	20.5	14.6	-18.5	-2.5	7.3	5.8	5.1	6.7
LU		3.6	5.4	5.9	11.7	12.9	4.1	5.0	4.8	4.0	11.1	6.4	10.9	4.2	1.4	6.1	7.6	5.6	4.9	5.0
HU		1.2	9.0	3.9	7.9	13.6	13.6	17.7	4.9	10.2	7.4	0.7	20.2	5.9	-13.9	0.3	0.8	2.8	1.3	3.4
MT		-1.6	20.4	-1.2	17.1	16.2	9.6	7.1	1.0	3.8	10.8	5.9	9.6	4.1	1.3	3.4	6.4	5.5	6.8	10.3
NL		2.9	2.0	4.7	9.6	6.9	2.9	2.2	1.7	3.3	4.6	8.6	4.9	5.2	-6.0	4.3	1.1	0.7	2.6	4.0
AT		4.9	2.2.	3.7	3.7	2.9	6.9	0.0	1.6	3.2	2.1	3.7	6.2	5.4	-2.9	2.5	5.0	4.2	3.7	3.1
Pl		16.0	9.9	7.9	2.1	10.2	14.2	-0.7	-10.0	5.3	23.2	13.6	17.5	15.0	-20.6	13.9	6.7	3.3	1.5	4.8
PT		8.7	6.9	8.7	10.1	8.3	4.8	7.1	3.6	1.4	6.7	6.5	6.2	1.7	-6.1	3.3	3.1	-7.1	9.1	1.2
RO		-4.8	10.7	29.5	-2.5	17.4	5.5	5.8	6.8	14.8	33.8	25.4	30.4	8.3	-19.3	4.8	9.8	-0.5	6.2	5.2
SI		0.9	5.0	10.3	8.3	1.6	6.6	8.7	5.5	5.8	6.9	7.1	9.6	6.6	-5.0	2.1	0.6	-1.3	-0.5	3.0
SK		8.8	7.7	4.0	-7.4	11.0	3.6	10.6	13.2	11.9	12.3	8.0	23.1	16.6	-3.5	2.9	6.6	1.6	8.9	5.3
FI		4.0	5.7	6.2	4.6	10.8	-0.2	3.0	0.0	3.2	4.4	5.1	6.4	3.1	-7.2	3.0	8.4	3.0	4.0	1.5
SE		17.7	3.4	2.8	7.4	10.7	-9.1	1.2	5.4	5.2	4.0	5.3	4.3	-3.2	-11.8	16.8	8.0	4.6	3.8	-1.6
UK		8.0	26.3	11.5	9.5	15.4	2.1	0.1	-3.8	9.3	6.2	8.0	4.1	-8.3	-19.1	10.8	4.0	7.7.	-1.3	8.8
IS		:	:	:	18.8	16.0	-10.9	7.1	6.6	13.4	31.9	3.7	9.9	-37.7	-22.2	13.6	8.5	7.4	6.8	20.1
NO		11.8	10.1	-3.8	11.6	23.3	5.2	7.5	-4.3	7.0	17.4	11.5	4.7	6.3	-12.6	18.3	11.0	9.2	-4.6	-6.0
CH		1.1	-4.4	7.5	3.5	12.6	3.5	5.4	-4.8	0.1	3.9	3.7	0.1	10.5	5.6	10.6	16.6	2.3	0.1	2.4
RS		:	:	:	:	:	:	:	:	:	:	19.5	19.3	11.6	-11.8	-0.6	7.5	-4.3	6.4	-0.6

Source: Wacker, Sigl, Fabio & Anderson (2011)

Unique monetary union, no matter what efforts have been made, cannot function without proper fiscal union (McKinnon, 1963; Mamadouh & Wusten, 2010; Ngai, 2012). Without fiscal convergence within the union, eurozone might not be able to resist asymmetric shocks. A lot of authors, including Mundell's as major advocate of eurozone, emphasizes that fiscal transfers are one of the main criteria to achieve the OCA. However, such convergence, thus fiscal transfers within the union lack. The reason why fiscal transfers lack in the union is due to the thinking that more financially stable countries cannot always help the weaker ones (the question is why weaker countries were granted the entrance in the eurozone since it was obvious that such countries won't be able to achieve the range of success as the strong countries of union?) and that fiscal transfers or transfer funds from the stronger countries and regions in the poorer parts of the monetary union, not solve, but only hide the problem. Moreover, temporary transfers can play a stabilizing role and may be required, under strict conditions, if a country hit by a shock. On the other hand, transfers that do not end do not represent the way of adjustment, but rather the opposite, rather the national economies should try to resolve the problem of imbalances through price and wage flexibility, flexibility of the labor force and fiscal transfers.

Graph 12: Total expenditures and total revenues as percentage of GDP (2014)



Source: Eurostat (2017).

On the basis of the presented graph it is obvious that rare countries like Germany (no wonder Germany opposes fiscal transfers to be increased) have balance between total expenditures and total revenues, whereas other countries have discrepancy between these two meaning that either fiscal transfer have to step in or countries shall be forced to seek money on the financial markets increasing their own debt levels.

Aware of the last crisis to repeat, leaders of the euro zone have discussed possible solutions on how to encourage member states to embrace structural reforms whereas the idea of fiscal transfers was born (after sixteen years of existence of euro zone which was called to be an OCA?). To such idea Germany was against ever since such idea was introduced. Hence, it is believed that fiscal transfers would pushed the eurozone step closer towards fiscal union. In a meanwhile, leaders must come up with the solution to increase fiscal transfer but also to avoid misusage of it by the weak economies that could pursue high levels of debt due to its luxurious standards of living.

