BUILDING A MONETARY UNION IN EUROPE: IS IT WORTHWHILE, WHERE DO WE STAND, AND WHERE ARE WE GOING?

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ABSTRACT

This paper discusses the building of a Monetary Union in Europe (EMU), and in so doing, addresses three key questions: Is it economically beneficial? Where does it stand at present? And where is it going?.

The first question refers to the costs and benefits of EMU. While the paper concludes that EMU is likely to be beneficial for the Community as a whole, the countries which will profit the most are those whose economies are more diversified, more integrated in commercial and financial terms and, most importantly, those whose goods and labour markets are freer from structural rigidities.

The second question addressed concerns the transition to EMU during Stage Two. It is concluded that only by strengthening policy-coordination among member countries, and by implementing the necessary changes to safeguard the cohesion of the ERM in the presence of speculative attacks, will it be possible to maintain monetary and exchange rate stability in an environment of liberalized capital flows. The recent creation of the European Monetary Institute and the automatic introduction by the Treaty of Maastricht of a number of changes in the economic and financial framework during the transition may facilitate achieving the above objectives.

The third question refers to the design of the future European monetary policy. Since the whole balance between the costs and benefits to be obtained from EMU depends critically on the anti-inflationary orientation of the future monetary policy to be conducted by the European System of Central Banks, the paper analyses the role of central bank independence as well as the complexities involved in moving to a single European monetary policy. The pros and cons of different alternatives for formulating and executing the European monetary policy are discussed.

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INTRODUCTION

The rationale behind the recent enactment of the Treaty of Maastricht for the purpose of creating an economic and monetary union in the European Community (EC) within the present decade cannot be understood unless we link it with the numerous attempts by Western European countries in the last twenty-five years to create a zone of exchange rate stability. Already at the end of the sixties, there was significant resolve on the part of political leaders in Europe to proceed towards monetary integration. This led in 1970 to the so-called Werner Plan, which sought to deepen and consolidate the then prevailing environment of stable exchange rates by moving towards a single European currency managed by a newly created European monetary authority[1]. Although the Plan was adopted on March 1971 by the Council of Economic and Finance Ministers of the Community, the end of Bretton Woods unfortunately prevented its implementation.

While the new international situation led to the shelving of the most ambitious parts of the Werner Plan, it did not change the basic attitude of the authorities of Member States of the Community in favour of preserving a higher degree of exchange rate stability among themselves even in the new environment of generalised floating. This favourable attitude towards stable exchange rates was exemplified by the creation of "the Snake" in 1972 and by the establishment of the European Monetary System (EMS) in 1979. More recently, the drive towards monetary integration in Europe gained new momentum towards the end of the eighties when, acting upon a mandate by the European Council, a Committee formed by the Governors of the Central Banks of the Community plus a few independent experts and chaired by Jacques Delors, President of the European Commission, produced a Report which identified the steps to be taken in moving towards a monetary union in the Community[2].

Unlike with the Werner Plan, much has happened as a result of the publication of the Delors Report and its adoption at the European Council of Madrid in June 1989. In particular, it was followed by an Inter-Governmental Conference where Member States discussed how the Treaty of Rome should be amended to allow the establishment of a full Economic and Monetary Union

(EMU). The successful discussions led to the signature in February 1992 of the Treaty on European Union at the Dutch city of Maastricht by the Heads of State or Government of Community countries[3]. In the following months the Treaty was ratified -although not without some difficulties- by Member States, becoming effective on November 1st 1993.

The foregoing description of the drive towards monetary integration in Western Europe, in contrast to attitudes prevailing in other parts of the world, cannot however be understood in isolation. In effect, the continuing desire to preserve a zone of exchange rate stability and to transform it over time into a monetary union has been strengthened by the gradual deepening of economic integration in the Community, which has recently been accelerated by the Single European Act of 1986 and by the subsequent creation of the Single Market on January 1st 1993. Indeed, while the degree of the Community's trade openness vis-à-vis the rest of the world has increased by roughly 30% since its creation, intra-EC trade has almost doubled in this period[4]. Nevertheless, this process cannot be viewed as only uni-directional; the maintenance of a relatively high degree of exchange rate stability is generally considered to have also promoted in the medium-term closer trade and financial interlinkages among the economies of Member States.

