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CURRENCY UNION AND COMMENTS ON MACROECONOMIC INDICATORS OF EUROPEAN ECONOMIES AFTER EURO CRISIS

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Abstract

With the introduction of the euro as the common currency, macroeconomic developments have led to the rapid expansion of the economic problems among the economies of the European country. The high level of integration and the increase in the level of influence resulted in a problem that would arise in a European country, and in a short time, also in other countries. Starting from the first half of 2010, especially the economic problems in Greece, extended to the other European countries in a short period. Countries such as Ireland, Portugal, Spain, Italy and Belgium faced serious economic problems after the debt crisis of Greece economy.

The crisis is largely taken as a problem connected to the common currency. Therefore, the fact that countries with different economic conditions use the same currency creates an important discussions in the literature.

In our study, we focus on monetary union and the process that bring the Eurozone area to the debt and economic crisis. In addition to discussions on the 2010 crisis in the European Union, the economies of the countries of EU will be grouped in the framework of Euro area-non Euro area criteria and will be subjected to a statistical analysis based on some macroeconomic indicators.

Keywords**:** Euro crisis, common currency, European currency union, Central Bank of Europe

JEL Classification: E50, E52, E60, H12

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1. Introduction

Monetary union is one of the most important steps taken in the history of European Union integration. This economic step is an important turning point that will produce results in financial, sociological and cultural terms. This stage, which is an important item on the agenda, both in first stage and also after the transition to the monetary union, has become a topic that has been discussed both in the literature and within the European Union after the Euro crisis.

The Monetary Union was established in 1999 under the European Union and was fully implemented in 2002 with the following process. Today, 19 member states are involved in the monetary union[1] and use the euro as legal currency (European Central Bank, 2009).

The euro area refers to a bit different region than the European Union. The Euro area comprising the European Union (EU) Member States which adopted the euro as their common currency, started in January 1999 with 11 countries and during the 1990's and beginning of the 2000's has expanded through a series of enlargements to 19 countries, so far (European Union, 2016).

Table 1. Euro area enlargements

EA-11 (*1 January 1999 - 31 December 2000*): Austria (AT), Belgium (BE), Finland (FI), France (FR), Germany (DE), Ireland (IE), Italy (IT), Luxembourg (LU), Netherlands (NL), Portugal (PT), Spain (ES)
EA-12 (*1 January 2001 - 31 December 2006*): EA-11 + Greece (EL)
EA-13 (*1 January 2007 - 31 December 2007*): EA-12 + Slovenia (SI)
EA-15 (*1 January 2008 - 31 December 2008*): EA-13 + Cyprus (CY) and Malta (MT)
EA-16 (*1 January 2009 - 31 December 2010*): EA-15 + Slovakia (SK)
EA-17 (*1 January 2011 - 31 December 2013*): EA-16 + Estonia (EE)
EA-18 (*from 1 January 2014*): EA-17 + Latvia (LV)
EA-19 (*from 1 January 2015*): EA-18 + Lithuania (LT)

[1] “”Legal basis of European Monetary Union can be stated as follows:
“— Decisions of the European Summits of The Hague (1969), Paris (1972), Brussels (1978), Hanover (1988), Madrid and Strasbourg (both 1989), and Maastricht (1991-1992);
— Articles 119-144, 219 and 282-284 of the Treaty on the Functioning of the European Union (TFEU);
— Protocols annexed to the TFEU on: the transition to the third stage of economic and monetary union; the excessive deficit and macroeconomic imbalances procedures; the convergence criteria; the opt-out clauses for the United Kingdom and Denmark; and the European System of Central Banks and the European Central Bank, as well as the Eurogroup”.
European Parliament, History Of Economic And Monetary Union, Fact Sheets on the European Union – 2018, p. 1, http://www.europarl.europa.eu/ftu/pdf/en/FTU_2.6.1.pdf

Source: European Union, Glossary: Euro area enlargements, 2016, https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Euro_area_enlargements

Economic and Monetary Union (EMU) represents a crucial step in the integration of EU economies. In addition to the coordination of economic and fiscal policies, the establishment of the common monetary policy and the use of the euro as the common currency are the main objectives.

Economic and Monetary Union (EMU) targets a policy design to build economic and monetary policies that will ensure high employment along with sustainable economic growth (Council of the European Union, 2017).