5.2 Link between different causes of the crisis and non fulfillment of the OCA criteria

There had been made a lot of discussion on this topic. EMU is certainly strategically very important for the world resulting in huge interest of authors world wide to point out on the real causes and consequences of the crisis in order to prevent its further development. Different authors and different conclusions, however non of the authors have seen listed causes to be a cycle in which one cause created another and eventually resulting in the main cause called „non fulfillment of OCA premises “. If we go to the beginning where the causes were listed, a cycle of causes can be made in a following manner: all problems have started in the very beginning when EMU was about to be established, in other words, ground for optimal currency area was not met because member of EMU were too different (Baimbridge, Burkitt & Whyman, 2012). Such differences could have not be neglected because it was not possible for such different countries with different problems on national levels to meet Maastrich criteria in the short period and since Europe was insisting on those criteria many countries sacrificed their national wealth for the well being of EMU (McDonell, 2012). Eventually lack of macroeconomic coordination brought many economies to neglect their low economic growth and their low competitiveness what in the era of crisis escalated and enabled those countries to overcome crisis.

5.2.1 Heterogenity of EMU's countries

In the very beginning the main OCA premise „only similar economies would experience benefits of OCA and eventually become an optimal currency area “was not met. Due to heterogeneity of the countries, core countries in a fear of collapse which can be pulled into abyss by weaker economies, insisted on strict criteria – so called Maastrich Treaty criteria – which must be fulfilled in order to approach to EMU.

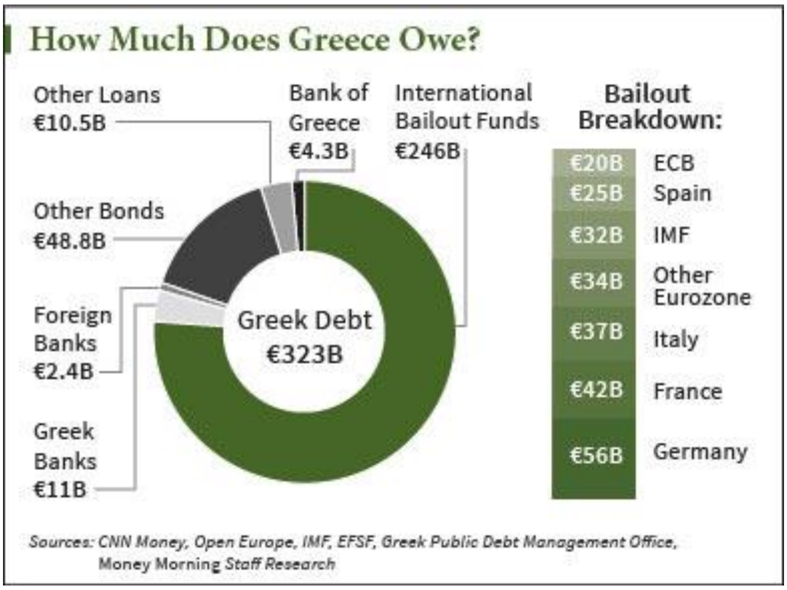
The **heterogeneity of the countries** forming the EMU relating to the differences in the overall level of economic development, economic growth performance and the mechanism of economy functioning is hardly considered OCA. Radović (2009) and Rodrik (1998) point out on to difficulty of implementing a unique currency policy in view of growing heterogeneity within the enlarged monetary union due to the heterogeneous economic structures of new EU member states. The countries creating the monetary union should be characterized by a similar level of economic development, similar economic structures and similar tendency to inflation and similarity of inflation rates, convergent levels of budget deficit and public debt in relation to GDP and similar legal system.

5.2.2 "Self-centered" Europe

Even though the main idea behind the creation of the EU and EMU was to create a one single market, possibly with one single currency diminishing the exchange risk and boarders which represented an obstacle to the factor mobility, whereas Europe would appear as one strong community protecting the interests of all members, during this crisis we saw a completely opposite face of the EU and EMU. Core states participate only when it suits their self-interest, so it means that financial crisis is understood to be national regardless of all mentioned above forgetting the philosophy of the EU (Detlef, 2012). For instance, when EU member states discussed several possible solutions for Greece where the first possible solution was to let Greece default on its debt this was opposed by member states whose banks held Greek debt (Germany, UK and others) because they would lose money. When the second possible solution was proposed by France, that is to arrange a bailout for Greece from the ECB, the EU, or the IMF. Germany was concerned that a bailout would further undermine the credibility of the Euro and signal the failure of the great 'economic monetary union experiment where Germany as the major proponent of the EU has a lot in steaks.

After all, Germany and France, as the largest holders of Greek bonds, have the most to lose financially if Greek bonds default and weak countries like it begin to exit the shared currency.

Scheme 3: Structure of the Greece's government debt



Source: Clarke (2015).

If we take a look at the capital structure of the banks which have lent money to the Greece government, we will see that major countries such as Germany, France, Spain and Netherlands are those who have the ownership in the banks which have lent the money to the government.