The recent entry into force of the Maastricht Treaty represents a major step forward in the Community's integration process given its importance in the economic and monetary fields and its far-reaching political implications. Furthermore, the process towards monetary integration in the European Community is all the more remarkable if we take into account several other factors. Firstly, it has gathered speed precisely at the time when previously existing monetary unions were disintegrating in Central and Eastern Europe, following the abandonment of socialism and the breakdown of the Soviet Union, Yugoslavia and Czechoslovakia. Furthermore, the Treaty of Maastricht has become legally valid in spite of a very unfavourable international economic climate.

The above notwithstanding, there are still many important obstacles to be overcome before achieving the ambitious goals set out in the Treaty of Maastricht. Indeed, the recent instability within the EMS reminds us of the difficulties of the transition to full economic and monetary union in a world of free capital movements. In addition, Member States' economies may not find it easy to satisfy the convergence criteria established to regulate access to EMU, thus casting a shadow of doubt on the timetable envisaged in the Treaty. Finally, the preparation of the future single monetary policy is a highly complex matter, especially when account is taken of the significant strategic and tactical differences which prevail at present among the national monetary policies of Member States.

The purpose of this paper is to discuss the building of a Monetary Union in Europe, and in doing so, to address several key questions. Is it economically beneficial? Where does it stand at present? And where is it going?

The first question refers to the costs and benefits of EMU. Although the widely held view in official Community circles is that the economic benefits of forming a monetary union in the Community grossly outweigh the economic costs, this issue is still highly debated in the literature. In fact, several distinguished academics have gone so far as to argue recently that building a European Economic and Monetary Union is likely to be costly from an economic viewpoint but that this may be a necessary price to pay to achieve the superior benefit of Political Union[5]. In order to clarify the economic rationale behind the European monetary integration process, Section I of the paper identifies the main economic costs and benefits which are likely to emerge from EMU and assesses its overall desirability.

The second question addressed in the paper concerns the transition to EMU. A main challenge facing European policy-makers during the transitional period is to maintain monetary and exchange rate stability in an environment of liberalised capital flows. Since the Treaty of Maastricht envisages that monetary sovereignty will remain firmly in the hands of the national authorities until such time EMU is established, there is a need to co-ordinate national policies if major

problems are to be avoided. Section II of the paper addresses the main issues likely to arise in the transition to EMU and discusses the main changes in the economic and monetary framework taking place during this period.

The final question tackled in the paper refers to the design of the future single monetary policy and to the complexities involved in moving from a system of different national monetary policies geared to achieving different objectives to a single European monetary policy oriented towards a single objective for the Union as a whole. Section III of the paper comments on the institutional design of the European System of Central Banks as regards its role as guardian of price stability. It also seeks to identify the main strategic and tactical issues that need to be reckoned with in preparing the future European monetary policy and compares various options as to how to move forward.

The concluding section of the paper summarises the main policy implications.

I. IS EMU WORTHWHILE? SETTING COSTS AGAINST BENEFITS

A currency union or monetary union is typically defined as an area where a "single currency" circulates. Logically, this means that a "single monetary policy" exists for the area as a whole, regardless of whether there is one or more monetary authorities.

In the European case, the so-called Economic and Monetary Union differs slightly from the previous definition since it implies: (i) a single market, where goods, services and factors circulate freely; (ii) irrevocably fixed exchange rates among participating currencies, and soon after a single currency; (iii) a single monetary authority implementing a single monetary policy; and (iv) binding rules on the size of budget deficits and public debt, and on the financing of deficits.

In discussing the economic rationale behind of European monetary integration and the costs and benefits involved in moving towards a monetary

union, it is very important to start by identifying the alternative against which EMU is to be set[6].

Before mid-1992, most countries in the European Community seemed to have voluntarily relinquished to making use of the nominal exchange rate as a tool for adjusting their economies, as exemplified by the extended period - from January 1987 to August 1992- without realignments in the ERM. At the time, the prevailing view was that moving towards a monetary union could not involve much greater costs than those already endured within the ERM but would instead allow further significant benefits to be gained in the form of absence of transaction costs, etc.

