
WHY EUROPEAN UNION IS NOT AN OPTIMAL CURRENCY AREA: THE LIMITS OF INTEGRATION

Yrd. Doç. Dr. Hüseyin Mualla YÜCEOL
Mersin Üniversitesi İktisadi ve İdari Bilimler Fakültesi, Maliye Bölümü
hyuceol@mersin.edu.tr

ÖZET

Para rejimleri ve onların etkileri hem gelişmiş ülkelerde hem de gelişmekte olan ülkelerde geniş bir şekilde tartışılmaktadır. Bu çalışma Avrupa'nın parasal bütünleşmesinin optimum para alanı (OPA) açısından anlamını literatüre yapılan klasik katkılar çerçevesinde tartışmaktadır. Çalışma, OPA'nın temel özellikleri teknik olarak geliştirildiği halde, bu alanda tam anlamıyla birleşik bir teori olmadığını göstermektedir. Avrupa'nın ekonomik ve parasal birlik konusundaki deneyimi bu tepiti doğrulamaktadır. Ayrıca, çalışma tek bir paranın üyeler, benzer ekonomik yapılar ve uluslararası ticaret özelliklerine sahip olduğunda yaşam standardını yükselttiğini, ancak aksi durumda saptırıldığını göstermektedir. Bundan dolayı Türkiye dahil aday ülkelerle birlikte genişleme süreci, parasal birliğin sağlanması anlamında Avrupa Birliği'nin geleceğine hem fırsatlar hem de tehditler sunmaktadır.

ABSTRACT

Currency regimes and their effects have been studied widely in both developed and developing countries. This study discusses what European monetary unification is telling about the interpretation of the optimum currency area (OCA) in the framework of classical contributions to the literature. The study concludes that although several weaknesses of the analytical framework of the early OCA theory have been modified and some of the OCA properties have technically sophisticated, there is no unified theory in this area. The experiment of Europe with economic and monetary union intensify this conviction. Moreover, it concludes that a single currency advances members' living standards when they have similar economic structures and international trading patterns, but proves detrimental when these diverge. Therefore, it can be said that the

enlargement process with the new candidate countries including Turkey puts forward both opportunities and threats for the future of European Union in terms of achieving a currency union.

INTRODUCTION

In the history of nations, the European Union (EU) which allows a prospective view plays an important role in understanding the problems and difficulties of economic integration. Because the evolution of the EU has been criticised on the grounds that it conforms to the principles of the Neo-classical trade theory but does not apply to present-day market economies. In addition, it is believed that one of the most ambitious economic policy of the 20th century is the European Monetary Union (EMU). By joining the EMU, 11 European countries have explicitly agreed to maintain a common monetary policy for an indefinite period.

After the European Council has decided in December 2002 to accept ten new countries as a member of European Union and two more will be so by 2007, the dimensions of integration have changed. While this enlargement process creates opportunities, it also brings new challenges both for the members of the Exchange Rate Mechanism (ERM) and the new candidate countries. Regarding the ERM II, some time after accession, many of the new member states joined the ERM. The ERM II could accommodate the main features of a number of exchange rate regimes, provided their commitments and objectives are credible and in line with those of the ERM II.

However, there is a widespread skepticism surrounding the long-run practicality of the EMU. The debate is generally focused on Robert Mundell's seminal work on currency unions, published in 1961. Mundell (1961) indicates that

the existence of a currency union mainly depends on how close it comes to the notion of an optimal currency area (OCA). The theory of OCA says that if a monetary union is not an OCA, then some of its participants will incur macroeconomic costs (like persistent higher unemployment and lower output) that will outweigh the micro-economic benefits of a single currency (lower transaction and hedging costs).

This study analyzes the limits of economic integration in terms of theory, evidence and consequences. In the theoretical framework, the concept of integration is defined and then the theory of optimal currency area is analyzed in detail. As an evidence, the experiment of European Union on achieving Economic and Monetary Union is examined. The results of the study in terms of OCA emphasizes that EMU has devastating implications if its participants are not sufficiently converged prior to its establishment. Furthermore, these circumstances are more important with the accession of new partners, the economies differ markedly from those of more advanced countries. The prospects of the EU currency necessitate broad convergence between the member states, which is wider than simply meeting the Maastricht conditions.

THEORY OF OPTIMAL CURRENCY AREA (OCA)

At least since the times of Adam Smith, effects of economic integration, i.e. of a reduction of barriers to international trade, are under debate among economists (Bröcker, 1988:261). However the idea of convergence among the member economies is largely based on the Neoclassical trade and the Heckscher-Ohlin framework. This is because the theory postulates gains from integration. There had been many comprehensive studies on the theory of economic integration. Some pioneering studies are demonstrated by Viner (1950, 1972), Myrdal (1956), Tinbergen (1965), Johnson (1972), Machlup (1976), Balassa (1976), Kenen (1976), Bröcker (1988), Flam (1992), Pohl and Sorsa (1994). From its lowest to highest forms, integration has been said to progress through freeing of trade barriers (trade integration), the liberalization of factor movements (factor integration), the harmonization of national economic policies (policy integration), and the complete unification of these policies (total integration) (Balassa, 1976:17).

This idea does not change whether integration occurs between developed market economies or developing countries. Integration should promote convergence among participating countries. This

holds also for the discussion of intranational (to create an integrated national economy), multinational (to create an integrated regional economy) or worldwide integration (to create an integrated world) (Machlup, 1976: 74). The Heckscher-Ohlin theorem which is one of the most important theory in explaining the basis of international trade, stresses the effects of factor content and relative factor prices under free trade. Moreover, the theory assumes that in a two country, two commodity, two factor model commodity-price equalization is sufficient to ensure factor-price equalization and factor-price equalization is sufficient to ensure commodity-price equalization (Mundell, 1957: 321).

The idea of optimum currency area is one of the pioneering study in the theory of economic and monetary union. In fact, the early discussion about the OCA theory focused on the choice of the exchange rate regime. Friedman (1953) favored flexible exchange rates, because they serve as a better mean to absorb exogenous shocks. Eight years after Friedman, Mundell (1961) published the article on the OCA which defines OCA as an area with internal factor mobility (including both interregional and inter-industrial mobility) and external factor immobility. He used the word "optimal" as referring to a regime that currency union maintain external and internal economic balances in a particular region. The word "area" to Mundell is not a geographical area. It is more of an economic region where homogenous products are produced, the technology and knowledge are at the same level, and the region is equally affected by changes. By definition, a region refers to an integration of countries, so one country in isolation can not be a region. The conclusions of this literature depend mainly on the Keynesian monetary and fiscal policies that can be used to stabilize unemployment and output (Grubel, 2002: 23).

A currency area which has a single currency means that there is only one central bank that manages monetary policies in the region. In other words, member countries give up the use of monetary policy and have only one policy tool left fiscal policy. Although, inside the region the fixed system is used, the area has flexible exchange rates with other areas. In summary, the OCA theory claims that a single currency (fixed exchange rate system) is more appropriate in an area with high factor mobility.