Table 8: European banks' exposure to Greek sovereign debt

Bank	Country	Greece exposure/ core capital
Postbank	Germany	35,55%
Commerzbank	Germany	19,02%
BPI	Portugal	25,51%
Intesa	Italy	2,97%
BPCE	France	3,75%
SocGen	France	9,49%
Credit Agricole	France	2,1%
Unicredit	Italy	2,05%
Erste	Austria	6,97%
ING bank	Holland	7,87%
BES	Portugal	4,69%
LBBW	Germany	10,07%
BCP	Portugal	11,7%
HSH Nordbank	Germany	4,58%
Deutsche Bank	Germany	4,42%
BNP Paribas	France	7,84%

HSBC	UK	0,95%
Dexia	Belgium	21,6%
RBS	UK	4,1%
Rabobank	Holland	1,33%

Source: T. Wacker, C. Sigl, Fabio T. & J. Anderson (2011).

According to the BIS data Germany has a highest exposure to the Greece's debt, where German banks' foreign claims on Greece reached 32 billion in March 2010, dropped to as low as 3.9 billion at the end of 2012 and went back to around 10 billion in June 2014. Furthermore, euro area banks' exposures to Greece amounted to 96.6 million for Austria, 29.4 million for Belgium, 1368 million for France, 10203 million for Germany, 55.9 million for Ireland, 800 million for Italy, 923 million for the Netherlands, 263 million for Portugal and 301 million for Spain in the 2014. Overall, from the scheme presented above we can see that major lenders come from core countries, so no wonder EU pressured Greece government to take bailout funds, regardless of the bad conditions under which they got that money, since the aim of that money were to service the debt of those lenders. A lot of speculations were made regarding the money which has been pumped in Greece and the reasons why this money was pumped in the first place, where it is said that Greeks didn't see a cent of received help since all that money went to the service of the outstanding debt into those banks or other lenders such as ECB, IMF, so one way or around the 'bail-out' money coming to Greece since 2010 was and will be paid directly to its lenders. More than 80 per cent of the bailout funds went to the country's banks and foreign creditors, mostly French and German banks financing the financial sector but not the Greek state. This is probably the reason of the Greeks anger since Union didn't act as the rescuer of the Greece rather as the rescuer of the core countries' banks. So, now the peripheral countries as well as potential members could ask themselves what is the point of being the part of the EU when the core countries create environment which seems to suit only them?

5.2.3 Non fulfillment of the Maastricht Treaty criteria

There is a group of authors that claim that the non fulfillment of the Maastricht convergence criteria (rules on budget deficit levels, debt levels, low inflation, and interest rates close to the EU average) and Stability and Growth criteria which were set to gain OCA under the roof of euro, were the cause of the crisis because they might have been unachievable for most of the European peripheral countries which are strategically important for EMU (Koureta & Vlamis, 2010).

Self - centered Europe set too ambitiously criterias due to the differences between European countries. Countries made a lot of effort to fulfill it without understanding its real purpose – make a ground for OCA premises to work out- nor real picture how to maintain such criteria and, moreover, putting too much effort on gaining the price stability and ignoring the need for free transfer of capital and labor, or fiscal transfers as OCA criteria.

Accordingly, the Maastricht convergence criteria were introduced as restrictions to:

- Inflation rates (an inflation rate no more than 1.5 percentage points above the average of the three countries with the lowest inflation rates);
- Interest rates (nominal long-term interest rates not exceeding by more than 2 percentage points those for the three countries with the lowest inflation rates);
- Exchange rates (no exchange rate realignment for at least two years);
- Government finance (a government budget deficit not in excess of 3 percent of each country's GDP and a gross debt to GDP ratio that does not exceed 60 percent).

The first three convergence criteria are designed to ensure monetary stability by supporting a fixed exchange rate regime among member countries, whilst the stability of euro was set by the last two criteria. These criteria were designed to ensure that a new economic force, so called euro area, could appear on the worlds market with the single currency as stable, sound and sustainable area reflecting economic policy convergence and a resilience to economic shocks. Thus, purpose of setting Maastricht criteria was to ensure price stability within the euro zone. However, only few countries met all of the conditions prior to the accession to the EMU. In 1998, the Council of ministers considered 11 countries to have satisfied the Maastricht Convergence criteria, with the notable exception of Greece, which in 2000 was 13 subsequently granted admission to the EMU, effective on January 1, 2001. However, the truth is that only France, Ireland, Luxembourg, Portugal and Finland satisfied the debt-to-GDP reference ratio of 60%. Based on the rationale of OCA, the EMU used the five Maastricht convergence criteria, the satisfaction of which was expected to produce a stable macroeconomic environment and guaranteed membership in an economically integrated Europe (Afxentiou, 2000). However, if the countries failed to fulfill the Maastricht Treaty criteria EMU could hardly be considered OCA even from the strictly macroeconomic stability framework.

5.2.4 Lack of macroeconomic coordination

16 fiscal policies and one monetary policy led to absence on real adjustment mechanism in place to dela with crisis (De Grauwe, 2010). Fiscal stabilization and monetary stabilization in core countries were achieved independetly, however peripheral countries couldn't have done the same due to their inability to make important desicion about wage agreements, budgetery policies, social policies etc nationaly, because they were too focused on Maastricht Treaty criteria and therefore, their competetivness and development couldn't have been seen. Low economic growth and competetivness were the result of: overregulating of economies (including labour market), rigid wages and prices, excessively developed social policy, high taxation burden for population and enterprises, too big budgets which should be reduced while reducing taxes and expenditures at the same time.

Therefore, the coordination of the policies would bring: at increased flexibility of markets, prices and wages, lower taxation and reduced role of the state in economy.