In the legislation of the European Institutions, practical and political goals of European Monetary Union (EMU) are mentioned as (European Commission, 2018):

* Implementing an effective monetary policy for the euro area with the objective of price stability
* Coordinating economic and fiscal policies in Member States
* Ensuring the smooth operation of the single market
* Supervising and monitoring financial Institutions

In addition to these goals, expectations from EMU can be stated more wider range. With the practical terms, EMU means (European Commission, 2018):

* Coordination of economic policy-making between Member States
* Coordination of fiscal policies, notably through limits on government debt and deficit
* An independent monetary policy run by the European Central Bank (ECB)
* Single rules and supervision of financial Institutions within the euro area
* The single currency and the euro area

In this framework, with the monetary union, it is seen that the European Union is not only aimed at monetary integration. Moreover, it is envisaged that many macroeconomic targets will be implemented through monetary union and it is assumed that a higher level of prosperity will be achieved for all countries in the European Union.

2. Dynamics of the Euro crisis

When the first steps are taken to the monetary union, it is foreseen that the transition to the euro will take risks. From the start, the euro has rested on a gamble (Moravcsik, 2012). When European leaders opted for the transition to monetary union in 1992, the expectation that European economies would come close together was the result of this step, which was essentially a gambling. In time, it was envisaged that countries in Southern Europe would gradually approach German economic standards, and achieve lower inflation and lower inflation targets with lower wages and higher savings and less expenditure

The economic developments in the first half of the 2000s resulted in difficulties faced by European economies in the following period. In its essence, the crisis in the Eurozone is a classic debt and BOP crisis (Frieden and Walter, 2017: 3) and in fact, the Eurozone crisis shows the similar results such as classic debt and balance of payments crisis. High borrowing due to over-consumption has naturally resulted in a crisis of the process.

The developments in the financial markets after monetary union, the euro was used a common currency led to borrowing as an attractive financing method. Borrowing costs decreased due to falling interest rates. This situation facilitated and encouraged the financing of public and private sector expenditures by borrowing (Ulusoy and Ela, 2014: 86).

Despite all the difficulties, the Euro, which has been successful for ten years, has become a symbol of Europe. However, the crisis experienced by the euro was similar to that of the United States[2]. After a decade, Europe suffered from the similar kind of profligate lending and borrowing, fueled by new types of financial derivatives, light-touch regulation and similar motivation of high profit intentions of financial markets which accelerated a financial crisis in the United States and global recession in 2008 (Hall , 2016: 51).

In the period before the financial crisis, both public and private sector debts increased with the easy access to capital and credit facilities. The tax cuts and the increase in public expenditures, which came along with the credit expansion, brought new risks for the countries with high internal and external debt stock. As a result of the economic revival, despite the increase in tax revenues, the high level of public expenditures brought along budget deficits. The violations of Maastricht Criteria for many countries and the economic indicators that go beyond this have increased macroeconomic risks over European economies (Eser and Ela, 2015: 209-210).

Following the transition to the Euro, countries such as Italy and Spain, which have previously had high inflation and interest rates, brought about a sudden decline in interest rates. Low interest rates were caused by public spending financed by the mortgage-funded housing sector and by debt. Financial markets came to believe that all Eurozone government bonds were essentially equivalent and that the margins of interest among these bonds are too small. Everything was fine until The Greek government had previously underestimated the size of its national debt. The market followed a sharp jump in interest rates on the Greek debt and followed next year with interest rates in other Eurozone countries with a large amount of government debt. With the 2011, the state debt of Ireland, Portugal and Italy exceeded 100 percent of their GDP and ten-year bond interest rates were over 12 percent in Ireland and Portugal, and over 7 percent in Italy. With these interest rates, government budgets were exposed and the rates increased to GDP (Feldstein, 2015: 1-2). At the end of first decade of 2000’s, there could be seen substantial divergences in current account positions among Euro member states. Some states such as: Spain, Greece, Portugal and Italy became a position with persistent

[2] Countries with high interest rates in the pre-Euro period, due to high inflation rates experienced a decline in the post-euro interest rates. Lenders have fallen into the belief that bond conditions are the same for all countries and assumed that a bond issued by any government in the European Monetary Union was equally safe. Governments responded to the low interest rates by increasing their borrowing. For more info, please see: (Victor A. Beker, 2014: 1)

current account deficits while Germany had large surpluses (Stockhammer, Constantine and Reissl, 2016: 9).

With the beginning of 2010, the Euro-crisis has got worse. First, Greece and then Ireland and Portugal had to seek shelter under the so-called bailout umbrella. It soon turned out that financial support for these countries would be tied to a particular form of economic policy therapy – tough austerity programmes (Busch, 2012: 3).

EU and IMF credits to highly debted countries for financial assistance in 2010 first for Greece and the following period IMF and EU programs were subsequently provided to Ireland and Portugal (Nelson, Paul Belkin and Derek E. Mix, 2011: 11):

- 110 billion Euro, Greece, May 2010
- 85 billion Euro, Ireland, December 2010
- 78 billion Euro, Portugal, May 2011

It can be seen that the crisis is caused by different factors in each country in member states. While the crisis in Greece emerged from the public sector, the weaknesses in the banking and real estate sector in Ireland have been the determining factor in the crisis. The current account deficit and the banking sector-driven crisis in Portugal. In Spain, the weakening of economic activity due to insufficient domestic and foreign demand and the rise in the unemployment rate above 20% have been effective. In Italy and Belgium, the main source of the crisis was the problems experienced in public finance (T.C. Başbakanlık, 2011: 8).

