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Optimal Currency Areas, EMU and the Outlook for Eastern Europe

Abstract

The theoretical literature suggests four criteria for judging whether regions should form a currency area: mobility of labour and capital, flexibility of prices and wages, openness to trade and diversity of production. Regions that have relatively closed economies, narrow product ranges, strong price and wage rigidities, and low external mobility of labour and capital should not join monetary union, but should instead retain exchange-rate flexibility.

According to Maastricht Treaty, countries wishing to join EMU must fulfil the convergence criteria on interest rate levels, exchange rates, price stability and public debt. Several studies indicate that neither current EU-members nor the Central and Eastern European countries fully satisfy Mundell's criteria for optimal currency area (OCA) or EMU convergence criteria. Therefore, a European monetary union might run more smoothly if limited to a subset of EU members.

European Union is less of an optimal currency area than, for example, the US, due to lower factor mobility, more variable real exchange rates and slower response to aggregate shocks. Regarding to convergence criteria, it seems that the majority of the EU-countries satisfy the criteria to price stability whereas more efforts are needed where public debt is concerned. In respect of Central and Eastern European countries, the successful conclusion of systematic transformation and market oriented structural reforms is essential before participation in EMU. At present, countries should concentrate on maintaining their commitment to stabilization and on development further modern monetary and fiscal policies. Furthermore, they must complete financial sector reform, and liberalize capital movements. In addition, their central banks have to become fully independent and have price stability as primary objective. Actions should be taken to tackle factors that hinder the efficiency of monetary policy e.g. the volatility of money demand, the poor degree of privatization and competition in the banking sector, the non-existence of a enforceable bankruptcy law, the lack of development of money and securities markets and the problem "bad loans" in the banking sector.

Endogeneity of OCA criteria argues that suitability of European countries, both Western and Eastern, for EMU cannot be judged on the basis of historical data since the structure of these economies is likely to change in EMU. The more countries integrate with each other, the more highly correlated will be their business cycles. Therefore, if a country, failing the OCA criteria now, goes ahead and joins EMU anyway, its trade linkages and income correlation with other EMU members are likely to rise as a consequence of entry into EMU.

Keywords: EMU, OCA, integration, transition, Central and Eastern Europe, enlargement

Introduction

Intensifying debate on European Monetary Union (EMU) has provoked renewed interest in the concept of optimal currency areas (OCAs). Economists have devoted great effort into determining an appropriate analytical framework that captures the full implications of monetary unification, including the impact of real and monetary shocks, shock symmetry, labour and capital mobility, as well as fiscal adjustments.

This article consists of two parts, and we argue that neither EU-members nor the Central and Eastern European countries fully satisfy EMU criteria or Mundell's criteria for OCA. Part I briefly reviews the literature on OCAs and EMU and considers some theoretical and empirical findings. Chapter 1 reviews the theory of optimal currency areas. Chapter 2 presents empirical findings evaluating the EU's suitability for a currency area. Chapter 3 focuses on the costs and chapter 4 analyses endogeneity of OCA criteria. Finally, chapter 5 discusses macroeconomic policy coordination and efficiency in a monetary union. Part II concerns EMU membership prospects for Central and Eastern European Countries (CEECs). Greatest emphasis is placed on the first five eastern candidates for accession talks (Poland, Hungary, the Czech Republic, Slovakia and Estonia) suggested at the December 1997 Luxembourg summit of the EU Council.

Stage One of EMU started in July 1990 with the abolition of all remaining restrictions on international capital movements in EU countries. Stage Two commenced at the beginning of 1994 with the inauguration of the European Monetary Institute (EMI), the forerunner to the European Central Bank (ECB). Stage Two forbade participants from using monetary financing to cover their budgetary deficits and or granting their public sectors privileged access to financial institutions. In addition, procedures for the surveillance of economic policies by EU institutions were strengthened. Currently, it seems that there is strong enough political will to start the third stage of EMU as scheduled on 1 January 1999. On that day, the euro will become a currency in its own right and the exchange rates between the euro and the participating national currencies will become irrevocably fixed.¹

Under the Maastricht treaty, the start of EMU is conditional: warm political sentiments alone do not constitute a basis for monetary union. Countries wishing to participate in EMU must comply with a set of convergence criteria that specify interest rate levels, exchange rates, price stability and public debt. Currently, results concerning economic convergence indicate that while most EU countries have been able to satisfy the monetary convergence criteria relating to price stability, their efforts in the sphere of public debt still need to improve. Nearly all candidates will have to work hard if they want to qualify under a strict interpretation of the convergence criteria. Discussion focuses on requirements of EMU and Results of Commission country report. In addition, CEECs are evaluated in terms of openness to trade and mobility of labour. The final remarks conclude that conditions for monetary union are still not met, either in the European Union itself or in the five CEECs. Some estimates identifies potential "core" countries of EMU as Germany, France, the Benelux countries, Austria, Ireland and Finland. Spain, Portugal and Italy (despite considerable progress in convergence) still need time to consolidate their improved track records. Sweden, Denmark and Great Britain have taken political decisions to "wait and see", so convergence *per se* is not the main issue for them. While speculation as to who's "in" and who's "out" of EMU abounds, many experts feel the issue of "ins" and "outs" is moot. Even if a country presently fails to meet OCA criteria for membership, given the endogeneity of EMU criteria, it would meet OCA criteria in the future as a result of membership.

What countries in Europe would qualify in the terms of an optimum currency area? What is required for a monetary union to function effectively? What determines whether a country should join a monetary union? Once monetary union is established, how should a country coordinate its monetary and fiscal policies with other "ins" and "outs"? The uncertainties related to EMU process are such that no single forecast or study can hope to capture them fully. Assessment of pros and cons is not only complicated, but often also rather subjective. Even imaging a number of possible outcomes for EMU, new surprises, economic and political, surely await current EU members and those waiting to be accepted as members.

¹ See for example: World Economic Outlook 1997, IMF.

Part I

1.1 The Theory of Optimum Currency Areas

The academic debate on cross-country currency arrangements started in earnest after Milton Friedman (1953) argued for a worldwide flexible exchange rate system. In 1961, Mundell formulated his definition of optimal currency areas, or OCAs, according to which "currency area" is defined as a "domain within which exchange rates are fixed," yet not synonymous with a system of fixed exchange rates. In other words, Mundell made a crucial distinction between arrangements with irrevocably fixed exchange rates and systems with fixed, but adjustable rates such as the Bretton Woods System or the European Monetary System (EMS).² Mundell defined both a system of a single currency and an arrangement of national currencies with absolutely fixed parities (a monetary union). We therefore note that the discussion on optimum currency areas, while overlapping, is not quite the same as the debate over fixed versus flexible exchange rates.

On the adjustment process, Mundell suggests that when regions or countries are subject to different disturbances, asymmetric shocks; adjustment requires that real exchange rates adjust or factors of production move, or a combination of the two. In the absence of real exchange rate flexibility and factor mobility, regional or national concentrations of unemployment cannot be avoided. In a monetary union the adjustment mechanisms will rely more on factor mobility than on real exchange rate flexibility. The opposite holds for countries with separate currencies, where more of the adjustment to asymmetric shocks will take the form of real exchange rate changes than of labour mobility.

In Mundell's framework (1961), the gains from monetary unification and a common currency accrue from lower transaction costs and the elimination of exchange-rate variability. Losses arise from the inability to pursue independent monetary policies or use the exchange rate as an instrument of adjustment. The magnitude of losses depends on the incidence of disturbances and the speed with which the economy adjusts. If disturbances and responses are similar across regions, symmetrical policy

responses will be sufficient and eliminate the need for policy autonomy. (Bayomi and Eichengreen)

Brisk debate on OCAs has continued for the last three decades. To summarize, the traditional literature suggests four criteria for judging whether regions should form a currency area:

- 1) mobility of factors of production; labour and capital
- 2) flexibility of prices and wages
- 3) openness to trade
- 4) diversity of production

Regions that have relatively closed economies, narrow product ranges, strong price and wage rigidities, and low external mobility of labour and capital should not join monetary union, but should instead retain exchange-rate flexibility, assuming they have some internal factor mobility.

In the light of these criteria, several interesting empirical studies have been made to measure the EU's suitability for a currency area.

1.2 Is the EU an OCA?

In recent years, Europe and the US have often been compared in terms of qualifications for the optimal currency area. However, Eichengreen (1990) poses a fundamental question: What if North America better meets Mundell's OCA criteria than Europe, both in terms of free mobility of labour within the area and stability of relative prices? He argues that, due to significantly lower labour mobility and more variable real exchange rates, the European Community is less of an optimum currency area than North America. Thus, he foresees that establishing a viable currency union in Europe may be problematic. Without sufficient mobility of labour and exchange rate stability, Europe must develop the political and economic institutions strong enough to assure smooth operation of a currency union. He suggests fiscal federalism as a possible approach.

Grauwe and Vanhaverbeke (1991) continue the discussion of Europe as an optimal currency area, presenting evidence from regional data. Their main findings concur with Eichengreen, i.e. at the sub-national level (between regions of the same country) where monetary union can already be said to exist, labour mobility plays a distinct role in the adjustment process. In addition, although the degree of

² The EMS came into operation in March 1979.

real exchange rate flexibility between regions is limited, it appears to play some role in the adjustment process. As the EMS moves towards monetary union, the question of whether labour mobility will compensate for reduced reliance on real exchange rate flexibility becomes more important.