5.2.5 Conclusion on the non fulfillment of the OCA premises

All above has the same denominator – OCA premises. Namely, due to failuers of all mentioned, it made harder for OCA premises to succeed in EMU, whose achievement is crucial for monetary union to be an OCA and thus to resist the crisis which could jeopridize the existance of monetary union. So, **the failure to meet OCA** premises making EMU to be „non OCA" and therefore not able to respond to asymmetrical shock (Baimbridge, Burkitt & Whyman, 2012) is largely seen to be the major reason for the crisis deeply hitting the EMU countries (Brkić & Kotarski, 2011; Petreski, 2007).

Hence, the main reason for that is that eurozone turned not to be the optimal currency area. Namely, OCA is one that can simultaneously achieve full employment, low inflation and balance of payments. If the Member is unable to achieve these three objectives simultaneously, then for that country we cannot say that it represents an OCA. OCA has several criteria, which must be fulfilled in order to see an area as OCA. These criteria are as follows:

- production factor mobility – labor mobility, capital mobility;
- wage flexibility;
- trade openness;
- fiscal integration;
- income correlation;
- flexibility of market;
- price flexibility;

When these criteria are fulfilled, then the optimal currency area has not any problems facing the asymmetrical shocks. Moreover, there are several ways in which combination of the OCA criteria can offset the asymmetrical shocks. For instance, Mundell (1961) explained it on the very simple example of the East and West Canada, where East was producing forestry products and West was producing cars. When due to the asymmetrical shock demand for cars has dropped and it increased for the forestry products, result was in the increased price levels in the Eats and lowered prices in the West. Such problem in the monetary union can be solved by mobility of the factor production: if capital and labor can be shifted form the West to the East balance will be restored making price stability and employment balanced. Furruter (2012), Brkić and Kotarski (2011) advocate that the euro zone in general failed to achieve the

OCA basic criteria. Indeed, it fulfilled only two criteria regarding the OCA: trade openness and production diversification. Labor mobility and fiscal transfers were not achieved. Furruter (2012) based it's analysis on the Paul Krugmans case study "Is Europe an optimal currency area" by imposing the cost benefit analysis with the result suggesting that EMU members are open to trade and have high degree of capital mobility whereas the labour mobility lacks due to the language and cultural barriers, and when it comes to the fiscal transfers they lack due to the absence of the "*budgetary capabilities to transfer support payments from tax earnings to the single state member".* Free movement of capital is an essential condition for the attainment of an EMU because it enables that EMU indeed functions as one market with no geographic or any other barriers (Weiler & Kocjan, 2004). However, the absence free movement of capital: personal capital movements (through gifts, inheritance, or movements resulting from the change of a person's residence), on the purchase or sale of real estate, on the purchase or sale of securities, and on short or medium term credit connected with commercial transactions, which is enabled by the First Capital Directive 921/60 and the Second Capital Directive 63/21 (Weiler & Kocjan, 2004) could be the reason of crisis.

Namely, eurozone countries while constructing their policy have adopted the fixed exchange rate and capital mobility giving up the monetary autonomy (as the two out of three chooses imposed by so called "policy trilemma"), in other words members gave up the ability to use interest rate policy to target domestic economic activity, therefore to stabilize business cycle in periods of recession by decreasing interest rates and at the pick of the business cycle ability to increase interest rate in order to control inflation. This choice made a lot of problems to the eurozone members during the last financial crisis facing a really hard time to deal with it whereas free capital mobility, thus the ability to seek funds out of the national boarders made such mess. Since all eurozone members forgo monetary autonomy, therefore, when the country like Spain faced high unemployment, decreasing export and low tax revenues, state was not able to use interest rate policy in order to influence the unemployment, nor it was able to devaluate its currency in order to increase export from which government was financing its expenditures. Rodrik (1998) claims that countries which have dropped capital controls and opened themselves to international capital markets have faced greater risk without compensating benefits in the form of higher economic growth and the free movement of capital is the reason why economic crises have become more frequent in both developing and advanced economies. Therefore, eurozone with unique monetary policy was not able to resist the crisis because the benefits from letting go the ability to deal with the shocks using instrument of national monetary policy hadn't been compensated by the benefits of OCA (ability to use OCA criteria to overcome the crisis and preventing it from holding on) due to EMU's failure to achieve the OCA criteria.

Fiscal transfers are important as well for the wellbeing of whole euro zone. Namely, it is sin qua non for the budgetary and tax responsibilities transfer onto union's authorities (De Grauwe, 2010), because in that way eurozone will ensure the support available in any moment for the countries experiencing the crisis with no need of getting out to the financial markets and deepening its agony by lending money with the high capital price. Hence, the non-fulfillment of the OCA criteria might have been the most relevant cause of the crisis (Baimbridge, 2012).

CONCLUSION

Europe always was the prestige continent where the idea of united Europe has always existed. Finally, those ideas came true and we say creation of EMU and EU. During its creation the idea was to create a strong economic force which will step on the wordl scene. Everything went smoothly until the 2008. With the 2008 came many doubts about the creation and further existance of these unions. However, even though it is still breathing, union can fell apart at any momen due to many incosistencies and failures made by reationd and during the lufe of union. Since it is in the best intreset of all European, including us, periphery country which tends to become part of it, to mantaine this community. But if we wish to stay, or rather become world forces many changes must be done. During this work we have discussed causes of almost departure of eurozone while now we will make conclusion about the actions which had been done so far.