Particularly, Greece tried to solve the problem of public debt burden by resorting to borrowing with low interest financing facilities provided by the Euro zone instead of providing financial discipline (Dağdelen, 2011: 4). However, although different economic problems stem from different dynamics, the common feature of the countries about the crisis is especially the high debt stock. In order to mitigate the effects of the financial crisis, interest rate cuts were made and stimulating policies were implemented in order to prevent stagnation and to stabilize the economy.

On the other hand, the problems in the banking sector of European countries, together with the financial crisis, forced the countries to help or nationalize these banks, at which point the crisis in the banking sector has spread to the public in terms of financing the crisis. Particularly in the PIIGS countries (Portugal, Ireland, Italy, Greece, Spain), the debt burden of the state increased due to the policies implemented after the financial crisis and the aid to the banks. This situation increased the concerns about the repayment of the debts of the countries. Due to increased concerns and the note-breaking policy of credit rating agencies, borrowing for countries has become costly and thus the European Debt Crisis has become more severe. Conditional support packages to the countries that have difficulty in translating their debts, as well as the International Monetary Fund (IMF) and the European Central Bank (ECB), have failed to solve the problem. In this case, additional funds and measures have been introduced to support countries in crisis (Eser and Ela, 2015: 210).

From the perspective of the European Union, one of the most important thing learned from the crisis is the need for a more efficient economic governance, financial oversight and institutionalization of coordination within the Union. This issue was reflected in Article 136 of the Lisbon Treaty[3] as follows: "Eurozone countries should adopt common economic policy rules and strengthen coordination for budgetary disciplines." (Eralp, 2010: 2). In addition, another point that underlined is the shortcomings in the economic governance of the Eurozone have been an urgent issue for the politicians' agenda (T.C. Başbakanlık, 2011: 9).

The discussions on the Euro Zone or the broader definition of the Economic and Monetary Union was not only due to the lack of sound control of the compliance of the EU countries with the Maastricht criteria in the Union. Another, and perhaps even more important problem was the inability of the legal and institutional infrastructure to provide the necessary coordination in economic and fiscal policies in a structure where the monetary policy and exchange rate policy was completely transferred to the European Central Bank, in accordance with the Economic and Monetary Union requirements (Eralp, 2010: 3).

3. Comments on Euro and the crisis: Statistical view to different country groups

The expansion and deepening of the euro crisis threatened the sustainability of the European common currency and also opened up a debate on the monetary union (Gibson, Palivos and George, 2013: 3) Becoming of Euro as common currency and the monetary policy as well, which in turn brings some macroeconomic results and problems. The fact that the conditions of independent monetary policy are limited and the conditions of the country cannot be taken into consideration in the policies to be implemented have become a factor that will affect the economies in the negative sense. The functioning of the European Central Bank as a monetary authority and the authority of national authorities in terms of fiscal policy have made it difficult to coordinate the coordination of these two policies.

The increase in the link between the economies of countries in monetary terms is also a factor triggering the crisis. The fact that the monetary union countries are using the euro and regional monetary policy is being carried out by the European Central Bank has strengthened the links between the economies of the countries in question. This situation facilitates the dissemination of negativities in a Euro country to other Euro countries in a short time (Yavuz, Şataf and Kır, 2013: 137).

The euro-area crisis, along with problems in the banking sector, has brought a debate between banks and governments. Additionally have led to negative feedback loops between weak banking systems and confidence in the sovereigns. Banking crises in

[3] The Lisbon Treaty was signed by the heads of state and government of the 27 EU Member States on 13 December 2007. For more info: http://www.lisbon-treaty.org/wcm/.
And for Article 136, please visit: http://www.lisbon-treaty.org/wcm/the-lisbon-treaty/treaty-on-the-functioning-of-the-european-union-and-comments/part-3-union-policies-and-internal-actions/title-viii-economic-and-monetary-policy/chapter-4-provisions-specific-to-member-states-whose-currency-is-the-euro/404-article-136.html.

Euro-area countries have placed large fiscal burdens on governments. By that way, bringing questions about solvency of governments and also fiscal policy infeasibilty under these conditions (Gibson, Palivos and George, 2013: 11).

In addition to the monetary policy variable, the high level of integration of the EU member countries, finance and real sectors increased the interaction between the economies and brought the crisis in Greece to spread to other countries in a short time (T.C. Başbakanlık, 2011: 8-9).