The situation nowadays seem to be different following the recent crises that have beset the ERM. Indeed, the problems faced in recent years by a number of ERM countries in adapting their interest rates to those prevailing in the anchor country in the presence of very weak domestic economic conditions, and the apparent stimulatory impact of the relaxation of Britain's monetary policy following the exit of Sterling from the ERM, have contributed to reopening the debate about the desirability and sustainability of EMU. Indeed, what has happened is that the situation with which EMU is to be compared is no longer one of de facto nominal exchange stability but one where, as shown by recent events, nominal exchange rates can be moved.

There follows an assessment of the main economic costs and benefits involved in moving from the present situation to EMU[7].

I.1. Economic benefits

An initial benefit from EMU is the reduction in transaction costs derived from replacing the various national currencies now circulating in the Community by a single currency. As is known, the costs involved in exchanging different currencies constitute a net deadweight loss for society as a whole. Another matter is how significant it is in practice. In this regard, although it is rather difficult to arrive at reliable estimates of the magnitude of

the savings involved, official estimates by the Commission suggest a figure of 0.5% of GDP for the Community as a whole, rising even to 1% in the case of the smaller more open economies. Although these figures are not very high they are nevertheless far from insignificant.

A second benefit from EMU would be the elimination of the degree of uncertainty presently associated with exchange rate movements. By reducing real exchange variability, it will likely lead to a decrease in the risk premium built into real interest rates. In turn, this would tend to enhance productive investment by making attractive those projects which are not currently undertaken due to the relatively high cost of capital. Commission (1990) estimates of the likely empirical magnitude of this effect indicate that a reduction of risk premia by 0.5 percentage points would tend to increase income in the Community by 5-10% in the long run.

While I am convinced that the disappearance of exchange rate uncertainty, under certain conditions, may shape a more favourable environment for investment and production, I am somewhat skeptical about the foregoing figures. As explained by De Grauwe (1992), while a reduction of uncertainty in foreign exchange markets may lead to a reduction in the real interest rate, it would also lead to a lower stream of corporate profits. This is, in turn, consistent with the absence of very significant empirical effects of exchange rate variability on investment, thus suggesting that the magnitude of the final effect on income may not be as high as suggested by official estimates.

Where I believe that the economic benefits from EMU may be largest is in further promoting market integration. According to official Commission (1988) estimates, the economic rewards from full market integration in the EC could amount to an extra 2% of the Community's GDP. While the evidence about the effects of exchange rate uncertainty on trade and foreign direct investment is rather inconclusive, I think few people would dispute the idea that market integration is easier to achieve when wild swings in exchange rates are absent. Indeed, a single European currency may foster socio-economic integration

through channels which are far more important and difficult to capture by econometric research than those discussed above. In contrast, the presence of exchange rate instability may well act as a barrier which prevents reaping the full benefits resulting from the Single Internal Market. Thus, although a single currency may not be absolutely necessary from an economic viewpoint for the workings of a single market, it may greatly increase the economic gains derived from the latter.

Consider, for example, the case of discriminatory pricing. In the EC it has been observed that the national prices of very similar tradeable goods are often quite different across national markets when converted into a common currency, even after removing the effect of trade barriers. Specifically, prices can be as low as 70% and as high as 170% of the average. Although it is not easy to calculate the economic benefits resulting from abolishing discriminatory pricing, the above figures suggest that they may well be significant.

All in all, I am very doubtful that European economies would have become as integrated as they are now in the absence of the relatively high degree of exchange rate stability which they have enjoyed within the ERM. Furthermore, the recent "Hoover affair" clearly suggests that having a single market without stable exchange rates may not be sustainable on political grounds. Indeed, as actual situations show, a single market tends to be associated with a single currency while many currencies tend to be associated with different markets[8].

The creation of EMU may also be beneficial on purely macroeconomic grounds by strengthening price stability within the Union. Clearly, the informational value of having a single money circulating in a wider area would be larger the more stable its value is. However, the effects of introducing a single currency on price performance are critically dependent on the institutional design and behaviour of the new supranational monetary authority. Since this issue is addressed in detail in Section III of the paper, I will just mention at this stage that in so far as EMU succeeds in promoting price

stability, this would greatly enhance the efficiency of resource allocation and thus provide the basis for sustained growth.