Grauwe and Vanhaverbeke provide two interpretations about EMU's prospects. Their *optimistic view* assumes that a low incidence of asymmetric shocks at the national level will make it possible to move ahead with monetary union without the threat of major adjustment problems. As economic integration moves forward, asymmetric shocks will become rare, and thus the adjustment costs will be even lower. Their *pessimistic view* considers that regions of the same country today are certainly more economically integrated with each other than EC countries. The observed frequent occurrence of asymmetric shocks at the regional level suggests that economic integration would not diminish the frequency of asymmetric shocks. Indeed, it may lead to major changes in the adjustment process between countries, and may force labour mobility to play a greater role than it does today.

The authors give two possible models of regional development in Europe. The Northern Model (typified by Germany) of regional development is balanced. It involves a relative large regional mobility of labour and low variations in output and employment. Thus, regional unemployment rates are relatively uniform. The Southern Model, on the other hand, is one where labour is relatively immobile, deviations in output and employment are relatively pronounced, and large regional concentrations of unemployment exist. Which of the two models of monetary union will prevail in Europe remain open for discussion. If mobility of labour between countries does not increase sufficiently, the Southern Model of monetary union could become reality. In that case, certain regions and countries in Europe might actually be harmed by participation in monetary union.

The fact that European currency area should not necessarily include all member countries has been noted in the following two studies as well. Bayomi and Eichengreen (1992) make also a comparison between the EU and the US. Again, it is found that aggregate demand and supply disturbances are significantly more typical across EC countries than across US regions. EC countries also exhibit a slower response to aggregate shocks than US regions, which reflects lower factor mobility. These

results again suggest that the EC would find it more difficult to operate a monetary union. Furthermore, research findings strengthen the case for policy autonomy and suggest that significant costs may be associated with its sacrifice. Given the results mentioned, monetary union in Europe, if established, could look like following: A core of EC countries would be made up of Germany, France, Belgium, the Netherlands and Denmark. They experience shocks of similar magnitude and cohesion as the US regions. Therefore, Germany and its immediate EC neighbours come much closer than the community as a whole to representing a workable monetary union along American lines.

In their subsequent study, Bayoumi and Eichengreen (1994) present a similar result. They give three sets of countries that face similar underlying disturbances and represent plausible candidates for monetary unification:

- A Northern European bloc consisting of Austria, Belgium, Denmark, France, Germany, the Netherlands, and possibly Switzerland;
- A Northeast Asian bloc of Japan, Korea and Taiwan; and
- A Southeast Asian bloc including Hong Kong, Indonesia, Malaysia, Singapore, and possibly Thailand.

In Western Europe, where adjustment tends to be sluggish, Germany and her immediate neighbours (other than France) display the speediest responses. They conclude that a European monetary union might run more smoothly if limited to a subset of EU members.

As mentioned, Mundell's second criterion for an OCA was stability of relative prices. Bayoumi and Thomas (1994) focus on the empirical relationship between fluctuations in relative prices and real output across the European Union and across regions of the US. In particular, they examine relative prices at the regional level, arguing that the importance of relative prices in reducing output fluctuations (particularly in the short run) depends on the integration of regional goods markets and factor markets. If regional goods and factor markets are highly integrated, they contend, relative price changes in response to disturbances will be relatively small. The results suggest that relative prices are more important for adjustment within the EU than within the US, which has better integrated markets than the EU. In the long run, increasing integration

of EU goods and factor markets should reduce the need for large movements in relative prices. With EMU, the EU is thus likely to reduce the short-run flexibility of relative prices, making it more costly and more difficult to adjust to underlying disturbances. The authors end by suggesting that the EU is unlikely to achieve the levels of integration of US in the immediate future. Shorter-run distorting relative price adjustments can probably be best avoided by reducing the size of disturbances in demand for regional products; for example, through coordination of domestic aggregate demand policies across EU countries.

The political reasoning behind currency unions has been touched upon by Ghosh and Wolf (1994), who examine the marginal benefits of increasing the number of currency unions within a given geographical area. Their study considers six regions: the US, Europe, the G-7, the CFA zone in Africa, the Former Soviet Union (FSU) and the world at large. They argue that countries have decided to share their currencies in part due to historical accidents and political reasons. For example, the rapid disintegration of the rouble zone, the stability of the US dollar zone and the move towards EMU, cannot be fully understood without taking into account non-economic objectives. Further, regions considering adoption of a common currency should first try to identify optimal members of smaller unions. These smaller unions could later be linked if the correlation of shocks, or factor mobility, become sufficiently high. Their conclusions concur somewhat with Eichengreen (1990). Neither Europe nor US are seen to constitute an optimum currency area, for both regions the cost of adopting a single currency exceeds estimates of the transaction cost savings. Further, countries such as Germany and the US will almost never find it to their (economic) advantage to join monetary unions. This is a notable conclusion in light of Germany's intensely active role in the first and second stages of EMU.

Bayomi and Prasad (1995) examine data on real output, employment and productivity in the US and eight European countries. The focal points are the role of sectoral, regional and aggregate shocks in economic fluctuations and labour market adjustment to such disturbances. They also argue that a major difference between the US and the EU can be seen in labour market adjustment to shocks. In the US productivity trends are dominated by industry-specific factors, whereas in the EU, productivity trends are mostly determined by country-specific

factors. It is suggested that the US has a much more integrated labour market, either because of, or reflecting, the single currency. Results of the study also find that interregional flows of labour constitute an important adjustment mechanism in the US labour market. In Europe, labour flows across countries do not play an important role as an adjustment mechanism, which suggests that large wage differentials across European countries might remain after EMU. Further, if labour mobility remains modest, wage differentials across countries will have to remain flexible in order to avoid country-specific disturbances in EMU.

A challenging view is presented by Gros (1996), who questions the traditional roles of external shocks and labour mobility. He suggests that there are conceptual and empirical flaws in the way the optimum currency area approach has been used in EMU studies. The external shocks emphasized by the standard Optimum Currency Area approach (i.e. shocks to exports) have surprisingly little influence on employment and unemployment in EU most member countries, regardless of whether or not exchange rates are fixed. Instead, short-term exchange rate variability (but not the level of the exchange rate) seems to have a substantial negative impact on employment.

While other studies consider a high degree of international labour mobility as a precondition to monetary union, Gros argues that what matters is the difference between interregional and international labour mobility – not the level of international labour mobility *per se*. Notably, the EU fulfils this criterion. Recent data shows that international labour mobility in Europe is of the same order of magnitude as interregional labour mobility within member countries. International labour movements in the EU (especially immigration from third countries) have now increased to a point where they are comparable with the interregional migration within member countries. Thus, EMU should not be more difficult to manage than existing monetary unions in Europe that member states currently represent. Reducing barriers to labour mobility remains, of course, desirable at any rate and making the housing market more flexible could contribute considerably to this goal.

Taylor (1995) finds the evidence on the EU as an optimal currency area somewhat contradictory. While some evidence supports the view that the EU could form a viable monetary union, there is no clear indication that such a union would be optimal.

Whereas the core of the EU, comprising the smaller economies clustered around Germany, and possibly France, might well take smoothly to EMU, potentially serious questions surround the candidacies of others, especially the large peripheral economies (Britain, Italy and Spain).

Several of the above researchers also note that empirical evidence inevitably reflects past experience, whereas the European economies are changing under the stimulus of the Single Market and the prospect of EMU. Taylor makes comparison with the US, arguing that real wages seem more rigid in Europe than in America. However, the US may be able to survive as a currency area without extreme tensions only because it has other mechanisms of economic adjustment, particularly federal fiscal policy. Since the EC lacks those central mechanisms, it may have greater need for exchange-rate flexibility.

In his conclusion, Taylor presents some of the criteria used when a country is deciding whether to join EMU. For those who see EMU as a stepping stone to political integration in Europe, the message is clear – the economic implications of EMU are attractive.

For those not intent on European political integration, the case for EMU on its economic merits alone is much more open. Those who lack trust that national authority will manage to pursue a successful monetary policy in the long run see EMU as a persuasive alternative only if they are confident that their own economy and those of other candidates have converged closely in both real and nominal terms and are not subject to major structural weaknesses. Those who have faith that national authorities to run monetary policy successfully face a more difficult choice. There may, after all, be genuine advantages in retaining monetary sovereignty outside EMU, even at the cost of living with more exchange-rate uncertainty and higher costs. The European country which has least to gain and most to lose economically from pooling monetary sovereignty is Germany. Without strong political objectives it would be hard to see why Germany should be interested in joining EMU, beyond gaining the modest benefits that currency stability with its main trading partners would bring.

Basically, most lines of argument contend that in Europe labour is less mobile and exchange rates vary more than in the US. Therefore, European countries considering a monetary union, need to find additional tools of adjustment. Fiscal stabilizers

are often presented as the alternative policy tool of choice.

Bayomi and Masson (1997) focus on the issue of fiscal stabilizers which, in addition to labour mobility and wage flexibility, represent potential ways of reducing the impact of cyclical disturbances across regions of EMU. The research compares the impact of changes in federal fiscal deficits on private consumption with that of changes in fiscal deficits at lower levels of government. Their results indicate that shocks are cushioned more effectively by federal fiscal policy that is nondebt-creating and involves a degree of redistribution across provinces. However, problems in implementing fiscal stabilization at the EU level are acknowledged. Also, fiscal federalism might be opposed for political reasons, general issues of sovereignty or because it would involve persistent transfers of revenue from some countries to others.