Bearing in mind how crisis has begun, thus it origins firstly we suggest that eurozone should be a common financial regulations, and supervision of financial institutions for the whole euro area, including a common deposit insurance, as well as a joint scheme to bail out banks. It's not an easy task. And it will take time to get it all into practice. However, short-term alternative, allowing Greece (and perhaps some others) that go awry and to secede, would have lasting and serious consequences. Countries on the periphery would be forced to pay a huge premium to investors who would take on the risk return of the old currencies. A eurozone would become extremely vulnerable, just like any system of fixed exchange rate in that position in the history.

Robert Mundell warned durong the 60's that giving up national currencies highlights the need for three alternative mechanisms for regional adaptation:

- intra fiscal transfers,
- the possibility of smooth migration within the Union,
- the labor market resistant to shocks and blows.

Unfortunately, these mechanisms when forming the eurozone no one paid attention to. When designing institutional framework for the euro no one paid attention to the arguments Mundell and his supporters. And so the SPG, as well as an article about the failure to provide financial assistance to needy members, ignored the crucial economic theory. Regional balance on the current account was explained as a result of the i behavior of market players, and not, for example, as a result of inflation the real estate market in Spain, Ireland and etc.. Only since the 2009, it became clear that the deficits within the Union, which are piled up ten years ago, are no longer sustainable. Now, because of monetary union, the adjustment must be done by changing the price on the domestic market in comparison to the trade value of goods or depreciation of the real exchange rate. And in some countries in the European periphery the process will be long. It is difficult, however, to imagine that market participants have the patience for that. Therefore, support for the euro requires a strong and credible crisis management, whatever it takes. However, the continuous crisis further underscores another flaw in the design, which has not been acknowledged in Mundell's argument: the challenges arising from the integration of financial markets. Under normal circumstances unrestricted cross-border capital flows include all the expected benefits and advantages in terms of improved resource allocation and higher productivity. But during the crisis, some governments and state banks share the same fate, and reappears affection for his homeland acting selfishly while making desicions regarding countries suffering serious consequrnces. Raising national fencing has become the last refuge of heads of state and monetary conditions again began to establish according to national borders what was shown during the last financial crisis with the behaviour of core countries.

Even though the main idea behind the creation of the EU and EMU was to create a one single market, possibly with one single currency, diminishing the exchange risk and boarders which represented an obstacle to the factor mobility, whereas Europe would appear as one strong community protecting the interests of all members, during this crisis we saw a completely opposite face of the EU and EMU and its institutions with a conclusion that sovereign states participate only when it suits their self-interest.

The question is can such behaviour be avoided or weather all countries will be able to share same ideology will be like such impelemneted. We have to bear in mind that as long as the differences among countries exists, with division on core and peripheral countries, or weak and strong economies, this ideology won't be followed nor its policies will be implemented suggesting that SGP and Maastricht Treaty criteria weren't properly set or even if its criteria were set in a right way its fulfillment should have been strictly monitored. That fact confirms difficulty of implementing a unique currency policy in view or growing heterogeneity within the enlarged monetary union due to the heterogeneous economic structures of new EU member states.

Moreover, non political, strategical or any other but economic goals should be hidden behind the set criteria. It is obvious that Greece, which has never fullfilled the all criteria, was wellcomed into euro zone due to its strategic position as well as for some other goals which core countries had in mind. This is not the way to create a strong economic world force, because its flaws will eventually come to the surfice with the serious consequnces as it did during the crisis. The new question which is raised during the crisis is weather the monetary union can survuve without a fiscal union. A lot of economist do agree that these two cannot be appart due to the fact that unique monetary policy sets limits on a creation and implementation of the fiscal policies, so for further analysis I recommend to question if the existance of unique fiscal union would enhance the economic outlook of euro zone and would it be sustainable to have two major economic policies as uniques one?

Going back to the Frankels's graphical illustration according to which the bigger the degree of openness of the economy, the higher the correlation of income among the potential members of the Union making benefits of OCA higher as well as to the thought that with an increase of integration, thus openness, the benefits of being part of OCA will increase as well, additionally meaning that less flexibility, thus price and wage flexibility or symmetry, income correlation will be needed in order to experience and, in the end, to Mundell's criteria of an OCA, we might suggest following:

- According to made analysis regarding the openness of the eurozone economies we shall conclude that comparing it with the Germany, only three countries had opened economies suggesting that these economies are opened to the international flows. Comparing the trade openness of analyzed countries for time period of 1999 until 2014 we concluded that all of it have become more and more opened, suggesting that this OCA criteria was fulfilled.
- The value of export within the Member States has increased for Netherlands, Spain and Portugal, while other countries have faced slight decrease during the period of euro crisis. But comparing it with the years before 2008 these countries exports and imports within the Member States was increasing. Therefore, we might say that the intra trade in EU has increased over the years, comparing to the 1999 when the value of the intra trade was pretty low but until 2008 when it started to decrease. However, amount of overall export and import happens within the EU, thus countries have traded goods more with the Member States rather than with the countries outside the EU, with a few exceptions such like Greece. Therefore, even though the increase is not that high it still exists, suggesting that this criterion of OCA is fulfilled, however, the relationship is not strong so some, maybe, political games can easily turn this into decrease and non-fulfillment of this criteria. Of course, mentioning the exception such as Greece it is obvious that this country unfortunately didn't experienced the benefits of being part of OCA.
- Labor mobility lacked. Eurozone reported really high levels of unemployment whereas labor mobility as instrument which should have offset the consequences of asymmetric shocks lacked. In general, labor mobility within the eurozone is limited due to the different languages, cultures and cost of livings. Now, if the major Mundell's criteria were not fulfilled that the eurozone, indeed, doesn't represent the OCA, which therefore will be able to handle the upcoming shocks.