Prior to the use of the euro as a common currency, there were many criticisms that the Euro was far from being an optimal currency. And it was argued that the transition to the common currency would result in disaster. These warnings and critics appeared to be coming to fruition during the Eurozone crisis and, as one observer put it, placed the Eurozone in a “full-fledged existential crisis.” (Beckworth, 2016: 4-5).

In the years following the crisis and in the crisis period, many measures were taken in order to achieve economic stability in the EU. Some steps were taken with close cooperation and negotiations as well as discussions.

Europe’s comprehensive response to the crisis can be counted as follows (Regling, 2016: 6):

a) Budget consolidation and structural reform in euro area countries
b) An active monetary policy
c) Closer economic policy coordination in the currency union
d) Strengthening the banking system
e) Firewalls against the crisis: EFSF and ESM[4]

The euro area crisis has been one of the most important milestones in EU history. The Eurozone crisis and its consequences have been the one of the most significant political development in Europe over recent decades by the shooks on institutional foundations of EU. And also shows the incomplete nature of its overall economic policy framework in general (Georgiou, 2017: 7). With the crisis, weaknesses in the institutional framework of the EU have emerged. As a result of the steps taken in the aftermath of the crisis, significant innovations have been realized in the institutional sense, the institutional

[4] *“The European Financial Stability Facility (EFSF) was created as a temporary crisis resolution mechanism by the euro area Member States in June 2010. The EFSF has provided financial assistance to Ireland, Portugal and Greece. The assistance was financed by the EFSF through the issuance of EFSF bonds and other debt instruments on capital markets. The EFSF does not provide any further financial assistance, as this task is now performed solely by the ESM. Nevertheless, the EFSF continues to operate in order to:*
- receive loan repayments from beneficiary countries;
- make interest and principal payments to holders of EFSF bonds;
- roll over outstanding EFSF bonds, as the maturity of loans provided to Ireland, Portugal and Greece is longer than the maturity of bonds issued by the EFSF
The mission of both the EFSF and ESM is to safeguard financial stability in Europe by providing financial assistance to countries of the euro area. ”
For more info: European Stability Mechanism, (2018), https://www.esm.europa.eu/efsf-overview.
And https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-financial-assistance/loan-programmes/european-financial-stability-facility-efsf_en

infrastructure of the EU has been strengthened and an important examination has been given with positive steps.

3.1. Comments on general government gross debt statistics of different country groups in European Union

The financial and economic crisis that started in 2007/08, followed by the debt crisis of some states in Eurozone are in 2010. Many researchers and policy makers concentrated on pointed on debt stock and they already had a strong opinion on the utility or risks of government debt (Holtfrerich and et all., 2016: 2). General government gross debt[5] is an important indicator for understanding the sustainability of the govenrment. And also helps to reflect the fiscal position of the public sector when it will be considered togetherly with the tax revenues of the governments. Government debt indicator was the most important and prior indicator that feel the pressure on it during the years of the Eurozone crisis.

Table 2. EU 16 - Euro Countries - General government gross debt - % of GDP

EU 16 - Euro Countries - General government gross debt - % of GDP													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Belgium	94,7	91,1	87	92,5	99,5	99,7	102,6	104,3	105,5	107,6	106,5	106,1	103,4
Germany	67	66,5	63,7	65,2	72,6	81	78,6	79,9	77,4	74,5	70,8	67,9	63,9
Ireland	26,1	23,6	23,9	42,4	61,5	86	110,9	119,9	119,7	104,1	76,8	73,4	68,4
Greece	107,4	103,6	103,1	109,4	126,7	146,2	172,1	159,6	177,4	178,9	175,9	178,5	176,1
Spain	42,3	38,9	35,6	39,5	52,8	60,1	69,5	85,7	95,5	100,4	99,3	99	98,1
France	67,4	64,6	64,5	68,8	83	85,3	87,8	90,6	93,4	94,9	95,6	98,2	98,5
Italy	101,9	102,6	99,8	102,4	112,5	115,4	116,5	123,4	129	131,8	131,6	131,4	131,2
Cyprus	63,4	59,3	54	45,6	54,3	56,8	66,2	80,1	103,1	108	108	105,5	96,1
Luxembour	7,4	7,8	7,7	14,9	15,7	19,8	18,7	22	23,7	22,7	22,2	20,7	23
Malta	70	64,5	62,3	62,6	67,6	67,5	70,1	67,7	68,4	63,7	58,6	56,3	50,9
Netherlands	49,8	45,2	43	54,7	56,8	59,3	61,7	66,2	67,7	67,9	64,6	61,9	57
Austria	68,6	67,3	65	68,7	79,9	82,7	82,4	81,9	81,3	84	84,8	83	78,3
Portugal	67,4	69,2	68,4	71,7	83,6	96,2	111,4	126,2	129	130,6	128,8	129,2	124,8
Slovenia	26,3	26	22,8	21,8	34,6	38,4	46,6	53,8	70,4	80,4	82,6	78,7	74,1
Slovakia	34,1	31	30,1	28,5	36,3	41,2	43,7	52,2	54,7	53,5	52,2	51,8	50,9
Finland	40	38,2	34	32,7	41,7	47,1	48,5	53,9	56,5	60,2	63,6	63	61,3
EU 16 av.	58,36	56,21	54,06	57,59	67,44	73,92	80,46	85,46	90,79	91,45	88,87	87,79	84,75