Finally, there may be benefits from EMU in that it helps the single European currency become an international reserve currency. However, the consensus on this issue currently seems to be that these effects are likely to be smaller than generally believed given the various institutional and historical factors that limit shifts among currencies, and the potential desire of investors to hold larger amounts of non-European currencies for diversification purposes (Eichengreen, 1992).

In sum, while EMU is likely to provide significant benefits to EC countries, it must be acknowledged that some of these benefits are rather hard to quantify. My own opinion is that the largest benefits will come from fostering the degree of economic and financial integration among Community countries in an environment of nominal stability. Thus, the countries which have more to gain are those which are now relatively open, those that will become more open precisely as a result of being EMU members, and those with relatively higher inflation rates at present.

Having succinctly described the main economic benefits from EMU, I shall now turn to examining its economic costs.

I.2. Economic costs

The major potential cost involved in forming a monetary union is forgoing the use of the nominal exchange rate as a tool for macroeconomic adjustment. However, the size of this cost will depend on several factors: the nature of the shocks; the degree of international factor mobility; the degree of wage and price flexibility; and the degree to which fiscal policy is orientated towards macroeconomic stability. In order to assess how important these considerations could be in a future European Monetary Union, each of them is discussed in some detail in what follows.

I.2.1. The nature of shocks

The loss involved in not making use of the nominal exchange rate as an instrument for macroeconomic adjustment will be, *ceteris paribus*, smaller when shocks require little movement of the real exchange rate to reestablish equilibrium. Normally, this tends to happen when shocks across the Union are symmetric rather than asymmetric or idiosyncratic. Nevertheless, it should be noted that even common shocks may have very asymmetric effects through the Union if economic structures differ across countries. For this reason, it is appropriate to define a shock as being "symmetric" when its effects are roughly similar across the Union and thus no real exchange rate adjustment is required to restore equilibrium.

In order to infer how symmetric shocks could be in EMU, the empirical evidence has generally looked at the present situation in the EC and has taken the United States as a standard for comparison. Nevertheless, the evidence is not uncontroversial.

For example, recent studies by Bayoumi and Eichengreen (1993) and Eichengreen (1992) have concluded that idiosyncratic shocks tend to be more frequent in the EC than in the US which, *prima facie*, would seem to suggest that the EC might find it rather costly to become a currency union from a macroeconomic viewpoint. Nevertheless, they also find, as do De Grauwe and Vanhaverbeke (1993) and other researchers, that the degree of asymmetries is considerably smaller and thus more similar to that of the US if one takes the subset of EC countries which have traditionally maintained closer economic and monetary links with Germany. In contrast to the above studies, Bini-Smaghi and Vori (1993) conclude that EC economies, especially the six founding members, are more diversified than US regions in their production structures and thus are less likely to be subject to asymmetric shocks. In addition, Stockman (1988), Baxter and Stockman (1989) and European Commission (1990) find that "industry-specific" shocks are more significant than "country-specific" shocks in the Community.

Evidently, an unavoidable problem that arises when interpreting the above mentioned empirical results is that they are drawn from comparing the historical performance of a group of countries that have not yet formed a monetary union with that of US regions, which have been long-standing members of a union. In short, the analysis could be biased because it might be the case that certain patterns of behaviour now observed in the EC would tend to evolve towards those in the US as economic and monetary integration advanced.