After Mundell (1961), Kenen (1961) and McKinnon (1963) defined what should be the criteria for an OCA and whether or not a region should have a single currency. Depending on the

contributions of these economists, it can be said that the OCA theory discusses the following criteria:

- 1) *Degree of openness*; a country, where trade within the OCA accounts for a high proportion in domestic output, can profit from joining in a currency area.
- 2) *The Similarities of shocks and business cycles*; asymmetric shocks and business cycles raise the need for country-specific adjustment policies; however in a single-currency area, country-specific monetary policy is not possible.
- 3) *International factor mobility*; high labor mobility facilitates adjustment to the adverse effects of asymmetric shocks and thus reduces the pressure for exchange rate adjustments.
- 4) *Product diversification*; a country exporting highly diversified product is less vulnerable to sector-specific shocks, therefore, countries with a large product spectrum are less likely to be induced to use the exchange rate as an adjustment tool.
- 5) *Fiscal transfers*; counteract asymmetric shocks in a currency area.
- 6) *The degree of fiscal policy integration and similarities between rates of inflation*; differences between rates of inflation result in a loss of competitiveness in high-inflation countries; a high degree of policy integration already before the creation of a currency area is likely to result in low inflation countries.

In recent years, the launch of the euro has spurred a debate on the endogenous effects of monetary integration (See Frankel and Rose, 1998; Fidrmuc, 2002 and DeGrauwe and Mongelli, 2004). Therefore, it can additionally be explored in four areas in which endogeneities are likely to occur for the new member states:

- a) the endogeneity of trade integration
- b) the endogeneity of financial integration or equivalently of insurance schemes provided by capital markets
- c) the endogeneity of symmetry of shocks
- d) the endogeneity of product and labor market flexibility

Table 1 Some Observations On The Properties Of OCA

Author and Year	Critical Observations
Corden (1972)	“Expenditure switching policies” and a loss of “direct control” over the national monetary policy.
Mundell (1973)	“International risk sharing” in the financial integration.
Mundell (1973), McKinnon (2001)	“The size of single currency area” a common currency could even span a larger and even more heterogeneous area.
Ishiyama (1975)	“Complexity” and “interdependency” of properties
Tower and Willett (1976)	No “general agreement” on the quantitative importance of each OCA property.
Kydland and Prescott (1977), Barro and Gordon (1983)	“The credibility issue” especially when some governments could have an incentive to revoke on a low inflation commitment in order to reduce unemployment among some short-run Phillips curve.
Bruno and Sachs (1985), Buiter (1999)	The different macroeconomic effects of “supply shocks” such as the second oil shock, “asymmetric shocks” and “cyclical divergence”.
Robson (1987)	“Measuring” and “evaluating” problems of properties.
Calmfors and Driffil (1988)	“the non-linearity” about the relationship between centralization of wage bargaining and labour market outcome.
Tavlas (1994)	The problem of “inconsistency” and “inconclusiveness” of properties.
Buiter (1999)	The problem of “bigness” and “openness” of a member country, as in the example of the UK which is too small and too open to be an OCA.
Mongelli (2002)	the “ranking” problem of properties.
DeGrauwe (2002)	“Differences” in labor market institutions which may bring extra costs in forming a monetary union.
Grubel (2002)	Determining the cost of losing “monetary sovereignty” and the result of a “downward bias of currency values” with flexible exchange rates in a world of imperfect labor markets and union power
Lombardo (2002)	Unequal “degrees of competition” across members of a currency area.
Horvath and Komarek (2003)	the “optimal number of currencies” to be used in one region
Tavlas (2004)	The necessity of a broad “economic and political calculus” about the advantages and disadvantages of participation in a monetary union.
Grauwe and Mongelli (2004)	If the criteria of OCA may not be satisfied, the endogeneity of the OCA criteria will solve this problem and move the new member countries safely into the euro area.
Alesina and Perotti (2004)	The main features of institutions and decision making process in the European Union, with particular attention to the debate between federalists and super nationalists.
Coudert and Couharde (2006)	The issue of the “Balassa effect” which shows that the real exchange rate of a catching up country (candidate country) should appreciate.

In table 1 we summarised some observations on the theory of OCA with reference to the studies of pioneering authors. Concerning the analytical framework, table 1 assures that the early OCA theory had some important weaknesses. There are some doubts about the properties of the theory of OCA especially in terms of net benefits of direct control over monetary policy and the exchange rates, fundamental role of credibility, different effects of shocks, optimal number of currencies to be used in one region, differences in labor market institutions, any complexity and interdependency of main properties. Thus, in order to understand the advantages and disadvantages of a monetary union in terms of the properties of OCA, there should be a broad “economic and political calculus” as Tavlas (2004) pointed out. This means that both in transition economies and developed market economies, a currency regime should be selected on the basis of sustainability and consistency with specific reform objectives.

EMPIRICAL LITERATURE REVIEW RELATED TO THE EUROPEAN MONETARY UNION

Since 1960, the experiment of the European Union confirms that coming from the Treaty of Rome (1957) to the Single European Act (1987) and the Maastricht Treaty (1992), the aim of narrowing disparities between the levels of development of the various regions and closing the welfare gap between various countries has become one of the most fundamental objectives of the Union.

The aims of achieving the Economic and Monetary Union and thus the idea of European Union are directly related to these objectives. These objectives necessitate the harmonization of economic policies and strengthening the solidarity between the member countries. Meanwhile, emphasis on the fundamental characteristic of convergence is particularly important in connection with the real variables. Because, besides promoting macroeconomic convergence this process could also help to bring the per capita income levels of the participating countries closer to one another (Larre, and Torres, 1991: 170). The Barre Plan was specifically noting on the convergence of the economic policies as a prescription for gradual achievement of monetary union. 1974 Council decision on convergence explicitly defined ‘convergence’ in connection with European Integration.

In terms of monetary coordination and macroeconomic convergence, the classical ERM (1979-1999) has been a benchmark in the monetary

history of the EU. The ERM, with the ecu (then euro) at its centre, was to provide an automatic indicator to the national authorities with regard to the convergence of their macroeconomic policies. Converging in terms of policy was to be simplified in this system, without the need to centralize the decision-making. The ERM II is the gateway to joining the eurozone and does not recommend staying in the mechanism for any longer than the minimum required period of two years. Each currency participating in ERM II has a defined central rate (parity) against the euro and a fluctuating band for movements around the central rate. In the event of exchange rate pressures, both the national central bank and the European Central Bank will intervene to keep the exchange rate within the fluctuating band.

However, in the process of accessing similar macroeconomic outcomes may not alone represent a satisfactory result. Andrew Crocket (1994) mentions three conditions for a realistic definition of convergence. Convergence, according to him, is the process of accomplishing macroeconomic results, which are:

- 1) similar across member states,
- 2) satisfactory in terms of basic economic objectives, and
- 3) sustainable over time.