Beetsma and Bovenberg (1997), on the other hand, argue that monetary unification without fiscal coordination among decentralized fiscal authorities may actually *reduce* the inflation bias and the bias towards public spending. Further, the larger the number of union participants, the larger the reductions. With fiscal policy coordination, each fiscal player internalizes the effects of its actions on the other fiscal players. The benefits of raising taxes for the purpose of higher inflation are correspondingly higher. Fiscal coordination thus strengthens the strategic position of the fiscal authorities against the common central bank and leads to the same outcomes as national policy making outside a monetary union. Hence, fiscal coordination eliminates the disciplining and potentially welfare-enhancing effects of monetary unification. This provides an argument for applying the subsidiarity principle, i.e. independent fiscal policies to fiscal policy making within a monetary union.

1.3 The Costs and Benefits of a Currency Area

McKinnon (1963) argues that the gains from unification are likely to be an increasing function of the openness of the constituent economies to intraregional trade, because openness reduces transaction costs.

Melitz (1993) focuses on three issues: the benefits of enlarging a currency area, the costs of such an enlargement, and dealing with the measure of the currency area. His study combines the theory of optimum currency areas with macroeconomics and trade. Following McKinnon, he notes that the benefits of widening a currency area are linked to a reduction in transportation costs. As the size of a monetary union expands, transportation costs progressively disappear. With lower unit sales costs, aggregate trade expands within the union. The trade creation takes place in all relevant dimensions: quantities of currently traded goods, kinds of traded goods, and varieties of differentiated goods. The rise in national trade leads to a rise in welfare. This welfare improvement progressively diminishes as the size of the monetary union grows due to diminishing marginal social utility of income. The costs of enlarging a currency area, in turn, are related to a reduction in the speed of adjustment of the terms of trade. In this respect, two assumptions are made:

- The desire for permanent inflation is identical everywhere, and
- Prices in goods and factor markets are sticky (otherwise the exchange rate would make little difference for trade adjustment).

Thus, the costs of monetary union must depend on the composition of the union. High levels of intra-industry trade inside the union indicates that the union partners have similar industrial structures, so fewer changes in the terms of trade with the other members will be required, and trade adjustment will be facilitated. Also, low ratios of non-monetary sales costs to trade inside the union would mean that the members are closer geographically, culturally and legally. This too could facilitate trade adjustment and lower the costs of monetary union. Third, in a monetary union, the union currency's exchange rate will respond to the equilibrium real exchange rate inside the union, rather than to that of the single country alone. Therefore, exchange rate movements can reflect conditions elsewhere in the union and not at home. Finally, in respect of the size of a currency area, the optimal choice of union implies a rising marginal cost of monetary union. This is due to a fact that with larger size, the best union partners will progressively worsen in quality. Rising marginal cost, together with the diminishing marginal benefits of monetary union, will cause an optimal currency area size to arise. Finally, it is

suggested that instead of asking whether a set of countries form an optimum currency area, one should ask whether the relevant currency area would be welfare-improving for everyone.

The issue of costs and benefits of currency union is also discussed in one of the studies by Gros (1996). The paper highlights problems and prospects while moving towards Economic and Monetary Union. The main outcome of the research is that Economic and Monetary Union is still considered desirable and can be reached by 1999. The crises that rocked the EMS in 1992 and the turbulence experienced by financial markets in 1995 should not be viewed as evidence that EMU is impossible or undesirable. On the contrary, they indicate that without EMU, there could be a continuation of financial market instability and excessive exchange rate variability, which has a negative effect on growth and might even endanger the single market. Further, Gros argues that observation of the convergence criteria should be regarded as desirable because they represent sound economic policy. Since it seems unlikely that all member countries will fulfil the convergence criteria by 1997–98, some form of variable geometry is unavoidable in the monetary field. Variable geometry might create difficulties if financial markets assume that exclusion from the "core" group that forms EMU in 1999 will lead to a slowing in convergence. To minimize this risk, countries that cannot participate in the first wave should clearly indicate that they will continue, and perhaps even increase their convergence efforts to be able to join EMU. This, however, might not be sufficient and, therefore, some exchange rate mechanism would still be useful to limit exchange rate variability and misalignments of the currencies outside EMU.

Gros and Steinherr (1997) also concentrate on factors that determine the costs of monetary unification. However, their study shows that the widely accepted presumption that costs decrease with openness is wrong. In particular, authors concentrate on the question whether the costs of losing the exchange rate adjustment instrument increase with the degree of openness. It is argued that, for domestic real shocks, a higher degree of openness diminishes the impact of a given shock on domestic demand and output. Hence, the cost of fixing the exchange rate diminishes if the main source of shocks is domestic. As this is true only from the point of view of the country concerned, it is suggested that to estimate the importance of the exchange

rate as an adjustment instrument, one should not look only at the degree of openness, but also at the combination of the degree of openness and a measure of the importance of external shocks. Finally, the authors stress that instead of automatically assuming that net costs are strictly decreasing with openness, one should be critical.

Luca Ricci (1997) investigates the circumstances under which it is beneficial to participate in a currency area. His paper presents a monetary model of trade (with nominal rigidities) which allows for a simultaneous consideration of the monetary and real arguments suggested by the literature on optimum currency areas and monetary integration. As has been observed in this section, it is quite impossible to find a rule of thumb for the identification of an optimum currency area. The results of the research are in line with most but not all of the arguments proposed by the literature. The study underscores the following points which stem from the model:

- The results challenge the conventional argument that more open economies are better candidates for a currency area. More open economies would gain monetary stability by joining a currency area only if the economy under consideration is less monetarily stable than the other members of the currency area.
- When monetary shocks are negatively correlated, both countries gain monetary stability from the currency union. In this case, the more open economy the greater the gains. The model also gives a regional dimension to the traditional macroeconomic trade-off between inflation and unemployment (such a regional aspect was already noted by Mundell 1961).
- In a currency area experiencing downwards nominal rigidities and labour immobility, trade shocks lead to inflation in one region and unemployment in the other. In this setting, unemployment in the second region could be eliminated by allowing further inflation in the first region. This could be done, for example, through monetary expansion.
- The introduction of nontraded goods plays no role in the evaluation of the cost-benefit analysis of a currency union. The crucial measure of the openness of a country is the share of domestic expenditure on foreign goods compared with that on domestic goods.

Thirty-five years after the publication of his 1961 article on optimum currency areas, Robert Mundell comments in an IMF paper (1997) on the current relevance of the subject. He lists several criteria both against and for joining an OCA as well as presents the probabilities of various EMU scenarios, (see tables 1 and 2).

1.4 Endogeneity of OCA criteria

According to the Maastricht Treaty, the start of EMU is conditional. As a consequence, countries wishing to join EMU must fulfil the convergence criteria on interest rate, exchange rate and price stability, and public debt convergence. The following tables list progress, current situation and future forecast in the current EU-member states in respect of each convergence criteria and in comparison with the target/reference values. Referring to the tables 3. and 4., it seems that the majority of the EU-countries satisfy the monetary convergence criteria to price stability whereas more efforts are needed where public debt is concerned.

EMU convergence criteria discussion includes a fascinating aspect, known generally as the "Lucas Critique." Simply stated, it says that OCA criteria are jointly endogenous, and thus the suitability of European countries for EMU cannot be judged on the basis of historical data since the structure of these economies is likely to change in EMU.

For example, two studies by Frankel and Rose (1996) focus on endogeneity of OCA criteria, and argue that the more countries trade with each other, the more highly correlated will be their business cycles. The pattern of income correlations is likely to change as well. As a result, EMU entry per se, for whatever reason, may provide a substantial impetus for trade expansion. This, in turn, may result in more highly correlated business cycles. Therefore, a country is more likely to satisfy the criteria for entry into a currency union *ex post* than *ex ante*. In other words, the OCA criteria are endogenous and they can change over time.

These results are presented using the case of Sweden. An econometric analysis of the relationship between the pattern of countries' income correlations and the intensity of their trade links is used. The findings suggest that Sweden is more likely to satisfy the OCA criteria in the future than it does

Table 1 The case for and against joining an OCA

Circumstances under which a country might decide **against** joining a fixed exchange rate zone or a currency union

- 1) achieve an inflation rate different from the currency area rate
- 2) use the exchange rate as an instrument of employment policy; to lower or raise wages
- 3) use the exchange rate as an instrument to capture employment from other countries
- 4) fears that the addition of another currency will complicate national macroeconomic policy making
- 5) use the money expansion or inflation tax to finance government spending
- 6) the country, especially if it is large, does not want to sacrifice seigniorage from the use of its money as an international means of payment
- 7) government members want to use seigniorage as a source of hidden or off-budget funding for personal use by members of a corrupt dictatorship or naive democratic government
- 8) a regime of fixed exchange rates could conflict with the required policies of a central bank that had a constitutional mandate to preserve price stability
- 9) monetary integration with one or more other countries would remove a dimension of national sovereignty that is a vital symbol of national independence
- 10) optimize the currency denominations appropriate to its per capita income (would be relevant only in the case of currency unions, not fixed rates)
- 11) maintain monetary independence to use the money-expansion or inflation tax in the event of war
- 12) protect the secrecy of its statistics
- 13) there is no domestic political or economic leadership capable of maintaining a fixed exchange rate system in equilibrium
- 14) the political authorities cannot achieve budget balance and/or establish confidence in the permanence of budgetary equilibrium or the viability of fixed exchange rates
- 15) the partners in the prospective currency area are politically unstable or prone to invasion by aggressor countries
- 16) the partner countries are poorer and will expect aid, "equalization payments", or otherwise an unduly large proportion of the OCA's expenditures
- 17) unwillingness to accept the degree of integration implied by the OCA agreement, such as common standards, immigration, labour, or tax legislation