Consider the case of monetary policy shocks. At present, these are country-specific shocks which result from imperfectly coordinated national monetary policies, currency substitution and exchange rate movements. This source of asymmetries would disappear instantaneously once EMU were formed and the single monetary policy implemented. Official estimates by the Commission (1990) indicate that this effect is likely to be significant. On the real side, the main issue for concern is whether the deepening of economic and monetary integration will be associated with a tendency towards productive diversification or specialisation in the Community. As Kenen (1969) argued years ago, the more diversified the industrial structure of countries is, the more likely it is that "industry-wide" shocks do not translate into "country-wide" shocks. In this respect, there are two opposing forces to be considered. On the one hand, since most intra-Community trade takes the form of "intra-industry" trade, this implies that Member States exchange very similar goods. Thus, foreseeably, deeper integration may contribute to further diversifying national production structures within the EC, lessening the role of asymmetric or "country-wide" shocks. On the other hand, work by Krugman (1993) suggests that the EC could move in the direction of the US, with higher regional specialisation. Indeed, the existence of increasing returns to scale and "thick-market" externalities could lead to a regional concentration of production, thus making "industry-wide" shocks "region-wide" shocks as well.

While I think that the point made by Krugman is a very valid one, and that overall there may be a tendency in EMU towards regional specialisation rather than diversification, I nevertheless doubt whether regional and national

specialisation are necessarily the same thing. In particular, even if a given industry concentrates on a given geographical region, such region might very well spread across several countries. In that case, "industry-wide" and "region-wide" shocks may coincide but diverge from "country-wide" shocks.

From the above discussion, I would draw the following conclusions: firstly, it is likely that symmetric shocks would prevail in EMU; secondly, the presence of symmetric shocks may be relatively more important in those EC countries which have traditionally maintained closer economic and monetary ties with Germany; and thirdly, since asymmetric shocks will still exist, it is important that adjustment mechanisms are found to deal with them in EMU.

I.2.2 Adjusting to asymmetric shocks

In this sub-section I discuss the likely role of alternative mechanisms in adjusting to asymmetric shocks in EMU: labour mobility, wage and price flexibility, and fiscal policy.

Labour mobility

In so far as large asymmetric shocks exist and wage and price flexibility is not complete, macroeconomic stability within EMU will require other adjustment mechanisms. The classical one, first outlined by Mundell (1961), is the international mobility of factors of production and, in particular, of labour. If there is a shift in relative demand across countries, and if the real exchange rate does not adjust, there will be unemployment in the country where demand has been reduced unless there is migration towards the country where demand has increased.

As regards the usefulness of intercountry labour mobility as a cushioning device for shocks in EMU, recent studies[9] find that labour movements across EC countries are very limited and significantly smaller than across US regions. Further analysis has also tended to confirm that the very small size of labour movements in the Community does not come from low

incentives to move but rather from a very low degree of labour mobility (i.e., the size of the response of migration to a given economic incentive to migrate). While it might be argued that labour mobility might increase as economic and monetary integration proceeds, it should be acknowledged that the presence of numerous historical, cultural and linguistic differences in European countries would prevent much higher migration than is currently the case, at least for many years after EMU is formed.

The above evidence of low labour movements and low labour mobility has been traditionally interpreted as indicating that migration will be an extremely limited tool to cope with asymmetric shocks in EMU. Although this channel could become more important over time, the US experience suggests that this is likely to take several decades.

Wages and prices

When shocks have asymmetric effects across countries, a movement of the real exchange is required to restore macroeconomic equilibrium. If wages and prices were to adjust costlessly, they would induce a prompt re-equilibrating response of the real exchange rate and there would be no loss from forgoing the present degree of nominal exchange rate flexibility. Unfortunately, experience shows that in EC economies structural rigidities in national labour markets make wages respond quite slowly to increasing unemployment while structural rigidities in non-tradeable goods markets limit the downward response of prices.

While wages and prices may not be flexible enough nowadays in the EC to cope with asymmetric shocks, some expect that EMU itself might reinforce the degree of wage and price flexibility in so far as the absence of residual exchange rate flexibility improves the behaviour of wage and price setters. I am rather more guarded on this issue. The recent experience of the ERM tends to suggest generally modest effects in the form of an "anti-inflationary credibility bonus" for higher inflation countries[10]. In addition, the recent experience in Germany following unification suggests that there may even be

a perverse "wage catching-up" effect which, at least initially, undermines downward flexibility. Consequently, restoring a higher degree of wage and price flexibility in EC countries is likely to require both a firm and balanced anti-inflationary macroeconomic policy stance, and the implementation of wide-ranging supply-side policies aimed at improving the workings of labour and goods markets. If such policies are pursued, EMU may well amplify their beneficial effects on wage and price flexibility.