His reasoning for accommodating 2) and 3) for further extending the simple definition is that, “similar outcomes” may not be considered as equilibrium situation.

Indeed, the determination of which individual EU member state is a suitable candidate for a single currency mainly depends on its attainment of five Maastricht convergence criteria established in the Maastricht Treaty. The determination of which individual European Union (EU) member states are suitable candidates for a single currency is supposedly achieved by their attainment of the five Maastricht convergence criteria (MCC) established in the Maastricht Treaty (EC, 1992):

1. each country's rate of inflation must be no more than 1.5% above the average of the lowest three inflation rates in the EMS;
2. its long-term interest rates must be within 2% of the same three countries chosen for the previous condition;
3. it must have been a member of the narrow band of fluctuation of the ERM for at least two years without a realignment;
4. its budget deficit must not be regarded as 'excessive' by the European Council, with

'excessive' defined to be where deficits are greater than 3% of GDP for reasons other than those of a 'temporary' or 'exceptional' nature;

5. its national debt must not be 'excessive', defined as where it is above 60% of GDP and is not declining at a 'satisfactory' pace.

Since 1960 there have been many comprehensive survey of EMU as an example of OCA. In table 2, we demonstrated some observations on the EMU with reference to OCA by taking into the consideration the theoretical and empirical issues. According to the empirical studies, it is widely accepted that in terms of properties of OCA and the criteria of a monetary union; the 12 participants in the EMU do not constitute an OCA to the extent that regimes of the United States do. Actually, there is now a wealth of data and information on European integration. Therefore, some of the properties of OCA have technically and econometrically sophisticated as the time passes. However, there are still important problems in supporting and confirming the theoretical issues.

In terms of openness and the degree of commodity diversification, many countries fulfil the condition

except the UK. But in terms of other conditions especially in real indicators, there is a gap between member countries. When the least favoured part of the Union has been included into the analysis, the level of disparities increases. This is because there has been and still there is a steady process of reform in the product and financial markets, that it has and will continue to lead to reforms also in the labor market. Then, countries including the UK view the establishment of an independent currency as an important element of national sovereignty.

Thus, the so called EMU “convergence criteria” are more concerned with examining transitory cyclical movements in financial indicators, rather than concentrating upon fundamental convergence in real economy. For example Eichengreen (1991) emphasized that the requirement of prior convergence should be equally significant over each part of the economic cycle, if EMU is to prove robust against symmetric and asymmetric shocks. However, examining the extent to which EU member states have actually met the MCC since 1990s, a period including both a recession and boom, makes disappointing reading for supporters of European monetary integration.

Table 2 Observations On The EMU With Reference to OCA

Theory	Evidence
High degree of factor mobility (Mundell, 1961; Ingram, 1962)	Labor mobility within the EU is one-third the level found in the USA (Eichengreen, 1991)
Degree of commodities' market integration which means similar production strategies in union members (Mundell, 1961)	Some countries (like Britain) have a greater reliance upon high technology exports and a large proportion of owner-occupiers who are subject to variable interest rates (Weber, 1991; Taylor, 1995)
Openness and size of the economy, depending on the fixed exchange system (McKinnon, 1963)	Most small or medium sized industrialized nations fulfil this condition (Baimbridge et al., 1998)
Degree of commodity diversification (Kenen, 1969)	All industrialized member countries will fulfil this particular criterion (Baimbridge et al., 1998).
Fiscal integration and inter-region transfers (Kenen, 1969)	The current size of the budget, at only 1.24 % of total EU GDP, precludes the development of any significant inter-regional fiscal transfer system for the foreseeable future (MacDogall, 1992). Then, its costs may defer this potential mechanism to stabilise EMU (Whyman, 1997)
Degree of policy integration (Ingram, 1969; Haberler, 1970; Tower and Willett, 1970)	Economic union is so far in front of political union (Bogdan, 2004; Willet, 2004; Krugman-Obstfeld, 2003)
Similarity of inflation rates (Haberler, 1970; Fleming, 1971; Magnifico, 1973)	ERM membership has caused most EU member states to adapt their economic strategies to achieve similar inflation rates at the cost of persistently high unemployment (Baimbridge, 1998)
Price and wage flexibility (Friedman, 1953)	Significant wage-price rigidity persists across Europe, so that market flexibility is unlikely to prevent the generation of areas blighted by high and persistent unemployment (Bruno and Sachs, 1985; Dreze and Bean, 1990; Eichengreen, 1991, 1993; Layard et al., 1991; Bini-Smaghi and Vori, 1992.; Blanchard and Katz, 1992; Kenen, 1995; Goodhart, 1995)
The need for real Exchange rate variability (Vaubel, 1976 and 1978)	Given that real Exchange rate variability depends on the absence of real wage rigidity, the comments made for characteristic of price and wage flexibility (Bruno and Sachs, 1985; Carlin and Soskice, 1990; Eichengreen, 1991, 1993; Layard et al., 1991; Bini-Smaghi and Vori, 1992.; Blanchard and Katz, 1992; Kenen, 1995; Goodhart, 1995)

A COMPARATIVE ECONOMIC ANALYSIS FOR THE CLASSICAL ERM COUNTRIES AND THE PERFORMANCE OF THE CANDIDATE COUNTRIES

In this stage, we intended to divide the main economic indicators for the classical ERM countries as “nominal indicators” such as inflation rate, interest rate, public deficit, national debt and the stability of exchange rates and “real indicators” such as income per head or tolerable level of unemployment. The time series used in this analysis is come from European Commission’s Annual Statistics (2000) and IMF’s International Financial Statistics (2000). The data is shown in Appendix.

The inflation rate which is defined as the changes in consumer prices, has a tendency to increase for a whole sample in the 1970s. In the periods of economic crisis and petroleum shocks, there is a widening gap between countries especially among the less favoured ones. In other words although, the rates are decreasing, since 1980 the gap has not been eliminated especially for Portugal, Spain and Greece. However, in the late 1990s the rates are converging for the countries as a whole. When long term interest rates are defined as government bond yield it is also true that the rates remained high in the period of 1970-80, then declined after the 1980s for the Community as a whole.

As in the Maastricht Treaty one of the important objectives for the EU is to have stable exchange rates. The removal of exchange controls between the Union currencies, and the further integration of money and capital markets are major steps towards monetary union. Therefore, Europe has been strongly influenced by events on the foreign exchange markets. The historical trends show us that exchange rates are very stable in the 1960s for all of the European countries. But in the 1970s the rates are started to fluctuate. Moreover, this distortion has not been eliminated after the 1980s especially for Italy, Spain, Portugal and Greece. The Exchange rate crisis erupted in Europe in 1992-1993 which often pronounced as ERM crises, also worsened the situation, but after the crises the relative position of the currencies have been improved in the late 1990s.

From the point view of general government gross debts as percent of GDP each country is subject to severe constraints. Except Luxemburg the rates are higher than 60 percent. For Italy, Greece and Belgium the rates are excessive, that is more than 100 %.