The reasons **for** a country to join an OCA

- 1) gain the inflation rate of the OCA
- 2) reduce transaction costs in trade with a major partner
- 3) eliminate the cost of printing and maintaining a separate national currency
- 4) participate in a purchasing power parity area, which would be fostered by fixed exchange rates and even more by monetary union
- 5) establish an anchor for policy, a fixed point around which expectations can be formulated and policies can revolve
- 6) remove discretion from monetary and fiscal policy authorities
- 7) keep the exchange rate from being kicked around as a political football by vested interests that want depreciation to boost profits or to bail out debtors
- 8) establish an automatic mechanism to enforce monetary and fiscal discipline
- 9) create a multinational cushion against shocks
- 10) participate more fully and on more equal terms in the financial center and capital market of the union
- 11) provide a catalyst for political alliance or integration
- 12) establish a power bloc as a countervailing influence against the domination of neighbouring powers
- 13) share in the political decision of determining the OCA's inflation rate
- 14) establish a competing international currency as a rival to the dollar and earn seigniorage
- 15) reinforce or establish an economic power block that will have more clout in international economic discussions and have greater power to improve, by its trade policy, its terms of trade
- 16) delegate to a mechanism outside the domestic political process the enforcement of monetary and fiscal discipline
- 17) participate in restoring a reformed world monetary system

Table 2 **The Probabilities of Various EMU Membership Scenarios**

- 80 % – a core group including both Germany and France form a monetary union
 60 % – the union includes Germany, France, Austria, Netherlands, Belgium, Luxembourg, Denmark, Ireland and Finland
 30 % – the above countries join and are joined by Sweden, Portugal, Spain and Italy
 15 % – the above countries join and are joined by Britain
 10 % – all countries, including Greece, join

Source: Mundell R. 1997.

Table 3 **EMU convergence criteria**

	Inflation			General govt. balance to GDP		
	1996	1997	1998	1996	1997	1998
Germany	1.5	1.9	2.3	-3.6	-3.1	-2.9
France	2.0	1.1	1.3	-4.1	-3.2	-3.2
Italy	3.9	1.8	2.1	-6.7	-3.2	-3.0
United Kingdom	2.9	2.6	2.7	-4.7	-2.0	-0.6
Spain	3.5	2.0	2.2	-4.4	-3.0	-2.6
Netherlands	2.1	2.3	2.3	-2.3	-2.1	-1.8
Belgium	2.1	1.6	1.9	-3.2	-2.8	-2.9
Sweden	0.8	1.0	2.0	-2.5	-2.1	0.0
Austria	1.9	1.5	1.6	-3.9	-2.5	-2.5
Denmark	2.2	2.5	2.6	-1.4	0.5	0.5
Finland	0.6	1.3	2.3	-3.1	-1.9	-0.4
Greece	8.2	5.7	4.7	-7.4	-4.7	-4.1
Portugal	3.1	2.2	2.3	-4.0	-2.9	-2.9
Ireland	1.6	1.7	2.1	-0.9	-0.8	-0.8
Luxembourg	1.8	2.0	2.0	-0.1	-0.1	-0.1
All EU	2.5	1.9	2.2	-4.3	-2.8	-2.3
Reference value	2.5	2.6	3.1	-3.0	-3.0	-3.0

Source: World Economic Outlook 1997.

Table 4 EMU convergence criteria

	Gross govt. debt to GDP			Long-term interest rates
	1996	1997	1998	August 1997
Germany	60.7	62.2	62.7	5.7
France	55.4	57.7	59.2	5.6
Italy	123.8	122.9	121.2	6.6
United Kingdom	53.8	54.5	52.4	7.1
Spain	69.8	69.0	68.2	6.2
Netherlands	78.0	73.6	71.2	5.5
Belgium	127.4	125.1	122.8	5.7
Sweden	77.7	77.1	73.9	6.5
Austria	70.0	68.0	67.6	5.7
Denmark	69.9	66.4	63.2	6.2
Finland	58.8	59.4	57.9	5.8
Greece	111.8	108.0	104.2	9.6
Portugal	66.0	62.9	61.7	6.3
Ireland	72.8	67.5	65.0	6.3
Luxembourg	5.9	5.7	5.5	6.0
All EU	73.5	73.5	72.9	6.2
Reference value	60.0	60.0	60.0	8.0

Source: World Economic Outlook 1997

now for two reasons:

- The ease of movement of trade and people between Sweden and the rest of Europe will be higher in, say, 2020 than it is now, simply because Sweden's accession to the EU will take some years to reach its full effect. As a result, Sweden's income will be more highly correlated with Europe's income in the future than it is now.
- If Sweden, despite failing the OCA criterion now, were to go ahead on political grounds and join EMU anyway, its trade linkages and hence income correlation with Europe are likely to rise as a consequence of entry into EMU.

Apparently, endogeneity is an important empirical issue in determining whether it is in a country's interest to join EMU. One could also interpret it as such that the discussion about EMU "ins" and "outs" is, to some extent, irrelevant since every country will, at some point, satisfy the convergence criteria once it is part of EMU.

1.5 Macroeconomic Policy Coordination and Efficiency in a Monetary Union

From the beginning of 1999, the ECB will most likely to start to operate and will decide on which particular monetary policy strategy is best for achieving the objective of price stability. Currently, the European Monetary Institute (EMI), the forerunner of the ECB, has made and will continue to make preparations. So far, the options for monetary policy have been narrowed into two: targeting inflation and targeting a monetary aggregate. At the moment, it is difficult to say with full certainty how macroeconomic policy will be coordinated in the future EMU and how efficient the future monetary union will be. Nevertheless, these questions have been discussed and some preliminary decisions as well as suggestions have been made.

Barrell and Whitley (1992) deal with macroeconomic policy coordination in Europe, the exchange rate mechanism and monetary union. Their study makes a comparison between two major model simulation studies of monetary union, those done by the EC Commission and by Minford and

Associates. Although authors do not find a very strong case for EMU, the EMS comes off as much less of an engine of instability than implied by the studies of Minford and Associates. They also use a welfare cost measure with components of output, price, real interest rate and real exchange-rate variances to suggest that the best regime for the EC would be floating with monetary policies coordinated, for example, within an EC-wide coalition. Despite this result, it is noted that EMU will most likely go ahead and reasons behind it are suggested to be more political than economic. In addition, three typical alternative choices of monetary policy are discussed, i.e.

- an interest-rate rule which targets *inflation* and real output.
- *money targeting*, and
- *nominal income targeting*.

They argue that a proper comparison of the different exchange-rate regimes should involve the adoption of the most appropriate monetary policy for that regime. Therefore, monetary policy may, and should, vary across the alternative exchange-rate regimes. Further, their results suggest that nominal income targeting is more favourable for floating whereas the reverse may hold for fixed money supplies.

John Arrosmith (1995) highlights some of the issues concerning a two-tier EMU, with some EC countries participating in Stage Three, would function and what implications there might be for those remaining in Stage Two. It is possible to imagine at least a core group of five or six, consisting of Germany and France as well as several smaller countries, constituting a reasonably coherent and viable economic and monetary grouping. On the other hand, experience with the ERM over the past few years suggests, that even for a fairly well-matched group of countries the operation of a common monetary policy may at times give rise to economic strains and political tensions. Policy directed towards price stability across the union may not always meet the immediate domestic concerns of a particular member of the union.

In addition, with two-thirds of the Community's trade in goods taking place between the Member States and trade with the rest of the world accounting for only 8 % of GDP, there is a danger that a monetary union will become inward-looking. Also monetary relations between the members of the

union and those members of the Community who remain outside could become much more asymmetric than they are at present. The incentive for the inner group to take into account the interests of those in the outside ring may considerably be reduced. It will be seen whether there will be strong enough cooperation between those who have entered Stage 3 and those who remain in Stage 2. In other words, it is not clear that institutional and legal framework established for a Stage 2 in which all Member States participate will be adequate when some members have moved on to a much greater degree of integration. Finally, it is suggested that participation by the United Kingdom in a move to Stage 3 in 1999 could add considerably to the economic and political substance of the union.

Persson and Tabellini (1996) also analyse how monetary policy in Stage Three of EMU might be coordinated between the ins and outs, comparing inflation targeting and money targeting approaches. They argue that a generalized system of inflation targets at the European level has several merits. It restores domestic credibility to a low inflation policy, which makes monetary cohabitation easier by reducing the volatility of the speculative shocks to the exchange rate. In other words, it forces monetary policy to respond automatically to various macroeconomic shocks. This stabilizes the real exchange rate and distributes shocks symmetrically across countries. It also rules out deliberate attempts to gain competitiveness through devaluation.