Let us assume for a moment, however, that the necessary structural reform policies do not take place and that EMU does not by itself alter the processes of wage and price formation. How costly is EMU then likely to be?

In order to answer the above question, one must first ascertain how effective the nominal exchange rate actually is in facilitating real exchange rate adjustment in European countries. Clearly, I am not referring to a situation where the nominal exchange rate is used in an activist and systematic way by the authorities. As it is widely acknowledged, the systematic use of monetary or exchange rate policy will not be very effective in altering real variables once private agents take into account the behaviour of the authorities in their decisions, and may even lead to an inflationary bias[11]. Rather, what I am referring to is a more exceptional situation where the nominal exchange is used as a "corrective device" to restore equilibrium among relative prices and among relative asset supplies and demands following a significant shock.

The effectiveness of the nominal exchange rate as a tool for facilitating macroeconomic adjustment depends fundamentally on how open the economy is, as Mckinnon (1963) noted years ago, and also on how rigid real wages are.

As regards openness, the more open EC economies are to intra-EC trade and the greater the substitutability of their tradeable goods, the quicker the pass-through from the exchange rate to domestic prices will be and the smaller the final effect on the real exchange rate. If we measure openness by the size of intra-EC exports as a percent of GDP, the most open economies are

Ireland, Belgium and the Netherlands, with shares between 40 and 50%. Then comes an intermediate group made up of Portugal, Germany, Denmark, France and Greece with shares between 11 and 20%. A final group, made up of the United Kingdom, Italy and Spain, has shares between 7 and 10%. Clearly, openness reduces the importance of using intra-EC exchange rate flexibility for macroeconomic adjustment to a significant extent in the three most open economies but not really in the rest.

As regards real wage rigidity, it is well known that even in rather closed economies nominal exchange rate movements are likely to have little impact on the real exchange rate in the presence of real wage rigidity. Various studies have recently looked at the behaviour of wages in industrial countries, and some others have analyzed the implications for EMU[12]. My own interpretation of the evidence is that while real wage rigidities are certainly a lot higher in Europe than in the US, they are not so high as to prevent the nominal exchange rate from playing a role in facilitating the adjustment of real exchange rates. Furthermore, the situation tends to differ quite significantly among EC countries since some have as much as three times as high a degree of real wage rigidity as others.

From the above examination of wage and price flexibility, it can be concluded that the present state of national goods and labour markets does not guarantee a smooth macroeconomic adjustment in a number of EC countries in the wake of asymmetric shocks. This highlights the need for the rapid introduction of structural reforms to improve wage and price flexibility, especially in those EC countries with more differentiated economic structures.

Fiscal policy

If labour mobility is low, and if wages and prices are slow to adjust, what is then left to cope with the problems posed in EMU by "country-wide" asymmetric shocks? The typical answer is fiscal policy. What is not so clear is whether it suffices to conduct it at the national level or whether it would be necessary to do so at the Union-wide level.

In keeping with the "subsidiarity principle", the Treaty of Maastricht does not at present envisage the creation of a supranational fiscal authority in the Community. This has been interpreted in some quarters as an undesirable feature which could jeopardise the stability of EMU. In this regard, it is often pointed out that the empirical evidence available in existing monetary unions confirms that the central government's budget plays an important role in smoothing cyclical divergences among the country's regions. Specifically, empirical results indicate that in the US between 10 and 28% of a given change in regional income is automatically offset through the central budget, and that these numbers range between 33 and 42% in Community countries[13].

Of course, one should be careful not to extrapolate these results automatically to the future EMU. In particular, the "local" authorities of the above countries generally do not play any active role in pursuing compensatory fiscal policies, which is the responsibility of the central authorities. In contrast, in the case of EMU, since the "local" authorities are sovereign governments responsible for conducting fiscal policy, national shocks can be accommodated by national fiscal policies.