Since 1966 per capita income is steadily increasing for the EU as a whole. But, in spite of increasing trends in poorer countries, current GNP per capita is much bigger in advanced countries. In the end of 1990s, while it reaches as an average to \$20.000 and more in Germany and others, it is still about \$10.000 in poorer countries that is for Greece, Portugal and Spain.

One of the real indicators of convergence for the EU is to have tolerable levels of unemployment. But it is clear that starting from 1970s the rates have increased for the whole Community up to 1990s. However, there are significant differences among countries in terms of convergence. In Spain the unemployment rate is so high that it is about 20 %. In France, Italy and Ireland it is around 10 % while in the others it is less than 10 %.

In analyzing the fulfillment of five Maastricht convergence criteria in European Monetary System (EMS) countries before 1999 which is the date of introduction of a single currency, the euro, we examine the data shown in appendix and the statistics of EU (2000). As a result of this examination we formed table 3 for the period of 1990-1998. We found that it is only Luxembourg, a country atypical of the other EU members' economies, appears to be able to consistently meet the 5 criteria, while among the remaining twelve nations only four have ever secured total compliance with the convergence indicators: France (1990,1991,1997,1998), Germany (1990, 1994), Denmark (1990) and Ireland (1998). As a number meeting all MCC criteria, there are only two dates (1990 and 1998) in which four countries meet the so called convergence criteria.

On 1 May 2004 ten new countries (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, the Slovak Republic and Slovenia) joined the EU, increasing the EU’s overall membership to 25 countries with a combined population of around 500 million. Today, many of these new members are also joined the euro area, regarding the ERM II. Bulgaria and Romania have begun negotiations and they will be admitted by 2007. Turkey has officially begun membership talks with the EU in December 2005, the culmination of a 40 year campaign.

At this stage for comparability reasons, we also examined the performance of these countries. From table 4, It can be seen that many of the countries are functioning market economy and the macroeconomic situation has continued to be robust with the moderate GDP growth (except Malta) and relatively low inflation (except Romania).

Table 3 The Classical EMS Countries on MCC Before 1999

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998
Luxembourg	5	5	5	4	5	5	5	5	5
Denmark	5	4	4	3	3	4	4	4	5
France	5	5	4	4	4	4	4	5	5
Germany	5	4	4	3	5	4	3	4	4
Ireland	4	4	4	3	3	4	4	4	5
Belgium	2	3	3	3	3	3	3	4	4
Netherlands	3	4	3	3	3	3	4	4	3
UK	3	3	2	2	3	3	2	4	5
Spain	1	1	1	1	1	1	1	4	3
Portugal	0	0	0	0	0	0	1	4	3
Italy	0	0	0	0	0	0	0	3	4
Greece	0	0	0	0	0	0	0	0	3
Total (numbers meeting all criteria)	4	2	1	0	2	1	1	2	4

Table 4 Main Statistical Indicators of the New Members and Candidate Countries (2004)

Source: The World Bank (2006), "World Development Indicators" and "Key Statistics".

	Area	Popula- tion	GDP	GDP growth	GNI per capita (1)	Inflat. Rate (2)	Unemp. Rate (3)	Agri- culture (4)	Indus-try (4)	Trade balance (5)	Ext debt
	1000 km ²	million	Current \$	annual %	current \$	%	% of lab.force	% of GDP	% of GDP	million \$	% of GNI
Bulgaria	111	7,8	24,1	5,6	2750	4,2	13,7	11,1	30,8	-4,506	66,1
Cyprus	9	0,8	15,4	3,7	16510	2,3	4,1	n.a	n.a	-4,554	n.a
Czech R.	79	10,2	107,0	4,4	9130	3,0	8,3	3,1	38,1	-493	44,9
Estonia	45	1,3	11,2	7,8	7080	3,1	10,0	4,3	66,9	-2,783	95,1
Hungary	93	10,1	100,7	4,6	8370	4,6	6,1	3,3	30,8*	-4,475	66,8
Latvia	65	2,3	13,6	8,3	5580	7,2	10,6	4,1	22,5	-3,054	92,0
Lithuania	65	3,4	22,3	6,7	5740	3,3	12,4	6,2	33,6	-3,014	43,9
Malta	0,3	0,4	5,3	0,4	12050	2,0	7,9	n.a	n.a	-1,178	n.a
Poland	313	38,2	242,3	5,4	6100	2,9	19,0	3,4	32,5	-14,320	41,7
Romania	238	21,7	73,2	8,3	2950	15,8	7,0	14,4	36,8	-9,179	41,8
Slovakia	49	5,4	41,1	5,5	6480	4,6	18,1	3,6	29,7	-1,923	54,2
Slovenia	20	2,0	32,2	4,6	14770	3,0	6,0	2,7	36,8*	-1,366	n.a
Turkey	775	71,7	302,8	8,9	3750	9,9	10,3	12,9	22,4	-34,419	53,6

Notes: n.a. not available, * The data for the year 2003, 1) Gross national income, atlas method, 2) GDP Deflator, 3) % of total labour force, 4) value added, 5) [merchandise exports] – [merchandise imports]

However, there are important differences between countries regarding convergence criteria. While some countries have higher gross national income per capita than their rivals, all countries stay below the average level of European Monetary Union (27,921 for the year 2004). Bulgaria, Lithuania, Poland and Slovakia are the countries who have serious unemployment problem. Bulgaria, Estonia, Hungary and Latvia are the countries whose external debt exceed 60 % of gross national income. Cyprus, Malta and Estonia are the smallest countries with the level of population. Turkey is the biggest economy among these countries in terms of

area, population and GDP, but it still has the problems of large trade balance deficit, high unemployment rates and low level of industry level. Then, Turkey has relatively very low level of gross national income per capita after Bulgaria and Romania.

CONCLUSION AND POLICY IMPLICATIONS

The Neoclassical trade theory postulates that economic integration is beneficial to the

participating countries. It is also true that the EU is proving to be good for all of its members. However, the experiment of the EU shows us that several of the least-favoured regions and countries failed to keep pace with their respective member states.

In this paper, we emphasized that coming from the 1960s up to 2006, there are four important observable features of the process of European integration.

1) In the 1960s, there was a process of development of the common market, thus, integration promotes convergence among the member states.

2) Throughout the 1970s, overall economic situation was worsening and integration was losing ground in reducing disparities between the levels of development of the various regions and the backwardness of the least-favoured countries, which mean that the degree of convergence was decreasing.

3) Europe is not an optimal currency area. Although, On January 1, 1999, 11 EU countries initiated an EMU by adopting common currency, the euro, the EU does not appear to satisfy all of the criteria for an optimum currency area. Then, joining the EU is not identical with joining the euro for both old members and new members.

4) Economic union is so far in front of political union.