Source: Prepared by the author with the data from: Eurostat, Government finance statistics, General government gross debt - annual data, (Last update of data in Eurostat: 24/10/2018).

The ratios of public debt stock to GDP in 16 monetary union countries are shown in Table 2. In the EU16 region, the year in which the debt stock / GDP ratio is highest with 91.45% is 2014. Italy, Ireland, Belgium, Greece, Portugal stand out as countries with high indebtedness. Although Spain experienced a serious crisis, it seems to be relatively

[5] "General government gross debt, also known as public debt, is the nominal (face) value of total gross debt outstanding at the end of the year and consolidated between and within the government subsectors". Eurostat, Glossary: Government debt, 27 June 2017, https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Government_debt.

more favorable compared to other problematic countries. More important problem for Spain is high unemployment rates.

Table 3. Non-euro countries - General government gross debt - % of GDP

Non-euro countries - General government gross debt - % of GDP													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bulgaria	26,8	21	16,3	13	13,7	15,3	15,2	16,7	17,1	27,1	26,2	29,6	25,6
Czechia	27,9	27,7	27,5	28,3	33,6	37,4	39,8	44,5	44,9	42,2	40	36,8	34,7
Denmark	37,4	31,5	27,3	33,3	40,2	42,6	46,1	44,9	44	44,3	39,9	37,9	36,1
Croatia	41,2	38,6	37,2	39	48,3	57,3	63,8	69,4	80,4	84	83,7	80,2	77,5
Hungary	60,5	64,5	65,5	71,6	77,8	80,2	80,5	78,4	77,1	76,6	76,6	75,9	73,3
Poland	46,4	46,9	44,2	46,3	49,4	53,1	54,1	53,7	55,7	50,4	51,3	54,2	50,6
Romania	15,7	12,3	11,9	12,4	22,1	29,7	34	36,9	37,6	39,2	37,8	37,3	35,1
Sweden	49,1	43,9	39,2	37,7	41,3	38,6	37,8	38,1	40,7	45,5	44,2	42,4	40,8
United Kingdom	39,8	40,7	41,7	49,7	63,7	75,2	80,8	84,1	85,2	87	87,9	87,9	87,4
Estonia	4,5	4,4	3,7	4,5	7	6,6	6,1	9,7	10,2	10,5	9,9	9,2	8,7
Latvia	11,4	9,6	8	18,2	35,8	46,8	42,7	41,2	39	40,9	36,8	40,3	40
Lithuania	17,6	17,2	15,9	14,6	28	36,2	37,2	39,8	38,8	40,5	42,6	39,9	39,4
Non-euro 9	38,3	36,3	34,5	36,8	43,3	47,7	50,2	51,9	53,6	55,1	54,2	53,6	51,2
Estonia+Latvia+ Lithuania	11,2	10,4	9,2	12,4	23,6	29,9	28,7	30,2	29,3	30,6	29,8	29,8	29,4

Source: Prepared by the author with the data from: Eurostat, Government finance statistics, General government gross debt - annual data, (Last update of data in Eurostat: 24/10/2018).

Table 3 shows the ratios of 9 non-euro countires' and 3 euro countries' (Estonia, Latvia, Lithuania - ELL) public debt stocks to GDP. When Euro member Estonia, Latvia and Lithuania are compared, they have lower public debt stock than other Euro countries. Among the non-euro countries, this ratio is below 50% for Bulgaria, Romania, Denmark and the Czech Republic. However, for all countries, it is observed that this ratio has entered a serious upward trend after 2010 and it has increased twice as much for many countries.