How then could a European system of inflation targets be implemented in practice? Persson and Tabellini suggest that all countries in the European union would have to participate, and they would have to announce precise quantitative targets for a well-defined measure of inflation. The targets would not have to be exactly the same, but would have to satisfy certain restrictions. Meeting the inflation target would be largely the responsibility of the individual national central banks, which would be largely independent from government and political interference. All in all, a major reason for institutionalizing inflation targets at the EU level rather than at the national level is precisely because of the desirable repercussions it would have on the exchange rate. But, they argue, exchange rate stability ought to be the result of successful monetary policies, rather than the explicit target of policy.

Under the inflation target regime, monetary policy coordination is achieved by setting up an institution that creates appropriate incentives.

Within that institution, national banks are free to determine policy in a decentralized and discretionary fashion. Such an approach to policy coordination is more likely to be incentive compatible, and hence to last over time, than ambitious attempts to explicitly target the exchange rate in a world of free capital mobility.

Bofinger (1994) concentrates on the efficiency of monetary policy under a currency union and under systems with adjustable exchange rates. This "monetary approach" to the theory of optimum currency areas leads to several new criteria for the delimitation of optimum currency areas. A monetary union can be superior to national currency areas not only in terms of transaction and information costs, but above all in terms of the credibility of monetary policy, the response to asymmetric monetary shocks, and the efficiency of monetary targeting and of monetary policy instruments. The thrust here is that the credibility of monetary policy can be strengthened by the expansion of currency domains beyond the size of national states. Furthermore, the transfer of monetary policy responsibilities to the supranational level reduces the influence of national policy makers. Finally, in areas without internal borders for financial market activities, a common currency area increases the efficiency of monetary targeting and monetary policy instruments.

Krueger, Laxton and Razin (1997) attempt to model EMU under various monetary policy regimes. Three groups of countries are distinguished. The first group includes the "ins", those participating EMU from the start. The second group is formed by the "pre-ins", those not participating EMU from the beginning, but joining an ERM-type exchange rate arrangement that ties their currencies to the euro. Finally, the third group consists of those not joining EMU and pursuing an independent monetary policy. By using the macroeconomic analytical framework (MULTIMOD; Masson, Symansky and Meredith, 1990), the paper investigates the implications of different shocks and policy rules. A simulation exercise is run for each of the three groups and the results suggest that in case of "ins", it is assumed that the ECB will follow a monetary policy regime that would be broadly similar to that of the German Bundesbank. This would mean setting short-term official interest rates that are determined by two components: deviations of expected inflation from the target rate, and deviations of output from "potential". The authors also suggest that the ECB would follow the Bundesbank's style of reacting more

strongly in the case where inflation is expected to be higher than the target rate. It is also assumed that the ECB follows a similar rule in influencing the short-term interest rate. Finally, in terms of monetary rule for the ECB, the output level and output gap will refer to the combined (weighted) values for all ins. In respect of monetary policy rule for "pre-ins", it is suggested that these countries will set their short-term interest rates according to a reaction function where short-term interest rates are adjusted to limit fluctuations of a country's exchange rate vis-à-vis the euro and its ERM-2 central parity rate. Finally, countries that are not participating in EMU or ERM-2 are assumed to follow an independent monetary policy and their monetary policy is modelled to follow a money supply rule.

In addition to the mentioned alternatives, the Maastricht treaty itself also has something to say about monetary policy in the future EMU. According to the Treaty, central banks are required to be independent and pursue price stability as a goal. Moreover, inflation is one of the convergence criteria. It makes inflation convergence an overriding objective for monetary policy, it forces each central bank to give that objective operational and quantitative contents and announce it clearly in advance. Maastricht Treaty also contains two references to the exchange rate. It says that the exchange rate is a matter of "common interest". And exchange rate stability, in the sense of no realignments, is one of the convergence criteria. It is important to note that the interpretation of this criterion is still disputed, since the EMS has changed drastically after the treaty was signed.

Part II

2.1 CEECs and EMU – An Introduction

Currently, enlargement and EMU are the main challenges faced by the European Union. In July 1997, the European Commission published the "Agenda 2000, For a Stronger and Wider Union". Together with the opinions on each application for accession, the Agenda 2000 outlined perspectives for the development of the Union and its policies beyond the turn of the century, the horizontal issues related to enlargement, and the future financial framework beyond 2000 taking into account the

prospect of an enlarged Union. After finalizing the country reports of Central and Eastern European countries ("Commission's Opinions"), the European Commission recommended starting membership negotiations (1998) with Poland, Hungary, Czech Republic, Slovenia and Estonia. The EU Council approved the European Commission recommendation at the Luxembourg summit on 12–13 December 1997. In addition, it was agreed that preparatory talks will be started with Slovakia, Latvia, Lithuania, Bulgaria and Romania.

In terms of enlargement and EU membership, the applicant countries are obliged to satisfy three rather broadly formulated requirements set in the Copenhagen Summit 1993:

- stability of institutions, guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities,
- a functioning market economy as well as capacity to cope with competitive pressure and market forces within the Union,
- demonstrate an ability to take on the obligations of membership, including adherence to the aims of economic and monetary union.

The last requirement makes clear that EU accession does neither require fulfilment of the convergence criteria of EMU nor imply the immediate adoption of the euro as the single currency. In other words, the convergence criteria are not accession criteria. The new eastern member states, once being accepted, will have to share the aim of monetary union, but they are not obliged to satisfy the convergence criteria at the time of accession.

At the moment, the CEECs have not yet completed their transition to a market economy although significant progress has been made. Furthermore, enlargement negotiations with candidate countries are still to come and will most likely take several years. As a consequence, it may seem too early to even talk about CEECs and EMU at the same time. It may also seem quite premature to examine the performance of the candidate countries with respect to EMU convergence criteria. However, the criteria as such do represent good economic goals. They also give some information about economic policy making in general. In case of the Central and Eastern European Countries, they can reflect results of implemented political, legal and economic reforms as well as serve as long-term goals for their policy making. Therefore, convergen-

ce criteria could be used as complementary measures in addition to the Copenhagen criteria and others measuring progress in transition, stabilization as well as suitability to join EMU.

All in all, by the time of first enlargement, the third stage of EMU will have commenced. This will mark important changes for all Member states, including those that do not participate in the euro area. Therefore issues related to requirements, possibilities, benefits and risks of Central and East European countries in respect of the monetary integration must be maintained under discussion.

2.2 Requirements of EMU and Results of Country Reports

In its Opinions, the Commission analyses country's readiness for membership in terms of political criteria, economic criteria, an ability to assume the obligations of membership and administrative capacity to apply community legislation. Regarding to EMU, full participation means that the convergence criteria must be fulfilled on a permanent basis. It also means that autonomy in the management of monetary and exchange rate regime policies will be completely transferred and handed over. Furthermore, participating countries will be required to respect "The Stability and Growth Pact", which makes more precise how surveillance of fiscal positions will be carried out in stage 3. Countries must also renounce any direct central bank financing of the public sector deficit and to have completed the liberalization of capital movements.

Generally speaking, if the CEECs are to assume the obligations of the monetary union, the successful conclusion of systematic transformation and market oriented structural reforms is essential. Commission's country reports indicate that regarding the challenges of the monetary union, a lot of work still needs to be done. At present, Eastern European candidate countries should concentrate on maintaining their commitment to stabilization and on developing further modern monetary and fiscal policies. Furthermore, they must complete financial sector reform, and liberalize capital movements. Once they have become a part of the Union, but not yet a part of the euro area, their central banks have to be independent and have price stability as primary objective. Monetary policy must be conducted with market-based instruments and has to be effi-

cient in transmitting its impulses to the real economy. Currently, actions should be taken to tackle factors that hinder the efficiency of monetary policy e.g. the volatility of money demand, the poor degree of privatization and competition in the banking sector, the non-existence of an enforceable bankruptcy law, the lack of development of money and securities markets and the problem of "bad loans" in the banking sector. Finally, as a part of the EU, the new members will have to coordinate their exchange rate policies with that of euro area. In particular, they should be able to avoid excessive fluctuations of their exchange rate, because it can endanger the functioning of the single market. In this respect, a formal exchange rate arrangement "ERM2" has already been agreed within the EU. According to the arrangement, EU countries outside the euro area that wish to participate in a new exchange rate mechanism will have central rates for their currencies expressed in euro and with $\pm 15\%$ fluctuation bands.

The following discussion focuses on the ability of CEECs (Poland, Hungary, the Czech Republic, Slovenia and Estonia) to assume the obligation of the monetary union. Particular attention is drawn to the central bank independence, foreign exchange regime, liberalization of capital movements, financial sector reform and monetary policy.

In *Poland*³, the Central Bank is not formally independent from the government in the conduct of monetary policy. It is independent only in terms of the appointment of the Governor. The formal objective of the central bank is the strengthening of the currency. At present, the central bank law is still far from being compatible regarding to complete prohibition of central bank budget deficit financing. Although, monetary policy in Poland has been successful in reducing the inflation rate, monetary policy measures are hard to effect due to its segmented, state-dominated banking sector. For example, at the end of 1996 the state owned about 50 % of the total share capital of the commercial banks. In addition, bankruptcy procedures have been difficult to implement and the banking sector still suffers from low competition. One indicator of inadequate competition is the quite large spread between

deposit and credit interest rates. The spread is assumed to remain as long as banks have bad loan problems. At the end of 1996, the total share of bad loans was estimated at 6 %.