In conclusion, it can be stated that although there is a moderate improvement in the economies of the members, there is no sustainable process of convergence especially for the least-favoured countries. This is because, the achievement of convergence depends on particular certain institutional and structural features and the degree of development of market mechanisms. It also depends on a number of factors such as on achieving the stability and coordination in overall economic policy, on pursuing a growth policy, and on organizing a system of financial transfers which is both efficient and of an adequate scale.

Hence, the EMS experience in the process of the European integration suggests that the conflicting domestic interests may jeopardize the degree of policy coordination needed for the sustainable operation of the exchange rate regime. Convergence of the monetary policies is then regarded as an important prerequisite for a successful implementation of a fixed exchange rate regime. On the other hand; changing global economic outlook, alterations in domestic circumstances or changes in political domain will

make it hard to sustain the policy convergence in the long run.

Consequently, the potential participants in a single EU currency possess divergent economies, they respond differently to the changes inevitable in a dynamic environment. An EU-wide monetary policy may widen the economic performance between member states, but it cannot meet individual national requirements. EMU will inevitably affect fiscal policy by limiting budgetary independence both directly through the Maastricht convergence criteria and potentially via the Growth and Stability Pact. The launching of an EU single currency on the basis of Maastricht conditions is impossible by generating historically high levels of unemployment. Thus, EMU will divide Europe because no mechanism exists for achieving real convergence between national economies. Much of the skepticism surrounding the long-run viability of the EMU is based on the belief that the monetary union is a long way from an OCA.

The basic question posed by Mundell, Kenen, McKinnon, Corden and the other OCA contributors is still relevant today. The discussion around the properties of the theory including price and wage flexibility, labour mobility, factor market and financial integration, economic openness and diversification and others is going on. Then, the studies of the OCA have become very comprehensive and technically sophisticated.

The European Union's enlargement process requires a fundamental understanding between the parties on the underlying values, the objectives of the Union and of the instruments and methods to be achieved in order to reach them. Under this concept the EU faced the biggest challenge in its history: to integrate 10 new Member States. It will take years to absorb these 75 million Europeans, coming from different cultural and political traditions, enjoying a living standard equal to less than one fifth of that of the average EU citizen. The EU is also committed to Bulgarian and Rumanian membership, another 33 million poor people, by 2007 as the target date. Moreover, the EU accepted to have negotiations with Turkey whose high level of population increase remains as a fundamental problem and whose economic and social conditions are markedly different from Europe. Now, the Commission welcomes the political and economic reforms which have been initiated in Turkey. But in this process, it should be noted that the governments of new candidates have difficulty making their reform programs credible. Especially, adopting a new currency signifies a break with the past. Thus, the EU need a serious debate on the "limits of Europe" and the role of new candidates in the future of

European construction in terms of European monetary integration.

REFERENCES

APEL, E. (1998), *European Monetary Integration*, Hardcover, Routledge.

ALESINA, A.; PEROTTI, R. (2004), "The European Union: A Politically Incorrect View", NBER Working Paper Series, Working Paper 10342, 2

BAIMBRIDGE, M.; BURKIT, B.; WHYMAN, P. (1998), "Is Europe Ready for EMU? Theory, Evidence and Consequences", The Bruges Group, <http://www.brugesgroup.com/mediacentre/index.live?article=102>

BALASSA, B. (1976), "Types of Economic Integration", F. Machlup (ed.), *Economic Integration Worldwide, Regional, Sectoral*, The MacMillan Press Ltd., pp.17-31.

BARRO, R.J.; SALA-I-MARTIN, X. (1992), "Convergence", *Journal of Political Economy*, Vol.100, No.2, pp.223-251.

BARRO, R.; GORDON, D.B. (1983), "A Positive Theory of Monetary Policy in a Natural Rate Model", *Journal of Political Economy* 91 (August):589-610.

BAYOUMI, T. (1994), "A Formal Model of Optimal Currency Areas", *International Monetary Fund Staff Papers* (December), 41, 537-54.

BAYOUMI, T.; EICHENGREEN, B. (1997), "Ever Closer to Heaven? An Optimum Currency-area Index for European Countries", University of Berkeley, Available from: <http://iber.berkeley.edu/wps/cider/c96-78.pdf>.

BEINE, M.; CANDELON, B.; SEKKAT, K. (2003), "EMU Membership and Business Cycle Phases in Europe: Maskov-Switching VAR Analysis", *Journal of Economic Integration* 18 (March), 214-242.

BINI-SMAGHI, L.; SILVIA, V. (1992), "Rating the European Community as an Optimal Currency Area: is it Worse Than the U.S.?", Mimeo Roma: Banca d'Italia.

BLANCHARD, O.; KATZ, L. (1992), "Regional Evolutions", *Brooking Papers and Economic Activity* (3): 369-402.

BLANCHARD, O. (2004), "The Economic Future of Europe", NBER Working Paper, Paper No: 10310, Available from: <http://www.nber.org/papers/10310>.

BROCKER, J. (1988), "Interregional Trade and Economic Integration: a Partial Equilibrium Analysis" *Regional Science and Urban Economics* 18, pp.261-81.

BRUNO, M.; SACHS, J. (1985), *Economics of Worldwide Stagflation*, Basil Blackwell, Oxford, U.K.

BUITER, William H. (1999), "Optimum Currency Areas: Why Does the Exchange Rate Regime Matter? With an Application to the UK Membership in EMU", University of Cambridge, Available from: <http://www.nber.org/~wbuiter/scotland.pdf>

BUNYARATAVEJ, K. (2000), "The Optimum Currency Area Index for the European Union Enlargement", The George Washington University, Available from: <http://www.sbp.gwu.edu/eucenter/eu/enlargement.pdf>

CALMFORS, L.; DRFFIL, J. (1988), "Bargaining Structure, Corporatism and Macroeconomic Performance", *Economic Policy*, vol.6, 13-61.

CARLIN, W.; SOSKICE, D. (1990), *Macroeconomics and the Wage Bargain: A Modern Approach to Employment, Inflation and the Exchange Rate*, Oxford University Press, Oxford.

COHEN, B. (1993), "Beyond EMU: The Problem of Sustainability", *Economic and Politics*, 187-202.

CROCKETT, A. (1994), "The Role of Convergence in the Process of EMU", in A. Steinherr (ed.), *30 years of European Monetary Integration from the Werner Plan to EMU*, Longman.

DE GRAUWE, P. (2003), *The Economics of Monetary Integration*, New York: Oxford University Press.

DE GRAUWE, P.; MONGELLI, F. (2004), "The Enlargement of the Euro Area and Optimum Currency Areas", Paper Prepared for the 8th CEPR/ESI Annual Conference on 'EMU Enlargement to the East and the West', September 24-25, Budapest, Hosted by the Magyar Nemzeti Bank.