- Fiscal transfers as well as one of the major Mundell's criteria of the OCA wasn't fulfilled due to inability of system to transfer money collected from taxes into single state. Fiscal transfers are important as well for the wellbeing of whole eurozone. Namely, it is sin qua non for the budgetary and tax responsibilities transfer onto union's authorities, because in that way eurozone will ensure the support available in any moment for the countries experincing the crisis with no need of getting out to the financial markets and lending money with the high capital price.

So according to these remarks we shall conclude that eurozone doesn't fulfill all the major OCA criteria (trade openness and intra trade were fulfilled whereas labor mobility and fiscal transfers lack) but if we wish to see euro zone as strong and sustainable in the long run therefore capable to overcome upcoming shocks institutions must work on the way how to make these criteria to come true, otherwise, the existence of emu the way it is now, will be jeopardized seriously.

Overall, non-fulfilment of the OCA criteria, unmatched monetary and fiscal policy, inability of EU institutions to respond in the alarming situation, excessive borrowing, reliance of the countries on the help of ECB and IMF, weak basic upon the establishment of the euro zone, have brought euro zone on the edge of its existence.

REFERENCE LIST

1. Afxentiou, P. (2000). Convergence, the Maastricht Criteria and Their Benefits. *International Economics*, *53*(4), 437-448.
2. Apergis, N. & Cooray, A. (2013). New Evidence on the Remedies of the Greek Sovereign Debt Problem. *Hellenic Observatory Papers on Greece and Southeast Europe, GreeSE Paper*, (79).
3. Baldwin, R. (2006). The Euro’s Trade Effect. (*ECB) Working Paper* (No 594), European Central Bank
4. Baimbridg, M., Burkitt, B. & Whyman, P. (2012). The Eurozone as a Flawed Currency Area. *The Political Quartely*, *83(1)*, 96 - 107.
5. Berglöf, E., Korniyenko, Y., Plekhanov, A. & Zettelmeyer, J. (2009). Understanding the crisis in emerging Europe. *(EBRD) Working paper*, *109*, European Central Bank for reconstruction and development
6. Bergsten, C. F. (2012). Why the Euro will survive? *Foreign Affairs*, *91(5)*, 16-22.
7. Blankenburg S., King L., Konzelmann, S. & Wilkinson, F. (2013). Prospects for the eurozone. *Cambridge Journal of Economics*, *37*, 463–477.
8. Bordo, M. & James, H. (2013). The European crisis in the context of the history of previous financial crises. *National Bureau of Economic Research Working Paper, 19112*, Cambridge
9. Brkić, L. & Kotarski, K. (2011). Managing crisis in the eurozone. *Politička misao, 47(5)*, 7-26.
10. Cabral, F. (2013). The euro crisis and Portugal's dilemma. ZBW – Leibniz *Information Centre for Economics.* Obtained 20 September 2015 from file:///C:/Users/acer/Downloads/004-032-Forum.pdf
11. Clarke, S. & Daley, C. (2010). The Eurozone crisis. *CIVITAS*, 8-9
12. Clarke, T. (2015). How much does Greece owe? *Money morning*, 2.
13. Committee for the study of economic and monetary union. (1989). *Report on economic and monetary union in the European Community.* Luxemburg: Office for Official Publications of the EC.
14. Corsetti, G. (2012). *Austerity too Much of a Good Thing. CEPR* (pp 1-10).
15. Detlef, A. (2012, April 16). Causes of the Sovereign Debt Crisis. *E-International Relations.* Obtained January 31, 2016 from http://www.e-ir.info/2012/04/16/causes-of-the-sovereign-debt-crisis/
16. Eichengreen, B. (1993). European Monetary Unification. *Journal of Economic Literature, 31(3)*, 1321–57.
17. European Commission. (2015). *One currency for one Europe: The road to the euro*. Obtained August 15, 2015 from http://ec.europa.eu/economy_finance/publications/pages/publication6730_en.pdf

18. Featherstone, K. (2011). The Greek sovereign debt crisis and EMU: A failing state in a skewed regime. *Journal of Common Market Studies, 49(2),* 193-217.
19. Frankel, J. (2013). The Future of the Currency Union. *HKS Working Paper RWP13-015* (6)
20. Furruter, M. (2012). The Eurozone: An Optimal Currency Area? *IFIER Papers, ISSN 2226-0080,* 3-6
21. Glavan, B. *(2004).* The failure of OCA theory. *The quarterly journal of Austrian economics, 7(2)*, 29-46.
22. De Grauwe, P. & Mongelli, F.P. (2005). Endogeneities of Optimum Currency Areas, (ECB). *Working Paper Series*, No. 468.
23. De Grauwe, P. (2010a). Crisis in the Eurozone and how to deal with it. *CEPS*, *44(3),* 132-141.
24. De Grauwe, P. (2010). The financial crisis and the future of the eurozone. *Bruges Economic Policy Briefings, 21*, 1-17.
25. Development of total expenditure and total revenue, Eurostat. (year). Title on the website. Obtained on 29 January 2017 from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Development_of_total_expenditure_and_total_revenue,_2007%E2%80%932017_(%C2%B9)_(%25_of_GDP)_2018-10-22.png
26. Euro area unemployment at 10, 1 % (2016) Eurostat. Obtained on 11 November 2016 from https://ec.europa.eu/eurostat/documents/2995521/7601593/3-31082016-AP-EN.pdf/c416f4ad-a1b4-4d29-b0f4-2adc41d4c951
27. Evolution of intra EU-28 export of goods, Eurostat. Obtained on 12 January 2017 from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Evolution_of_intra_EU-28_export_of_goods,_January_2002_-July_2018_(EUR_billion).png
28. General government gross debt (2017). General government gross debit, Eurostat. Obtained on July 2017 from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tipsgo10&language=en
29. Intra EU trade in goods, Eurostat. Obtained on 12 January 2017 from https://ec.europa.eu/eurostat/statistics-explained/index.php/Intra-EU_trade_in_goods_-_recent_trends#Evolution_of_intra-EU_trade_in_goods:_2002-2018
30. Jurak, J. (2007). *The EMU and the Theory of Optimum Currency Areas.* Obtained March 14, 2016 from https://vskp.vse.cz/id/6289
31. Kouretas, G. P. & Vlamis, P. (2010) The Greek Crisis: Causes and Implications. *Panoeconomicus, 57(4),* 391-404.
32. Krugman, P. (1988) Financing versus forgiving a debt overhang. (*NBER) Working Paper, 2486.*