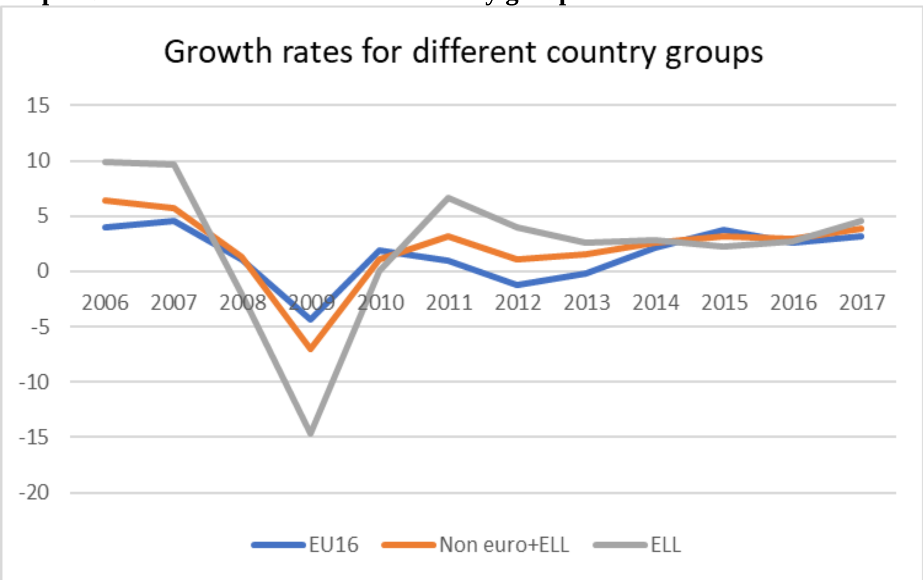
Table 4. Euro Countries- Comparisons - General government gross debt - % of GDP

Euro Countries- Comparisons - General government gross debt - % of GDP													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Estonia	4,5	4,4	3,7	4,5	7	6,6	6,1	9,7	10,2	10,5	9,9	9,2	8,7
Latvia	11,4	9,6	8	18,2	35,8	46,8	42,7	41,2	39	40,9	36,8	40,3	40
Lithuania	17,6	17,2	15,9	14,6	28	36,2	37,2	39,8	38,8	40,5	42,6	39,9	39,4
Non-euro 9	38,3	36,3	34,5	36,8	43,3	47,7	50,2	51,9	53,6	55,1	54,2	53,6	51,2
Estonia+Latvia+ Lithuania	11,2	10,4	9,2	12,4	23,6	29,9	28,7	30,2	29,3	30,6	29,8	29,8	29,4
EU 16 av.	58,36	56,21	54,06	57,59	67,44	73,92	80,46	85,46	90,79	91,45	88,87	87,79	84,75

Source: Prepared by the author with the data from: Eurostat, Government finance statistics, General government gross debt - annual data, (Last update of data in Eurostat: 24/10/2018).

Table 4 shows the comparisons between Non-euro countries, EU16 and Euro users special 3 countries. In non-euro 9 countries, lowest rate of debt to stock ratio is %34 in the year 2007. That rate is also lowest for special 3 countries ELL, in 2007 with the rate of %9,2. Fort he avarage EU16, the ratios of debt stock to GDP are always higher than the other 2 groups for all years. It is highest in 2014 with the rate of %91 for EU16.

Graph 1. Growth rates for different country groups in EU



Source: Prepared by the author with the data from: Eurostat, Real GDP growth rate statistics, annual data, (Last update of data in Eurostat: 17/08/2018).

Graph 1 shows the economic growth rates of different country groups; non-euro countries, EU16 and non-euro countries+special 3 countries. The increase in the debt to GDP ratio generally in all other member states is also due to the sharp decline in their GDP during the crisis. In some countries, GDP continued to decrease in the following years, especially strictly in 2008, 2009, 201 and partially 2011 0with additional negative effects on the debt ratio (Budimir, 2017: 53). The growth rates became more reasonable after 2013 and became more stable in generally.

3.2. Comments on Net Lending/Borrowing statistics of different country groups in European Union

Net lending / barrowing data[6] is an important indicator that gives an idea about economic performance of the countries and also indirectly about the possible future trend of debt stock. Recalling that a nation's current account is its net borrowing from rest of the world, large increases in foreign indebtedness shows up as a negative current account. That represents the net barrowing position in current account. A positive current account indicates that the nation is, on net, lending to foreigner nations. And at this situation, net lending represents positive data in this indicator. (Baldwin and Giavazzi, 2015). In this section, net lending / barrowing[7] statistics in different European Union groups will be discussed into the period of before and after the crisis.

[6] *"In the European Union, Member States which are part of the euro area are required to keep their budget deficits below 3 % of gross domestic product to promote economic stability and sustainable public finances. Under the terms of the European Union's Stability and Growth Pact (SGP), Member States pledged to keep their deficits and debt below certain limits: a Member State's government deficit may not exceed -3 % of its gross domestic product (GDP) in order to promote economic stability and sustainable public finances".* Eurostat, Glossary: Net lending net borrowing, 2016, https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Net_lending_net_borrowing.