- DIXIT, A. (2000), "A Repeated Game Model of Monetary Union", *Economic Journal* 110, October, 759-780.
- DREZE, J.; BEAN, C. (1990), "Europe Unemployment Problem: Introduction and Synthesis", in J. Dreze and C. Bean (eds) *Europe's Unemployment Problem*, Cambridge MA: MIT Press.
- EICHENGREEN, B. (1991), "Is Europe an Optimum Currency Area ?", *NBER Working Papers*, Paper No.3579, Available from: <http://www.nber.org/papers/w3579>.
- EICHENGREEN, B. (1993), "Shocking aspects of European Monetary Unification", in F. Torres and F. Giavazzi (eds.), *Growth and Adjustment in the EMU*, Cambridge University Press.
- EICHENGREEN, B. (2002), "Lessons of the Euro for the Rest of the World", *Working Paper PEIF-2*, Available from: http://ies.berkeley.edu/pubs/workingpapers/PEIF-2-Lessons_of_the_Euro.pdf.
- EC COMMISSION (1992) *Treaty on European Union*, Office for the Official Publications of the European Communities, Luxembourg.
- EC COMMISSION (2000), *European Economy, Annual Statistics*, Office for the Official Publications of the European Communities, Luxembourg.
- FELDSTEIN, M. (1991), "Does One Market Require One Money ?", In *Symposium On Policy Implications of Trade and Currency Zones*, Kansas City: Federal Reserve Bank of Kansas, 77-84.
- FIDRMUC, J. (2002), "The Endogeneity of the Optimum Currency Area Criteria, Intra-industry Trade, and EMU Enlargement", *Oesterreichische Nationalbank*, Available from: http://www.wiwi.ac.at/pdf/sie_fidrmuc_paper.pdf.
- FLAM, H. (1992), "Product Markets and 1992: Full Integration, Large Gains", *Journal of Economic Perspectives*, Vol.6, No.4, (Fall), pp.7-30.
- FLEMING, J. M. (1971), "On Exchange Rate Unification", *The Economic Journal*, vol.81, 467-488.
- FRANKEL, J.; ROSE, A. (1998), "The Endogeneity of the Optimum Currency Area Criterion", *Economic Journal*, 108 (July), 1009-10025.
- FRIEDMAN, M. (1953), "The Case of Flexible Exchange Rates", in M. Friedman (ed.), *Essays in Positive Economics*, Chicago: University of Chicago Press.
- GOLDBERG, L.S. (1999), "Is OCA Theory Irrelevant for Economies in Transition", Published in R.J. Sweeney, C. Wihlborg and T.D. Willet (eds.), *Exchange Rate Policies for Emerging Market Economies*, Westview Press, 45-60.
- GOODHART, C.A.E (1989), *Money, Information and Uncertainty*, Cambridge, Massachusetts, MIT Press.
- GOODHART, C.A.E (1995), "The Political Economy of Monetary Union", in Kenen, P.B (ed.) *Understanding independence: the macroeconomics of the open economy*, Princeton University Press, Princeton.
- GROSS, D.; THYGESEN, N. (1992), *European Monetary Integration*, St. Martin' s Press, New York.
- GRUBEL, H. (2002), New Criteria for Optimum Currency Areas, Emeritus, Simon Fraser University, Available from: <http://www.sfu.ca>.
- HABERLER, G. (1970), "The International Monetary System: Some Recent Development and Discussions", in George Holm (ed.), *Approaches to Greater Flexibility in Exchange Rates*, Princeton University Press, 115-123.
- HORVATH, R.; KOMAREK, L (2003), "Optimum Currency Area Theory: An Approach for Thinking About Monetary Integration", *Warwick Economic Research Papers*, The University of Warwick, Available from: <http://www2.warwick.ac.uk/fac/soc/economics>.
- HUTCHISON, M. M.; BERGMAN, M.U. (1999), Northern Light: Does Optimal Currency Area Criteria Explain Nordic Reluctance to join EMU ?, University of California, Available from: <http://econ.ucsc.edu>.
- IFS (2000), *International Monetary Fund*, IFS' s CD ROM, Version 1.1.53.
- INGRAM, J. (1969), The Currency Area Problem, in R.A. Mundell & A.K. Svoboda (eds.), *Monetary Problems of the International Economy*, Chicago II, Chicago University Press.
- INGRAM, J. (1973), *The case for European Monetary Integration*, Princeton Essays in International Finance 98, Princeton University Press.

- ISHIYAMA, I. (1975), "The Theory of Optimal Currency Areas: a Survey", *IMF Staff Papers*, IMF 22, 344-383.
- JOHNSON, H.G. (1972), "The Gains from Freer Trade with Europe: An Estimate, Penguin Modern Economics Reading", P. Robson (ed.) *International Economic Economic Integration*, Middlesex; Penguin Books Lmt., pp.340-47.
- KENEN, P.B. (1969), "The Theory of Optimum Currency Areas: An Eclectic View, in Mundell", R.A. & Swoboda, A.K. (eds.), *Monetary Problems of the International Economy*, Chicago University Press.
- KENEN, P. (1976), "International Capital Movements and the Integration of Capital Markets", F. Machlup (ed.), *Economic Integration Worldwide, Regional Sectoral*, The MacMillan Press Lmt.
- KENEN, P.B. (1995), "What Have We Learned from the EMS Crises ?", *Journal of Policy Modeling*, vol 17 (5), 449-461.
- KRUGMAN, P.R.; OBSTFELD, M. (2003), *International Economics: Theory and Policy*, Sixth Edition, Harper Collins, New York.
- KYDLAND, F.E.; PRESCOTT, E. C. (1977), "Rules Rather than Discretion: the Inconsistency of Optimal Plans", *Journal of Political Economy* 85 (June): 473-491.
- LARRE, B.; TORRES, R. (1991), "Is Convergence a Spontaneous Process ? The Experiment of Spain, Portugal and Greece", *OECD Economic Studies* No.16, (Spring), pp.169-98.
- LAYARD, R, NICKELL, S.; JACKMAN, R. (1991), *Unemployment: Macroeconomic Performance and the Labour Market*, Oxford University Pres, New York.
- LOMBARDO, Giovanni (2002), Imperfect Ccompetition, Monetary Policy and Welfare in a Currency Area, *Discussion Paper 21/02*, Economic Research Centre of the Deutsche Bundesbank.
- MACDOUGALL, D. (1992) "Economic and Monetary Union and the European Community Budget", *National Institute Economic Review*, May, 64-68.
- MACHLUP, F. (1976), "A History of Thought on Economic Integration", F.Machlup (ed.) *Economic Integration Worldwide, Regional, Sectoral*, The MacMillan Press Lmt., pp.61-85.
- MAGNIFICO, G. (1973) *European Monetary Unification*, Wiley, New York.
- MAWSON, J. (1986), "Europe and the Principle of Convergence", *Regional Studies* (Policy Review Section), Vol.20, No.4, pp.371-77.
- MAWSON, J. (1993), "Cohesion, Convergence and Economic and Monetary Union in Europe", *Regional Studies* (Policy Review Section), Vol.27, No.2, pp.149-65.
- MCKINNON, R.I. (1963), "Optimum Currency Areas", *American Economic Review*, 53.
- MCKINNON, R.I. (2002), "Optimal Currency Areas and the European Experience", *Economics of Transition*, 10 (2).
- MONGELLI, F.P. (2002), "New Views on the Optimum Currency Area Theory: What is EMU Telling US ?", *European Central Bank*, Available from: <http://repec.org/res2002/Mongelli.pdf>.
- MUNDELL, Robert A (1957), "International Trade and Factor Mobility", *American Economic Review* (June), Vol.XLVII, No.3, 321-35.
- MUNDELL, R.A. (1961), "A Theory of Optimum Currency Area", *American Economic Review*, 51.
- MYRDAL, G. (1956), *An International Economy: Problems and Prospects*, Harper & Row Publishers, New York.
- PINDER, J. (1986), "The Political Economy of Integration in Europe East and West", *Journal of Common Market Studies*, Vol.XXV, No.1 (September), 1-14.
- PADOA-SCHIOPPA, T. (1994), *The Road to Monetary Union*, Clarendon Press-Oxford.
- POHL, G.; SORSA, P. (1994), "Is European Integration Bad News for Developing Countries", *The World Bank Research Observer*, Vol.9, No.1, (January), pp.147-55.
- RICCI, L. (1997), "A Model of an Optimal Currency Area", *IMF Working Paper*, wp/97/76 (June), Washington, D.C.
- SACHS, J. and SALA-I MARTÍN, X. (1991), "Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the U.S.", *NBER Working Paper* no. 3855.
- TAVLAS, G.S. (1993), "The "new" Theory of Optimal Currency Areas", *The World Economy*, 16, 663-667.