33. Lane, P. & Tornell, A. (1996). Power, growth, and the voracity effect. *Journal of Economic Growth 1(2),* 213-241.
34. Lane, P. (2006). The Real Effects of European Monetary Union. *Journal of Economic perspectives, 20,* 47-66
35. Lapavitsas, C., Kaltenbrunner, A., Lindo, D., Michell, J., Painceira, J. P., Pires, E., Powell, J., Stenfors, A. & Teles, N. (2010). Eurozone crisis: beggar thyself and thy neighbour. *Journal of Balkan and Near Eastern Studies, 12(4),* 321-373.
36. Lastra, R. M. & Louis, J. V. (2013). European Economic and Monetary Union: History, Trends, and Prospects. *Queen Mary University of London, School of Law Legal Studies Research Paper, 136,* 1-151.
37. Macdougall, D. (1977). Comission of the European communities. *Report of the study group on the role of public finance in European integration*. Retrieved April, 2015 from https://www.cvce.eu/content/publication/2012/5/31/c475e949-ed28-490b-81ae-a33ce9860d09/publishable_en.pdf
38. McKinnon, R. I. (1963). Optimum Currency Areas. *American Economic Review, 53(4),* 717-725.
39. McDonell, T. (2012, May 14). European Monetary Union: Doomed to fail or just another stepping stone? *E-revir.* Obtained January 28, 2016 from http://www.progressive-economy.ie/2012/05/european-monetary-union-doomed-to-fail.html
40. Makrydakisa, S., Tzavalisb, E. & Balfoussiasa, A. (1999). Policy regime changes and the long-run sustainability of fiscal policy: An application to Greece. *Economic Modelling, 16(1),* 71-86.
41. Mamadouh, V. & Wusten, H. (2010). Financial, monetary and governance crisis: an outlook on the eurozone. *Tijdschrift voor Economische en Sociale Geografie, 102(1),* 111-118.
42. Matheron, J., Mojon, B. & Sahun, J.-G. (2012). The sovereign debt crisis and monetary policy. *Financial Stability Review, 16,* 155-167.
43. Micco, A., Stein, E., & Ordoñez, G. (2003). The Currency Union Effect on Trade: Early Evidence from EMU. *Economic Policy, 18(37),* 315-56.
44. Mongelli, F. P (2002). "New" Views on the Optimum Currency Area Theory: What is EMU Telling US? *European Central Bank, Working Paper, 138*.
45. Mongelli, F. P. & Vega J. L. (2006). What effects is EMU having on the euro area and its member countries? *Working Paper Series, 599*.
46. Mongelli, F. P. (2008). European Economic and Monetary Integration, and the Optimum Currency Area Theory. European Commission. *Economic papers, 302*.
47. Mundell, R. (1961). A theory of Optimum Currency Areas. *The American economic review.*
48. Ngai, V. (2012). *Stability and Growth Pact and fiscal discipline in Eurozone*. Pennsylvania. *University of Pennsylvania, Working paper*, 12-10.

49. Pelkmans, J. (2014). Designing a Genuine EMU: Which “Unions” for EU and Eurozone? *Bruges Economic Policy Briefings, 34*.
50. Radović, I. (2009). Challenges for Monetary Policy in the Enlarged European Monetary Union. *Panoeconomicus, 1*, 95-110.
51. Rodrigues, J. M. (2012). Maping future scenario for the Eurozone. *Friedrich Ebert Stiftung*. Obtained on May 26, 2015 from http://library.fes.de/pdf-files/id/ipa/09194.pdf
52. Rodrik, D. (1998): Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy, 106(5)*, 997-1032.
53. Rose, A. (2000). One Money, One Market: The Effect of Common Currencies on Trade. *Economic Policy, 30*, 9-45.
54. Rusuhuzwa, T. & Masson, P. (2012). Design and Implementation of a Common Currency Area in the East African Community. Department of Economics, *University of Toronto, Working Paper, No.451*
55. Smaghi, L. B. & Casini C. (2000). Monetary and fiscal policy co-operation: Institutions and procedures in EMU. *Journal of Common Market Studies, 38(3)*, 91-375.
56. Sonsengard, M. (2013). Should Greece stay or leave euro zone? *The case of the financial crisis in Greece.* As: Norwegian University of Life Science.
57. Stanković, M. (2013). The advantages of being a member of the European monetary union and its influence on trade in the eurozone. *Škola biznisa, 2*, 30-46.
58. Tavlas, G. (2004). Benefits and costs of entering the eurozone. *Cato Journal, 24(1-2)*, 89-106.
59. Total revenue from taxes and social contributions, Eurostat. Obtained on 12 February 2017 from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Total_revenue_from_taxes_and_social_contributions,_EU-28_and_EA-19,%25_of_GDP,_1995-2016.png
60. Total unemployment rate, Eurostat. Obtained on 17 November 2016 from https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00203&plugin=1
61. Tsoukalis, L. (2010). We can't go on like this: Greek debt crisis and the euro. *ELIAMEP Special Paper*, 1-4.
62. Varoufakis, Y. (2011). *The Global Minotaur*. London: Zed books.
63. Velis, O. J. (1995). *The Collapse of the EMS: Symptomatic of a Doomed EMU?* Retrieved March 20, 2016 from http://aei.pitt.edu/7027/.
64. Wacker, T., Sigl, C., Fabio, R.J.T. & Anderson, J. (2011). The debt crisis. *Wealth management research, 2.*
65. Watt, A. (2008). *The economic and financial crisis in Europe: addressing the causes and the repercussions.* Place: European Trade Union Institute.