[7] Eurostat, Glossary: Net lending net borrowing
"Net lending (+)/ net borrowing (-) is a national accounts balancing item. It is the last balancing item of the non-financial accounts - namely the balancing item of the capital account.
It can be used in the context of the domestic economy as a whole, but is most frequently used in the context of the Excessive deficit procedure (EDP) and government finance statistics; i.e. in the context of the net lending (+)/ net borrowing (-) of the general government sector. When the balancing item is positive, a surplus is said to exist, when it is negative, there is a deficit.
It can be derived as follows:
Net lending (+)/ net borrowing (-)
=Government surplus / deficit (net lending/ borrowing under EDP)
= gross saving (defined as gross disposable income less final consumption expenditure) less net capital transfers less gross acquisitions less disposals of non-financial assets
= total revenue less total expenditure
= (conceptually) net acquisition of financial assets less net incurrence of liabilities."
For more info: Eurostat, Glossary: Net lending net borrowing, 2016, https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Net_lending_net_borrowing.

Table 5. EU 16 - Euro Countries – Net Lending/Barrowing - % of GDP

EU 16 - Euro Countries - Net Lending/Borrowing - % of GDP)													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Belgium	1,9	1,9	1,6	-1,5	-1,3	1,5	-1,2	0,5	-0,4	-1,1	-1	-0,5	0,8
Germany	4,5	5,6	6,7	5,6	5,7	5,7	6,1	7	6,7	7,6	8,9	8,6	7,9
Ireland	-3,3	-5,2	-6,4	-6,2	-4,6	-1,1	-1,5	-2,6	1	-2,4	3,9	-5,7	-1,1
Greece	-7,8	-10,1	-13,3	-13,4	-11,5	-10,5	-8,7	-2,6	-0,4	-0,2	0,9	-0,7	-0,5
Spain	-6,7	-8,4	-9,3	-8,8	-4	-3,5	-2,8	0,3	2,2	1,6	1,8	2,5	2,1
France	0,1	0,3	0	-0,7	-0,5	-0,6	-0,9	-1,1	-0,5	-1	-0,4	-0,7	-0,5
Italy	-0,8	-1,4	-1,3	-2,8	-1,9	-3,4	-2,9	-0,1	0,9	2,1	1,7	2,3	2,7
Cyprus	:	:	:	-15,3	-7,3	-11	-3,7	-5,8	-3,5	-3,5	-1,2	-4,9	-7,9
Luxembourg	14,2	9,2	9,3	6,9	6,1	6,2	5,6	4,7	4,2	3,8	4,5	4,7	4,5
Malta	-3,4	-3	-0,7	-0,7	-5,4	-2,7	1	3,6	4,4	10,5	6,2	7,4	14,3
Netherlands	7,1	8,9	5,2	4,9	5,5	6,5	8,7	8,9	9,9	8,4	5,8	7,9	10,4
Austria	2,3	3	3,8	4,4	2,6	2,9	1,5	1,3	1,8	2,4	1,2	2,4	1,9
Portugal	-8,5	-9,5	-8,6	-10,9	-9,3	-8,8	-4,5	0,3	3,2	1,4	1,3	1,6	1,4
Slovenia	-2,2	-2,3	-4,3	-5,4	-0,5	0	0	2,3	4,8	6	5,6	4,8	6,4
Slovakia	-10,6	-9,5	-5,1	-5,3	-2,7	-3,2	-3,7	2,9	3,3	2,1	1,8	-0,2	-1,1
Finland	3,2	3,8	3,8	2,2	1,7	1,2	-1,6	-2,2	-2,1	-1,7	-0,7	-0,7	-0,6
EU 16 av.	-0,63	-1,04	-1,16	-2,94	-1,71	-1,30	-0,54	1,09	2,22	2,25	2,52	1,80	2,54

Source: Prepared by the author with the data from: Eurostat, Net Lending/Borrowing (current and capital account) - annual dat, (Last update of data in Eurostat: 17/08/2018).

Table 5 shows net lending / barrowing data in EU16 as a ratio to GDP. Negative data is particularly noteworthy in countries experiencing crisis. Negative rates are seen to be at the peak in the pre-crisis period, and after 2010 and 2011, partial improvement is observed in these data with strict policies. It is noteworthy that net lending / barrowing rate does not pose any risk to the whole period for Belgium which was strongly feel the Euro crisis on its economy. When the EU16 average is considered, a positive situation in general is noteworthy.