TAVLAS, G.S. (1994), "The Theory of an Optimal Currency Areas", *Open Economics Review*, 5, 211-230.

TAVLAS, G.S. (2004), "Benefits and Costs of Entering Eurozone", *Cato Journal*, vol.24, Nos. 1-2 (Spring-Summer).

TAYLOR, M. P. (1995), "The Economics of Exchange Rates", *Journal of Economic Literature*, 33 (1), 13-47.

TINBERGEN, J. (1965), *International Economic Integration*, Elsevier Publishing Company, Amsterdam.

TOWER, E.; WILLET, Thomas (1976), "The Theory of Optimal Currency Areas and Exchange Rate Flexibility", *International Finance Section*, no.11, Princeton University, Department of Economics.

VAUBEL, R. (1978), "Real Exchange Rate Changes in the EC: a New Approach to the Determination of Optimal Currency Areas", *Journal of International Economics* 8, 319-339.

VINER, J. (1950), *The Customs Union Issue*, New York, Carnegie Endowment for International Peace.

VINER, J. (1972), "The Economics of Customs Unions, Penguin Modern Economics Reading", P.Robson (ed.) *International Economic Integration*, Middlesex; Penguin Books Lmt., 31-46.

WILLET, Thomas D. (2001), "The OCA Approach to Exchange Rate Regimes: A Perspective on Recent Developments", Claremont College Working Papers, Working Paper 2001-04, February, 1-22.

WILLET, Thomas D. (2004), "Optimum Currency Area and Political Economy Approaches to Exchange Rate Regimes: Towards and Analytical Synthesis", Claremont Graduate University, www.cgu.edu/include/spe_Willet6.pdf

WORLD BANK (2006), World Development Indicators, Available from: <http://www.worldbank.org>.

APPENDIX

Belgium

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	3.7	7.4	2.3	2.7	2.3	1.6	1.3
2. Exchange Rates	52.58	43.18	43.31	41.30	39.30	40.53	40.62
3. Net Lending (+) or net borrowing (-)	-2.6	-7.9	-7.1	-5.8	-3.2	-2.1	-1.7
4. General Government Gross Debt	60.7	120.1	125.7	131.3	126.9	122.2	118.1
5. Long term interest rates (%)	6.5	10.6	8.5	8.1	6.5	5.8	5.1
<i>Real Indicators</i>							
1. GDP	4.9	1.8	3.0	1.2	1.5	2.7	2.8
2. Per Capita Nominal GNP (\$)	2683*	8758	13568	22737	26409	23820	24574
3. Unemployment (%)	2.0	7.7	8.7	8.5	9.8	9.5	8.5

Denmark

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	6.6	9.6	3.7	1.7	2.1	2.3	2.1
2. Exchange Rates	7.50	7.53	7.94	7.64	7.36	7.48	7.50
3. Net Lending (+) or net borrowing (-)	2.2	-2.8	0.9	-2.4	-0.7	0.7	1.1
4. General Government Gross Debt	8.8	72.0	60.8	73.3	70.6	65.1	59.5
5. Long term interest rates (%)	9.0	16.0	10.8	8.7	7.2	6.2	5.4
<i>Real Indicators</i>							
1. GDP	4.3	2.0	1.4	2.0	2.7	2.9	1.7
2. Per Capita Nominal GNP (\$)	3131*	10305	17960	29000	34963	32179	33045
3. Unemployment (%)	1.0	6.4	6.4	8.6	6.9	6.1	5.4

Germany

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	3.5	4.3	1.5	3.5	1.9	1.9	1.7
2. Exchange Rate	4.06	2.57	2.08	1.96	1.91	1.96	1.97
3. Net Lending (+) or net borrowing (-)	0.4	-2.8	-1.5	-2.9	-3.4	-2.7	-2.5
4. General Government Gross Debt	18.3	41.7	43.8	58.0	60.4	61.3	61.2
5. Long term interest rates (%)	7.1	8.08	6.8	7.5	5.6	5.08	4.4
<i>Real Indicators</i>							
1. GDP	4.3	1.7	3.4	2.1	1.4	2.2	2.6
2. Per Capita Nominal GNP (\$)	2961*	10107	17480	24827	28592	25470	26226
3. Unemployment (%)	0.7	4.2	5.9	7.3	8.8	9.7	9.8

Greece

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	3.5	17.5	17.0	13.8	8.5	5.5	4.5
2. Exchange Rate	32.17	59.58	148.30	266.37	305.55	309.35	330.70
3. Net Lending (+) or net borrowing (-)	:	:	-12.4	-11.7	-7.5	-4.0	-2.2
4. General Government Gross Debt	16.1	51.6	90.1	110.1	111.6	108.7	107.7
5. Long term interest rates (%)	:	13.6	:	:	:	:	:
<i>Real Indicators</i>							
1. GDP	7.7	2.5	1.9	1.1	2.6	3.5	3.8
2. Per Capita Nominal GNP (\$)	1158*	3456	4758	9539	11777	11438	11456
3. Unemployment (%)	4.5	3.8	6.6	8.3	9.6	9.5	9.2