The Warsaw Stock Exchange was established in 1991, but the number of companies listed has remained rather small. Treasury bonds dominate in the bond market whereas the market for corporate bonds is less developed. Overall, the money market is at an early stage of development although its size and liquidity has increased in recent years. In Poland, the exchange rate regime is a crawling peg. The Polish zloty is fixed against a basket of currencies with fluctuations bands ($\pm 7\%$) around central parity and the central rate is devalued every month by 1 %. The width of the bands has often been widened and it seems that increased flexibility of the exchange rate has helped to stop speculative capital inflows and slow down inflationary pressures. Since 1995, the exchange rate has been stable and remained within target limits.

With respect to movement of capital, the Polish zloty was made convertible for trade transactions in 1991, and it achieved full current-account convertibility in 1995. However, some restrictions still exist on cross-border capital transactions. All in all, liberalization of capital movements has been gradual starting from medium and long-term capital followed by the abolition of restrictions on short-term capital. At present, direct investment, commercial credits and loans and personal capital movements have been completely liberalized. Partial liberalization has been introduced on real estate investments, operations in securities and the admission of securities to foreign and capital markets. The remaining restrictions on capital movements will be removed in steps. By the end of 1998, the rest of the medium and long-term capital movements are to be liberalized and by the end of 1999, all short-term capital movements will be removed.

In *Hungary*⁴, the Central Bank is formally independent from the government although changes in the government have often led to changes of bank governors also. The law of the central bank does not clearly set price stability as a primary objective. However, since 1995 stabilization package, the

³ Commission of the European Communities, Commission Opinion on Poland's Application for Membership of the European Union, Brussels, 15.7.1997, COM(97) 2002 final.

⁴ Commission of the European Communities, Commission Opinion on Hungary's Application for Membership of the European Union, Brussels, 15.7.1997, COM(97) 2001 final.

objective of Hungarian Central Bank has been to control inflation. Recent changes in the central bank law have almost fully eliminated the possibility of budget deficit financing by the central bank.

Regarding to success of the monetary policy, inflation has been reduced to some extent. Furthermore, transition towards a market based monetary policy seems to develop well. The Hungarian central bank uses indirect instruments only to control the money supply. Reforms in the banking sector have included, among others, privatization as well as better credit assessment and lending practices. However, the sector is still highly concentrated which hinders the competition and keeps large spreads between deposit and lending rates. Nevertheless, bank privatization has lately proceeded at a rather fast pace with considerable participation by foreign investors. Bad loans have been reduced and bankruptcy law is implemented quite effectively.

The market of government papers is well developed and represents one of the best in the eastern region. The corporate bond market, in turn, is not developed. The Budapest Stock Exchange began to operate in 1990, and the securities market increasingly provides companies with an alternative source of finance to bank loans.

The central bank has adopted a crawling peg exchange rate policy, where the Hungarian Forint is devalued each month by a fixed, pre-announced rate against a basket of currencies. Since March 1995, the exchange rate has played an important role in the stabilization programme, reducing inflation and preventing speculative capital inflows.

As regards capital movements, the Hungarian forint has been fully convertible for current account transactions since the beginning of 1996. In January 1996, a new Foreign Exchange Act also came into force; it has largely contributed to liberalization of capital movements. The new law partially liberalized long-term capital movements whereas the obligation for authorization for short-term capital transactions was maintained. In particular, restrictions were moved on outward direct investment, personal capital movements and granting of trade credits. All in all, full liberalization of capital transactions can be expected within two years.

In the *Czech Republic*⁵, the central bank is largely independent from the government, but accountable to Parliament. The official objective of the Czech National Bank is to ensure the stability of the national currency. The central bank does not set targets for inflation, but has a target range for money supply. These targets have generally been missed, although inflation has slowed down. The Central Bank financing of the budget deficit is not fully prohibited, but in practice, the central bank has never financed the budget deficit. Nevertheless, the authorities are expected to reform the law according to the requirements of the EU.

As in many other transition countries, successful and tight monetary policy has contributed to the slowing down of inflation. However, in order to improve the efficiency of monetary policy in future, the privatization and the restructuring of the banking sector should continue and bankruptcy procedures should be enforced properly. The reform of the banking sector is rather complete. However, competition in the banking sector as well as supervision in the financial markets has to be strengthened. At present, 80 % of banking business is concentrated in the four main state-owned banks. In addition, there are too many small inefficient banks still operating. There is also a considerable amount of inside ownership of banks as well as cross-ownership between investment funds and banks.

In respect of capital markets, the Prague Stock Exchange has developed due to a mass privatization, but is not yet a significant source of finance for enterprises. In general, the capital markets have been accused for being poorly regulated and confusingly complicated. In respect of the exchange rate regime, the currency crisis provoked by speculative capital inflows and the rising current account deficit led to a switch from a currency peg (a basket consisting of US dollars and D-Marks) to a managed float in May 1997. Since then, the central bank allows the exchange rate to float with an exchange rate target for the CZK-DM of 17–19.5 crown/mark.

Regarding capital movements, the Czechs have adopted rather liberal policy. The Foreign Exchange

⁵ Commission of the European Communities, Commission Opinion on the Czech Republic's Application for Membership of the European Union, Brussels, 15.7.1997, COM(97) 2009 final.

Law in 1995 introduced current account convertibility. The same law also called for extensive liberalization of capital movements. As a consequence, most of capital inflows have been liberalized. The main restrictions concern the acquisition by non-residents of real estate and the admission of foreign securities to the domestic capital and money markets. According to plans made, the abolition of the remaining restrictions will proceed gradually in the coming three to five years.

In *Slovenia*⁶, the central bank enjoys a relatively high degree of independence from the government and the Bank is only institution responsible for monetary policy. Only the Governor is appointed by Parliament. Although the law on the Central Bank is not fully compatible with the EU requirements and some budget deficit financing is allowed, the sound fiscal policy has eliminated the need for central bank deficit financing. The stability of the domestic currency (and implicitly price stability) is the formal objective of the Central Bank. It sets the money supply target, and controls it through the use of indirect instruments such as open market operations, reserve requirements, and refinancing credits. In general, Slovenian monetary policy has been effective enough to slow down inflation to single digits. However, several problems still hinder the efficiency of monetary policy. First of all, competition in the banking sector is still lacking and the bad loans still remain a problem. In addition, the privatization of state-owned banks and the restructuring of the banking sector in general need to continue. Two of the country's largest banks are state owned and only a limited number of financial instruments are available. The stock exchange while being technologically advanced, is, however, small and does not contribute much to the financial markets. Furthermore, there is an interest rate agreement, i.e. a cartel among banks which sets the maximum rates on deposits. Naturally, this cartel is not compatible with a market-oriented financial system.

Due to a sound fiscal history, there has not been a great need for government bond papers. This, in turn, makes it difficult for the central bank to use indirect instruments for the purpose of money

supply control. Further difficulties have been caused by indexation in the Slovenian economy, particularly indexation of interest rates and wages. The high degree of indexation keeps lending interest rates high and has encouraged speculative capital inflows. The capital inflows make it difficult for the central bank to control monetary aggregates. They also hinder disinflationary process as well as put pressure on the country's currency. Since the beginning of the 1996, capital controls have been introduced in order to limit above-mentioned phenomena. Capital outflow is subject to authorization while capital inflow has become more restrictive.

The Slovenian exchange rate regime has been a managed float since mid-1992. The system was adopted because Slovenia has a small monetary base so it is very sensitive to swings in capital inflows. The Slovenian Tolar was adopted in 1991 and in practice, it has, to a large extent, followed the development of the D-Mark. In 1995, Slovenia formally established full current account convertibility of the Tolar. Among the liberalized capital movements are foreign direct investment abroad and in the country, commercial credits, personal capital movements (except loan operations) and financial credits and loans (with exceptions/limitations). For establishing the legal basis for the further liberalization of capital transactions, a new law on foreign exchange is scheduled to be adopted early 1998.

In *Estonia*⁷, the Central Bank is highly independent from the government in conducting its monetary policy but is accountable to the parliament. The formal objective of the bank is the stability of the national currency. Furthermore, the law on the Central Bank prohibits central bank budget deficit financing. In practice, since 1992 Estonia has operated under a currency board regime that gives very limited possibilities for free monetary policy and budget deficit financing. In other words, lending to the government is prohibited by law and the central bank has neither monetary targets, nor credit restrictions for banks, nor discount rates.

As a part of the currency board system, the Estonian kroon has been fixed against the D-Mark and so far, no major tensions of the foreign exchan-

⁶ Commission of the European Communities, Commission Opinion on Slovenia's Application for Membership of the European Union, Brussels, 15.7.1997, COM(97) 2010 final.

⁷ Commission of the European Communities, Commission Opinion on Estonia's Application for Membership of the European Union, Brussels, 15.7.1997, COM(97) 2006 final.

ge market have occurred. The central bank guarantees conversion of kroon bank notes and reserve deposits into DM, and vice versa, at the rate of 8 Estonian kroons for one DM. The kroon has been fully convertible for current account transaction since the introduction of the currency board 1992. The decision to devalue the currency can only be taken by the parliament. Estonia's fairly successful monetary policy has contributed to bringing inflation down to single digit levels. Open market operations, i.e. using Central Bank bills have been used to encourage the development of a secondary market and deepening of the interbank market rather than for monetary policy purposes. Reserve requirements are not used as monetary policy instrument but to assist the banks in case of liquidity problems. Most of the Banks have been privatised. At present, the state has minor shareholdings in two credit institutions which it is planning to sell in coming years. The competition is quite satisfactory and the bankruptcy laws have a role in enforcing a hard budget constraint on financial firms. The share of non-performing loans has dropped due to improved asset quality and risk management.