It could nevertheless be argued that the Maastricht Treaty eliminates most of the room for manoeuvre of national fiscal authorities as a result of the ceilings imposed on national budget deficits and public debt. This is an interpretation that I would not share in so far as the articles of the Treaty designed to prevent "excessive deficits" can be construed as requiring that deficits should not exceed on average 3% of GDP during the business cycle. Given that this would be equivalent, for all practical purposes, to running a "cyclically adjusted" deficit as high as 3% of GDP on average, this seems to me to be enough to deal with most asymmetric shocks. And while it could be argued that budget deficits in Community countries have been significantly greater than this figure during the last five years, this should by no means be taken as a desirable benchmark given their very unfavourable effects on real interest rates and private investment. In fact, recent developments in European public finances quite vividly show that there is nothing like fiscal profligacy in "good years" to erode the available room for fiscal manouvering in "bad years"; and

such room has now become very narrow in the Community given the relatively high public debt levels which already existed at the onset of the present recession as a result of the failure to achieve fiscal consolidation in the previous boom.

To conclude, in so far as the "excess deficit procedure" of the Maastricht Treaty is not too rigidly interpreted, there seems to be significant scope for national fiscal policies to smooth macroeconomic adjustment if and when "country-wide" asymmetric shocks so require it. Fiscal austerity in "good times" would thus be the price to pay to be able to exercise fiscal flexibility in "bad times".

I.3. Overall assessment of the economic desirability of EMU

From the previous discussion of the economic costs and benefits involved in moving from the present situation to EMU, I would conclude that it is likely to be beneficial to the Community as a whole. On the one hand, there may be significant benefits associated with the favourable impact of EMU on economic and financial integration provided this takes place in an environment of more stable prices. On the other hand, since symmetric shocks are likely to be more frequent than asymmetric shocks given the production patterns of Community countries, and since national fiscal policies can still play a role in counteracting the latter within the framework laid out by the Treaty of Maastricht, the macroeconomic costs associated with forgoing the present degree of intra-EMU nominal exchange rate flexibility are likely to be limited.

It should nevertheless be noted that the cost/benefit ratio is not likely to be equally favourable in all EC countries since there are important structural economic differences among them. In this regard, the countries which start from the most favourable positions are those whose economies are more diversified, more integrated in commercial and financial terms, and whose goods and labour markets are freer from structural rigidities. In the remaining countries aspiring to become EMU members in the future, the best way to improve the relationship between costs and benefits would be to undertake

forthwith the necessary structural reforms which would increase the flexibility of wages and prices. In this respect, in so far as the nominal convergence criteria contained in the Maastricht Treaty induce the above countries to adopt the necessary structural policy measures during the transition, the potential economic net gains from EMU could be increased even further.

After having discussed the long-run economic desirability of EMU, I turn now to examining the main issues during the transition towards it.

II. WHERE DO WE STAND? THE DIFFICULTIES OF TRANSITION

At the time of writing this paper, Community countries have already entered into what the Delors Report called the Second Stage of Economic and Monetary Union. The nature of this stage is to serve as a period of preparation before entering the Third and final stage where there will be: irrevocably fixed exchange rates among Member currencies as a prelude to the single currency; a single monetary policy for the Union formulated by a single European monetary authority; and binding constraints on national public finances.

In this section, I briefly go over two issues which are of importance during the transition: the potential for instability, and the impact of the major changes in the economic and monetary institutional framework brought about by the beginning of Stage Two.

II.1. ERM instability: causes and consequences

The so-called transitional stage has always been regarded with suspicion by those who believe in the "inconsistent-quarter", made popular by Padoa-Schioppa (1987). Under this proposition, free trade, free capital movements and exchange rate stability can mutually and peacefully co-exist only if national economic policies are adequately coordinated. Otherwise, there would be serious risks of exchange rate instability which could undermine very seriously not just progress towards EMU but also preserving the degree of economic integration already achieved in the Community.

The recent evolution of the ERM since the summer of 1992 has reminded us of the potential instability of the transition to EMU. Indeed, after an extended period of unprecedented stability, between 1987 and August 1992, the ERM entered a period of marked exchange rate instability which has led to the temporary departure of the Italian Lira and Sterling from the ERM; to successive devaluations of other currencies; and, most recently, to the need to widen temporarily the fluctuation band between participating currencies to ± 15%.