66. Weiler, J. H. H. & Kocjan, M. (2004). *Economic and monetary union*. Place: NYU: School of law.
67. Wiggins, R., Piontek, T. & Metrick, A. (2014). *The Lehman's Brothers Bankrupcy A: Overview*. Place: Yale School of Management.
68. Zika, J. (2006). Cost and benefits of monetary union. *European Economic Policies Term paper*. Obtained on February 4, 2016, from http://janzika.com/en/wp-content/uploads/2006/03/Monetary_union.pdf

APPENDIX

Appendix 1: Povzetek (Summary in Slovene language)

Evropa je bila vedno prestižna celina, kjer je ideja o združeni Evropi vedno obstajala. Končno se je ta ideja uresničila in ustanovila sta se EMU in EU. V času njihovega nastanka je bila ideja ustvariti močno gospodarsko silo, ki bo stopila na svetovno sceno. Vse je potekalo gladko do leta 2008. Kljub temu, da še vedno živi pa lahko zaradi številnih neskladij in napak unija v vsakem trenutku razpade. Lahko rečemo, da je v interesu vseh evropskih držav, vključno s tistimi na obrobju, ki stremijo k temu, da del Skupnosti šele postanejo, da se unija ohrani. Toda če želimo ostati ali bolje postati svetovna sila, bo potrebno še veliko sprememb. Med našim delom smo razpravljali o vzrokih za bližajoče se odhode iz evro območja in sklepih o dosedanjih ukrepih.

Upoštevajoč, kako se je kriza začela, izhajamo iz tega, da bi morala veljati za evro-območje skupna finančna ureditev, nadzor finančnih institucij v celotnem evro-območju, vključno s skupnim zavarovanjem depozitov, in skupna shema za reševanje bank. To ni lahka naloga. Potreben bo čas, da se to uresniči v praksi. Robert Mundell je v šestdesetih letih opozoril, da opustitev nacionalnih valut izpostavlja potrebo po treh alternativnih mehanizmih za regionalno prilagoditev:

- intra fiskalni transferji,
- možnost nemotene migracije v Uniji,
- odpornost trga dela na pretrese in udarce.

Na žalost tem mehanizmom pri oblikovanju evro-območja nihče ni posvečal pozornosti. Čeprav je bila osnovna zamisel pri ustanovitvi EU in EMU vzpostavitev enotnega trga, po možnosti z eno samo valuto, katera bi zmanjšala valutno tveganje in brez meja katere ovirajo mobilnost. Tako bi se Evropa pojavila kot močna skupnost, ki ščiti interese vseh članic. V tej krizi smo videli popolnoma nasprotno podobo EU in EMU ter njenih institucij, ko suverene države sodelujejo le, če to ustreza njihovemu lastnemu interesu. Vprašanje je, ali se je takšnemu vedenju mogoče izogniti in bodo prav vse države delile implementirano ideologijo. Ne smemo pozabiti, dokler bodo obstajale razlike med državami, z delitvijo na osrednje in obrobne države, šibke in močne ekonomije, se te ideologije ne bodo upoštevale in se njene politike ne bodo izvajale, kar kaže, da merila Pakta stabilnosti in rasti in maastrichtske pogodbe niso bili pravilno postavljeni. Če pa so bila pravilno postavljena, njihovo izvajanje ni bilo dobro in zadostno nadzorovano. To dejstvo potrjujejo težave implementacije skupne valutne politike z obzirom na naraščajoče heterogenosti znotraj razširjene monetarne unije zaradi heterogenih gospodarskih struktur novih držav članic EU. Glede na te pripombe lahko sklenemo, da evro-območje ne izpolnjuje vseh glavnih meril OCA (trgovinska odprtost in intra trgovina sta bili izpolnjeni, mobilnost delovne sile in davčni transferji pa ne). Če želimo, da bi bilo evro-območje dolgoročno stabilno, zmožno premagovanja prihajajočih ovir, se morajo institucije osredotočiti na uresničevanje postavljenih kriterijev, v nasprotnem bo obstoj EMU resno ogrožen.

Na splošno, neizpolnjevanje meril OCA, neizravnane monetarne in fiskalne politike, nezmožnost institucij EU, da se odzovejo na alarmantne situacije, prekomerno zadolževanje, zanašanje držav članic na pomoč ECB in MDS kot „izhoda v sili“ in šibki temelji pri ustanovitvi so evro-območja, so tega pripeljali na rob svojega obstoja