The capital market and non-bank financial institutions are still less developed compared to the banking sector. The Tallinn Stock Exchange started operating in May last year. In respect of free movement of capital, most capital movements were liberalized in 1992. All foreign exchange controls were abolished in 1994 and, at the moment, there are no foreign exchange controls in Estonia. Payments between Estonian and foreign entities as well as currency conversions are free of any restrictions. Investments by non-residents in real estate is the only capital transaction for which restrictions still apply.

All in all, Commission's opinions indicate that the five CEECs are currently far from being ready to join the monetary union. In addition, although Tables 5 and 6 look rather promising in terms of convergence criteria, their message should be interpreted with a caution. Since the CEECs have not yet completed their transition to a market economy, not all convergence criteria can be used as such. There are still many reforms to come in the way to a market economy.

2.3 Openness to Trade and Free Mobility of Labour in CEECs

The previous section summarized the readiness of the five CEECs for EMU. In particular, central bank independence, monetary policy, financial sector reform, liberalization of capital movements and foreign exchange regime were discussed. This section shortly comments on openness to trade and labour mobility (i.e. two of Mundell's OCA criteria) in five Central and Eastern European countries.

Table 7 shows the share of the European Union in CEECs' foreign trade. In general, it can be observed that the European Union plays an important part in their foreign trade. In addition, there have been significant increases in the level of intra-industry trade with the European Union for all transition countries. This indicates that five candidate countries are open and already largely integrated with the EU. As pointed out in part I, more open economies are better candidates for a currency area. High levels of intra-industry trade indicate that partners have similar industrial structures. As a consequence, fewer changes in the terms of trade with the other members will be required, and trade adjustment will be facilitated. In addition, Poland, Hungary, the Czech Republic, Slovenia and Estonia are, to some extent, both geographically and culturally close to some of the EU member countries. This too could facilitate trade adjustment and lower the costs of monetary union. All in all, developments in trade between the EU and CEECs support their suitability for European Union membership, and eventually EMU.

Free movement of labour is one of the fundamental freedoms in the EU. As was discussed in Part I, free labour mobility is also seen as one of the key players in the adjustment process in the future EMU. However, at present, the free movement of persons, i.e. the abolition of obstacles on all persons, whatever their nationality, at the internal frontiers has not yet been fully implemented in the Union level. So far, the objective has been achieved by a limited number of Member States in the framework of the Schengen Agreement (signed 1985). This has most likely contributed to a lower labour mobility inside the union.

Table 5 **CEEC and convergence criteria**

	Budget deficit % / GDP	Public debt % / GDP	Inflation 1996
Poland	2.5	55.0	18.5
Hungary	3.3	75.0	23.5
Czech Republic	0.1	12.0	8.8
Slovenia	0.2	33.0	9.7
Estonia	0.0	6.7	23.1
Latvia	1.2	10.1	17.7
Lithuania	2.4	9.9	13.1
Slovakia	4.3	27.0	5.8
Romania	4.6	15.4	38.8
Bulgaria	9.8	85.9	123.2

Source: Agenda 2000, European Commission 1997.

Table 6 **CEEC – inflation & GDP**

	Inflation			GDP		
	1994	1995	1996	1994	1995	1996
Poland	32.2	27.8	19.9	5.2	7.0	6.0
Hungary	18.8	28.2	23.6	2.9	1.5	1.0
Slovenia	19.8	12.6	9.7	5.3	3.9	3.1
Czech Republic	10.0	9.1	8.8	2.6	4.8	4.0
Estonia	47.7	29.0	23.1	-1.8	4.3	4.0
Romania	136.7	32.2	38.8	3.9	7.1	4.1
Slovakia	13.3	9.9	5.8	4.9	6.8	6.9
Latvia	35.9	25	17.6	0.6	-1.6	2.8
Lithuania	72.2	39.6	24.6	1.0	3.0	3.6
Bulgaria	96	62	123.2	1.8	2.1	-10.9

Source: Agenda 2000, European Commission 1997.

Table 7 **The Share of the EU in Foreign Trade %**

Poland	62
Hungary	68
Czech Republic	83
Slovenia	63
Estonia	65

Source: Agenda 2000, European Commission 1997.

Table 8 Net Migration per 1,000 of population

	1993	1994
Poland	-0.4	-0.49
Hungary	0	0
Czech Republic	0.3	-1.1
Slovenia	0.71	0.45
Estonia	-9.08	-5.10

Source: Agenda 2000, European Commission 1997.

According to Commission country reports, labour mobility has remained modest in CEECs (see Table 8.). Significant efforts are still required to resolve issues regarding the free movement of persons in the medium term. Improvements are still needed mainly in areas such as freedom to practice certain professions, freedom of establishment, recognition of diplomas and qualifications, as well as border controls. The necessary legal structures in these areas are quite well in place, but their implementation and enforcement seem to be more difficult. In addition, equal social safety net for foreigners needs to be developed.

Poland has adopted a relatively open approach to the movement of persons. Visa requirements have been abolished for EU citizens. A residence permit is a precondition for a work permit and work permits are granted depending on the local labour market conditions. Further amendments to existing national legislation are still required to improve access to employment for non-Polish nationals as well as EU citizens. In addition, community legislation is only partly achieved concerning the mutual recognition of diplomas and qualifications. Full approximation is expected, however, in the medium term. Poland has also expressed its readiness to fulfil the Schengen provisions and substantial amount of assistance provided by the Members States has focused on the strengthening of border controls.

In Hungary, legislation recognises the principle of non-discrimination between nationals and foreigners legally residing in the country. However, annual quotas of immigration are still imposed. This has been to improve employment of Hungarian nationals. Foreigners can have access to employment only if they have a work permit which, in turn, is conditional. A large part of the community legislation concerning the mutual recognition of diplomas and qualifications is under preparation and

is to be finalized in the medium run. Like Poland, Hungary is interested in participating in the Schengen Agreement and has called for institutional as well as technical cooperation in the field of border control.

In the Czech Republic, the principle of equal treatment to those EU workers legally residing in the country should not impose a problem. Foreigners can enter into the labour market if they have a residence permit and a work permit, which both are subject to conditions. A work permit, however, will not be granted to a foreigner when the job applied for could be filled by a Czech citizen. Progress has been achieved concerning the mutual recognition of diplomas and qualifications and five years is expected to be enough for full approximation. Also Czech Republic has stated its intentions to become party to the Schengen Convention (signed 1990) and, therefore, called for institutional as well as technical cooperation in the field of border control.

Slovenia has worked hard in adapting its social legislation to EU standards. Apart from some exceptions, current legislation provides foreigners with equal rights as regards working conditions as well as in the field of social security. On mutual recognition of diplomas, some areas still remain to be adjusted. Slovenia has also expressed its interest to fulfil the provisions of the Schengen Agreement. Necessary amendments related to the law on border control and the law on foreigners are included in three-year legislative programme of the government.

In Estonia, legislation still needs to be prepared further for the equal treatment of EU citizens with nationals working in Estonia. In addition, the current legislation only to a limited extent takes into account the Community requirements regarding mutual recognition of professional qualification. In this field, a new law is being prepared. Also law enforcement structures need still improvement. Estonia has also expressed its desire to fulfil the

Estonia has also expressed its desire to fulfil the provisions of the Schengen Agreement and got assistance aiming at strengthening of border controls.

Overall, it seems that conditions providing free mobility of labour are still not met, either in the European Union itself or in the five first-wave CEECs. In the CEECs, additional efforts must be taken to implement changes that abolish border checks, guarantee equal treatment as well as adequate social security for foreign workers. Therefore, it is hard to say that if European monetary union was established today, labour mobility would serve as an adequate adjustment mechanism.

2.4 Final Remarks

This paper reviewed literature on the optimal currency areas relevant to the EMU discussion. It also highlighted some of the problems faced by Central and Eastern European Countries with regard to a common currency area in Europe. We conclude that currently, neither EU-members nor the Central and Eastern European countries fully satisfy EMU

criteria or Mundell's criteria for OCA.

The following four scenarios presented by Currie (1997) represent possible development paths for the EU over the next decade or more. Each scenario is, naturally, a simplification, and actual developments in the EU could very well combine some elements of different scenarios.

Several compelling, but conflicting, arguments crop up in the EMU debate. The present EU has grown to fifteen members through four enlargements. European economic and monetary union is scheduled for the beginning of 1999 and the common currency for 2002. Given the amount of effort, there seems little possibility to turn back. Monetary union is considered a logical extension of the single market and therefore, progress should be made despite differences in opinion or the variations in policy commitment to achieving that stage. However, factors determining the future of EMU and the future development of the European economy as a whole are complex and uncertain. No one can say with certainty whether EMU will succeed or fail, whether it is worth the trouble, or what are the consequences will be for those who join and those who don't. Ultimately, the debate over EMU is about balancing probabilities.