France

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	5.4	2.2	3.2	1.1	1.5	2.4	3.0
2. Exchange Rate	5.36	6.02	6.94	6.71	6.49	6.61	6.60
3. Net Lending (+) or net borrowing (-)	0.4	-1.7	-1.8	-4.5	-4.9	-4.1	-2.9
4. General Government Gross Debt	:	31.0	35.5	52.7	55.7	58.0	58.1
5. Long term interest rates (%)	6.9	12.2	9.1	7.8	6.3	5.6	5.0
<i>Real Indicators</i>							
1. GDP	5.4	2.2	3.2	1.1	1.5	2.4	3.0
2. Per Capita Nominal GNP (\$)	2989*	9176	15464	23033	26362	23789	24497
3. Unemployment (%)	2.0	6.4	9.7	11.1	12.4	12.5	11.9

Ireland

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	6.3	13.8	3.2	2.4	1.1	1.4	3.3
2. Exchange Rate	0.41	0.66	0.77	0.79	0.79	0.75	0.75
3. Net Lending (+) or net borrowing (-)	-3.7	-10.4	-5.5	-2.3	-0.4	0.9	1.1
4. General Government Gross Debt	42.2	102.5	96.0	82.3	72.7	66.3	59.5
5. Long term interest rates (%)	:	14.6	10.2	8.5	7.3	6.3	5.2
<i>Real Indicators</i>							
1. GDP	4.4	3.8	4.7	5.9	8.6	10.0	8.7
2. Per Capita Nominal GNP (\$)	1366*	4119	7792	15025	19889	21104	22286
3. Unemployment (%)	5.6	10.6	15.5	14.5	11.6	10.2	8.4

Italy

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	4.9	15.9	6.1	5.7	4.3	2.4	2.1
2. Exchange Rate	662.70	1142.69	1505.32	1803.02	1959	1929.3	1944
3. Net Lending (+) or net borrowing (-)	-3.1	-9.6	-10.9	-9.2	-6.7	-2.7	-2.5
4. General Government Gross Debt	51.3	82.3	98.0	124.2	124.0	121.6	118.1
5. Long term interest rates (%)	7.0	15.1	12.3	12.0	9.2	6.7	5.3
<i>Real Indicators</i>							
1. GDP	5.3	2.7	3.0	1.1	0.7	1.5	2.4
2. Per Capita Nominal GNP (\$)	2060*	6056	12916	19147	21151	19913	20448
3. Unemployment (%)	5.0	7.0	9.6	10.3	12.0	12.1	12.0

Luxemburg

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	3.0	7.4	2.4	3.0	1.6	1.4	1.6
2. Exchange Rate	52.04	43.18	43.22	40.50	39.30	40.53	40.62
3. Net Lending (+) or net borrowing (-)	1.9	1.9	:	1.8	2.5	1.7	1.0
4. General Government Gross Debt	18.5	13.0	4.7	5.9	6.6	6.7	7.1
5. Long term interest rates (%)	:	8.1	8.0	7.5	6.3	5.6	:
<i>Real Indicators</i>							
1. GDP	4.0	1.8	6.4	5.4	3.0	4.1	4.4
2. Per Capita Nominal GNP (\$)	3170*	11983	22308	34162	40791	37346	38639
3. Unemployment (%)	0.0	1.7	2.1	2.5	3.3	3.7	3.9

Netherlands

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	5.1	5.7	0.9	2.5	1.3	2.2	2.3
2. Exchange Rate	3.78	2.77	2.34	2.20	2.14	2.21	2.22
3. Net Lending (+) or net borrowing (-)	-0.7	-3.6	-5.1	-3.6	-2.3	-1.4	-1.6
4. General Government Gross Debt	:	71.5	79.2	79.1	77.2	72.1	70.0
5. Long term interest rates (%)	5.9	9.4	7.1	7.4	6.2	5.6	5.0
<i>Real Indicators</i>							
1. GDP	4.9	1.9	3.1	2.1	3.3	3.3	3.7
2. Per Capita Nominal GNP (\$)	2585	9087	13990	21730	25577	23280	24225
3. Unemployment (%)	1.1	7.1	7.4	6.4	6.3	5.3	4.4

Portugal

<i>Nominal Indicators</i>	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	3.9	22.2	12.2	7.4	2.6	2.1	2.2
2. Exchange Rate	30.30	68.51	166.86	186.94	195.76	198.59	201.7

3. Net Lending (+) or net borrowing (-)	0.5	:	-4.6	-5.4	-3.2	-2.5	-2.2
4. General Government Gross Debt	15.4	61.9	65.3	65.9	65.0	62.0	60.0
5. Long term interest rates (%)	:	:	17.1	13.0	8.6	6.4	5.4
Reel Indicators							
1. GDP	6.9	2.2	5.0	1.4	3.6	3.7	4.0
2. Per Capita Nominal GNP (\$),	715*	2004	3638	9089	10962	10184	10580
3. Unemployment (%)	2.5	6.9	6.1	5.6	7.3	6.4	6.2

Spain

Nominal Indicators							
	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	6.5	15.4	6.6	5.6	3.4	2.5	2.2
2. Exchange Rate	67.47	98.60	135.41	146.41	160.75	165.89	167.20
3. Net Lending (+) or net borrowing (-)	:	-2.8	-3.7	-5.7	-4.6	-2.6	-2.2
4. General Government Gross Debt	13.1	43.7	44.8	65.5	70.1	68.8	67.4
5. Long term interest rates (%)	:	:	12.9	11.2	8.7	6.4	5.2
Reel Indicators							
1. GDP	7.2	1.9	4.5	1.3	2.3	3.4	3.6
2. Per Capita Nominal GNP (\$)	1143*	4134	7846	13453	14826	13530	14088
3. Unemployment (%)	2.6	11.3	18.9	20.9	22.1	20.9	19.7

United Kingdom

Nominal Indicators							
	1961-73	1974-85	1986-90	1991-95	1996	1997	1998
1. Inflation	4.8	12.0	5.0	4.1	2.6	2.3	2.3
2. Exchange Rate	0.41	0.59	0.69	0.76	0.81	0.69	0.68
3. Net Lending (+) or net borrowing (-)	-0.3	-3.6	-0.7	-5.8	-4.8	-1.9	-0.6
4. General Government Gross Debt	66.3	53.8	35.5	53.9	54.7	53.4	52.3
5. Long term interest rates (%)	7.6	13.0	9.9	8.5	7.8	7.0	6.0
Reel Indicators							
1. GDP	3.1	1.4	3.3	1.3	2.3	3.5	1.9
2. Per Capita Nominal GNP (\$)	2371*	6788	12564	17626	19615	21740	23056
3. Unemployment (%)	1.9	6.9	9.0	9.5	8.2	7.1	6.5

* For 1966-1973

Nominal Indicators

1. Inflation (price deflator private consumption)
2. Exchange Rates (annual average national currency per ecu)
3. Net Lending (+) or net borrowing (-) of general government (% of GDP)
4. General Government Gross Debt End of period (% of GDP)
5. Long term interest rates (%) (Government bond yield)

Reel Indicators

1. Gross Domestic Product (at 1990 prices)
2. Per Capita Nominal GNP (\$), After 1991 Per Capita Nominal GDP (\$)
3. Unemployment (%)