Table 6. Non-euro countries – Net Lending/Barrowing - % of GDP

Non-Euro Contries- Net Lending/Borrowing - % of GDP)													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bulgaria	:	:	-25,7	-21,2	-7	-0,9	1,5	0,4	2,4	3,5	3,1	4,8	7,7
Czechia	-1,4	-2,1	-4	-1,2	-1	-2,6	-1,8	-0,3	1,5	0,9	2,5	2,7	2
Denmark	4,3	3,3	1,5	2,9	3,4	6,6	6,9	6,3	7,7	8,7	7,9	8,1	8,1
Croatia	-5,2	-7	-7,2	-9	-5,1	-1,1	-0,7	-0,1	1	2,3	5,1	3,9	4,5
Hungary	-6,3	-6,4	-6,4	-5,8	0,9	2,1	3,1	4,3	7,3	5,2	7,3	6,1	4,2
Poland	-2,3	-3,4	-5,3	-5,6	-2,3	-3,6	-3,2	-1,5	1	0,4	1,8	0,5	1,4
Romania	-7,9	-10,4	-12,9	-11,1	-4,2	-4,9	-4,4	-3,4	1	2	1,2	0,4	-2
Sweden	6,1	7,6	8,1	7,7	5,9	5,8	5,3	5,4	5	4,4	4,3	4,2	3,2
United Kingdom	-2,1	-3,2	-3,8	-4,6	-3,9	-3,8	-2,4	-4,3	-5,2	-5	-5	-5,3	-3,8
Estonia	-8	-12,8	-13,8	-7,5	6	5,3	5,4	1,4	3,1	1,9	3,9	3	4,2
Latvia	-10,5	-19,6	-18,9	-11	10,2	4	-1,1	-0,6	-0,2	1,5	2,3	2,6	1,5
Lithuania	-6,3	-9,4	-13,4	-11,7	5,7	2,5	-1,3	1,5	4	5,8	0,7	0,7	2,1
Non-euro 9	-1,64	-2,40	-6,19	-5,32	-1,48	-0,27	0,48	0,76	2,41	2,49	3,13	2,82	2,81
Estonia+ Latvia+ Lithuania	-8,27	-13,93	-15,37	-10,07	7,30	3,93	1,00	0,77	2,30	3,07	2,30	2,10	2,60

Source: Prepared by the author with the data from: Eurostat, Net Lending/Borrowing (current and capital account) - annual dat, (Last update of data in Eurostat: 17/08/2018).

Table 6 shows net lending / barrowing data in Non-euro countries as a ratio to GDP and 3 euro countries' (Estonia, Latvia, Lithuania - ELL). For Romania, Croatia, Latvia and Lithuania, the ratios are especially higher than the other countries. Also avarage of ELL, fort he year 2007, the rate is the highest point with the rate of % - 15,37. With the 2010, after the crisis, it becomes positive and in 2010 it is at the highest level with the positive rate of % 3,93. Also fort he all years after the crisis, it keeps positive rates. That shows the accounts for these country groups became sustainable and reasonable after the 2010's.

Table 7. Euro Countries- Comparisons - Net Lending/Barrowing - % of GDP

Euro Countries- Comparisons - Net Lending/Borrowing - % of GDP)													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Non-euro 9	-1,64	-2,40	-6,19	-5,32	-1,48	-0,27	0,48	0,76	2,41	2,49	3,13	2,82	2,81
Estonia+ Latvia+ Lithuania	-8,27	-13,93	-15,37	-10,07	7,30	3,93	1,00	0,77	2,30	3,07	2,30	2,10	2,60
EU 16 av.	-0,63	-1,04	-1,16	-2,94	-1,71	-1,30	-0,54	1,09	2,22	2,25	2,52	1,80	2,54

Source: Prepared by the author with the data from: Eurostat, Net Lending/Borrowing (current and capital account) - annual dat, (Last update of data in Eurostat: 17/08/2018).

Table 7 shows the comparisons of net lending / barrowing data between Non-euro countries, EU16 and Euro users special 3 countries. It seems clear that fort he net lending/barrowing, performance of EU16 countries are relatively more successful than the non-euro 9 countries and also better than ELL. Following years after 2010's, fort he all groups of countries, ratios are relatively better than the previous years of the crisis. That can show, fiscal discipline[8] after the crisis years help the fiscal performance of the countries. For all groups, after 2012, rates become positively over % 2.

4. Conclusion

Starting from the first half of 2010, especially the economic problems in Greece, extended to the other European countries in a short period and Eurozone area faced various economic problems. Becoming of Euro as common currency created the strong links between the economies of countries in monetary terms. At the same time, crisis offered an opportunity for the EU to regulate itself in terms of institutional base. As a result of the steps taken such as: structural reforms, active monetary policy, corrdination in the currency area etc., EU improves its infrastructe in institutional level. In our stitistical overview, it can be seen that, countries that are not the member of currency union feel the effects of crisis relatively low level. Having an opportunity of independent monetary policy and also low level of interaction with the currency area protect them from the negative effects of the crisis. But further analysis and investigations should be made for certain opinions and judgments for these arguments. And also statistics that used in our study are data based on the ratio to GDP. For that reason fluctuations on GDP levels could be create some misunderstandings for the data used in our study.

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