Four scenarios for EMU

Scenario 1

No EMU: Europe stalled, EU divided

- * Most countries fail to meet the Maastricht criteria.
- * Increasing popular discontent with the prospect of the euro, especially in Germany.
- * EMU is initially postponed and then indefinitely postponed.
- * The high-debt countries experience sharp rise in short and long-term interest rates, worsening fiscal problems.
- * Considerable acrimony among EU members.
- * Lack of progress in further implementation of single-market provisions and in liberalization of EU telecoms and energy markets.
- * Failure to tackle problems of structural rigidities in Europe.
- * EU countries stagnate amid mountains of debt.
- * EU loses its direction and momentum.
- * EU failure to address the issue of eastern enlargement.

Scenario 2

No EMU: Single market triumphant, EU unified

- * Increasing lack of support for EMU leads EU countries to defer EMU and concentrate on other policy initiatives.
- * The move to fiscal responsibility continues, reducing problems of excessive deficits and debt.
- * All countries succeed in achieving low inflation, despite the abandonment of the euro.
- * Major moves to liberalize European telecoms, energy and airline markets and to pursue energetically the implementation of all single market directives.
- * Reform of European benefit systems and undue labour market regulation leads to greater flexibility of labour markets.
- * Result is a dynamic growing economy, with falling unemployment.
- * A more confident EU addresses the issue of eastern enlargement.

Scenario 3

EMU: The core humbled, EU divided

- * 6–10 countries join EMU.
- * EMU works badly.
- * Instabilities in transition: ECB hits technical problems in running euro monetary policy.
- * Conflicts between ECB and Ecofin lead to instability of the euro against other currencies, and dollar: yen volatility.
- * Unemployment high and rising in some areas because of structural rigidities strengthened by EMU.
- * Debt levels climb; debt traps reemerge.
- * General European stagnation.
- * Excessive bureaucracy: failure to tackle rigidities.
- * Enlargement issue avoided, so that Europe as a whole is divided.
- * The "outs" fare better than the "ins" but still suffer from the stagnation of EMU core.
- * Political pressures build for the abandonment of EMU and the restoration of national currencies.
- * Growing disenchantment with EU integration undermines commitment to the single market.

Scenario 4

EMU triumphant, EU unified

- * 6–10 countries proceed to EMU in 1999, and others follow: most EU countries adopt euro by 2002.
- * Transition to euro works smoothly.
- * No major macroeconomic problems: the European economy revives and unemployment falls.
- * ECB establishes an early and strong reputation.
- * No institutional conflicts between ECB and Ecofin.
- * Euro widely adopted as vehicle currency.
- * European competitiveness tackled by flexibility and deregulation.
- * No creeping protectionism.
- * Debt and deficit problems solved.
- * Some limited accretion of powers to Brussels, but no general federalism: an open decentralized Europe (on the Swiss model).
- * A strong EU addresses the issue of enlargement, avoiding conflicts to the east.

Source: The Economist Intelligence Unit Limited 1997, "The pros and cons of EMU".

References

- Arrowsmith John **Economic and Monetary Union in a Multi-Tier Europe**. National Institute Economic Review May 1995.
- Barrell R. – Whitley J. **Macroeconomic Policy Coordination in Europe**. National Institute of Economic and Social Research 1992.
- Bayoumi, Tamim – Eichengreen, Barry **Shocking Aspects of European Monetary Unification**. National Bureau of Economic Research, INC. Working Paper No. 3949, January 1992.
- Bayoumi, Tamim – Eichengreen, Barry **One Many or Many? Analyzing the Prospects for Monetary Unification in Various Parts of the World**. Princeton Studies in International Finance No. 76, Princeton University, September 1994.
- Bayoumi, Tamim – Alun, Thomas **Relative Prices and Economic Adjustment in the US and EU: A Real Story About European Monetary Union**. Discussion Paper Series No. 988, Centre for Economic Policy Research, London, July 1994.
- Bayoumi, Tamim – Masson, Paul **Debt-Creating Versus Nondebt-Creating Fiscal Stabilization Policies: Richardian Equivalence, Fiscal Stabilization and EMU**, in *Optimum Currency Areas, New Analytical and Policy Developments* Ed. By M. Bleijer, J. Frenkel, L. Leiderman, and A. Razin in cooperation with D.M. Cheney, International Monetary Fund 1997.
- Bayomi, Tamim – Prasad, Edward **Currency Unions, Economic Fluctuations and Adjustment: Some Empirical Evidence**, Discussion Paper Series No. 1172, Centre for Economic Policy Research, London May 1995.
- Beetsma, R. – Bovenberg, A. **Monetary Union Without Fiscal Coordination May Discipline Policy Makers**, in *Optimum Currency Areas, New Analytical and Policy Developments* Ed. by M. Bleijer, J. Frenkel, L. Leiderman, and A. Razin in cooperation with D.M. Cheney, International Monetary Fund 1997.
- Bofinger, Peter **Is Europe an Optimum Currency Area?** Discussion Paper Series No. 915, Centre for Economic Policy Research, London February 1994.
- Brandsma, Andries **Economies in transition and EMU**. European Commission, DG II 1997.
- Currie, David **The pros and cons of EMU**. The Economist Intelligence Unit, 1997.
- Eichengreen, Barry **Is Europe an Optimum Currency Area?** Discussion Paper Series No. 478, Centre for Economic Policy Research, London November 1990.
- Frankel, J. – Rose, A. **Economic Structure and The Decision to Adopt a Common Currency**. Seminar Paper No. 611, Institute for International Economic Studies, Stockholm University, May 1996.
- Frankel, J. – Rose, A. **The Endogeneity of the Optimum Currency Area Criteria**. Discussion Paper Series No. 1473, Centre for Economic Policy Research, London September 1996.
- Ghosh, A. – Wolf, H. **How Many Monies? A Genetic Approach to Finding Optimum Currency Areas**. Working Paper Series No. 4805, National Bureau of Economic Research, INC. Cambridge July 1994.

Grauwe, P. – Wim, Vanhaverbeke **Is Europe An Optimum Currency Area? Evidence from Regional Data.** Discussion Paper Series No. 555, Centre for Economic Policy Research, London May 1991.

Gros, D. **Towards Economic and Monetary Union, Problems and Prospects.** CEPS Paper No. 65, Centre for European Policy Studies, Brussels 1996.

Gros, D. **A Reconsideration of the Optimum Currency Area Approach, The Role of External Shocks and Labour Mobility.** Centre for European Policy Studies, Working Document No. 101, July 1996.

Gros, D. – Steiner, A. **Openness and the Cost of Fixing Exchange Rates in a Mundell-Fleming World,** in *Optimum Currency Areas, New Analytical and Policy Developments* Ed. By M. Bleijer, J. Frenkel, L. Leiderman., and A. Razin in cooperation with D.M. Cheney, International Monetary Fund 1997.

IMF Survey **Success of EMU Hinges on Euro's Stability.** June 23, 1997.

Kenen, B. Peter **Economic and Monetary Union in Europe, Moving beyond Maastricht.** Cambridge University Press, 1995.

Kenen, Peter B. **The Theory of Optimum Currency Areas: An Eclectic View,** in *Monetary Problems of the International Economy* Ed. By Robert A. Mundell and Alexander K. Swoboda, The University of Chicago Press, Chicago and London 1969.

Commission of European Communities, Agenda 2000, **For a Stronger and Wider Union,** COM(97) 2000-Volume I, Brussels 1997.

Commission of the European Communities, **Commission Opinion on Poland's Application for Membership of the European Union,** Brussels, 15.7.1997, COM(97) 2002 final.

Commission of the European Communities, **Commission Opinion on Hungary's Application for Membership of the European Union,** Brussels, 15.7.1997, COM(97) 2001 final.

Commission of the European Communities, **Commission Opinion on the Czech Republic's Application for Membership of the European Union,** Brussels, 15.7.1997, COM(97) 2009 final.

Commission of the European Communities, **Commission Opinion on Slovenia's Application for Membership of the European Union,** Brussels, 15.7.1997, COM(97) 2010 final.

Commission of the European Communities, **Commission Opinion on Estonia's Application for Membership of the European Union,** Brussels, 15.7.1997, COM(97) 2006 final.

Krueger, Thomas – Laxton, Douglas – Razin, Assaf **EMU: Ins, Outs, and the Macroeconomic Effects of Alternative Monetary Policy Rules,** in *Optimum Currency Areas, New Analytical and Policy Developments* Ed. by M. Bleijer, J. Frenkel, L. Leiderman, and A. Razin in cooperation with D.M. Cheney, International Monetary Fund 1997.

Meliz, Jacques **The Theory of Optimum Currency Areas, Trade Adjustment and Trade.** Discussion Paper Series No. 847, Centre for Economic Policy Research, London October 1993.

Mundell, Robert A **Theory of Optimum Currency Areas.** The American Economic Review, 60, no.4 September 1961.

Mundell, Robert **Optimum Currency Areas**. The American Economic Review, Volume LIII, Number 3, June 1963.

Mundell, R. **Updating the Agenda for Monetary Union**, in *Optimum Currency Areas, New Analytical and Policy Developments* Ed. By M. Bleijer, J. Frenkel, L. Leiderman and A. Razin in cooperation with D.M. Cheney, International Monetary Fund 1997.

Persson, T. – Tabellini, G. **Monetary Cohabitation in Europe**. Working Paper Series No. 5532, National Bureau of Economic Research, INC., Cambridge April 1996.

Ricci, Luca A. **A Model of an Optimum Currency Area**. IMF Working Paper WP/97/76, International Monetary Fund June 1997.

Taylor, Christopher **EMU 2000? Prospects for European Monetary Union**. The Royal Institute of International Affairs, London 1995.

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