The above facts could be masked to give the appearance that they reflect mostly exceptional factors. However, this attitude would be deceptive and would also prevent us from properly understanding the causes and magnitude of the recent problems as well as from finding a durable solution to them. Consequently, it should be acknowledged that the recent ERM crises are nothing but the reflection of a number of fundamental problems which, if unsolved, would not just jeopardise the regaining of exchange rate stability but could also prevent the practical implementation of the legal principles contained in the Treaty of Maastricht.

I am referring to the two kinds of problems which I believe have been behind the recent ERM turmoil: firstly, to the inability to coordinate sufficiently monetary and especially non-monetary policies among Member States, which has led over time to the emergence of competitiveness problems and policy dilemmas; and secondly, to the lack of effective mechanisms to preserve exchange rate cohesion in the ERM in those cases where it was threatened by speculative attacks[14].

It could perhaps be thought that since the recent widening of the ERM bands has coincided with a return to exchange rate stability, little else needs to be done. However, this would entirely miss the point since the decision to widen the bands was considered as an interim solution to ERM problems while more permanent solutions were found. Indeed, the main purpose of the wider band has been to restore two-way risk in foreign exchange markets and thus to deter speculation. However, let us not deceive ourselves by

thinking that this is a sufficient remedy. Unless national policies are adequately coordinated and suitable ways are found to share collectively the responsibility of preserving the cohesion of the System in the event of speculative attacks, even the wider band may not be enough to guarantee a tranquil transition to EMU.

As regards the defense of the cohesion of the ERM, it is of paramount importance that national monetary authorities show a strong commitment to defending by the appropriate means those central parities which they believe are justified on the basis of economic fundamentals. Nevertheless, it must be also recognised that since the unilateral defense of exchange rate stability may prove, in situations of acute tension, extremely difficult for the weak currency country, it would be desirable to devise and implement the technical and institutional reforms in the ERM that would lead to more solidarity in the defense of the System without jeopardising price stability. This should certainly be an important item in the working agendas of European central banks.

As regards coordination, recent experience shows that ERM membership by itself does not fully guarantee that such coordination will take place. Or, to be more precise, while the exchange rate constraint may be a useful focal point for the coordination of national monetary policies, it is unfortunately not so useful as regards fiscal policies and wages. In fact, during all these years, budget deficits and wages have differed significantly among ERM countries, and this has, in turn, prevented a faster reduction of inflation and inflation differentials. Consequently, the existence of inadequate national policy-mixes has often tended to complicate the task of monetary policy by shifting upon its shoulders the burden of achieving both price and exchange rate stability.

On the other hand, while it is true that the asymmetric model of national monetary policy coordination in the ERM has been fully accepted by all Members in periods of high growth and inflationary pressures in non-German ERM countries, it has however tended to be questioned in periods of recession

and low inflation in the latter countries. Therefore, it is very important to find new ways of fostering coordination that are valid both in "good" and "bad" times. This could perhaps be accomplished by complementing the exchange rate criterion with the establishment of more explicit medium-term anti-inflationary goals.

II. 2. Changes in the economic and financial framework during the transition

Needless to say, coordinating national policies is easier said than done. However, I would like to point out that a number of institutional changes have just been made effective as of the beginning of Stage Two which could help improve the coordination of monetary policies and achieve a better national "policy-mix" in Member countries. Such changes are discussed in what follows.

II.2.1. Budget deficits and their financing

In the fiscal domain, during Stage Two there will be continuous multilateral surveillance by the Community authorities on the evolution of national public finances to detect the existence of "excessive" budget deficits and debt levels. Under the Treaty, budget deficits and debt levels are to be considered "excessive" when they are respectively above 3% and 60% of GDP and do not tend to converge sufficiently rapidly towards these thresholds. Nevertheless, it must be acknowleged that the only tool available to Community bodies during Stage Two to foster fiscal discipline is moral suasion, since the sanctioning procedures established in the Treaty to correct situations of inadequate fiscal behaviour are reserved for Stage Three.

In addition to the above, since the beginning of Stage Two strict laws have come into effect for the purpose of prohibiting the direct financing of the public sector by central banks as well as its financing in the market under privileged conditions. Clearly, the rationale behind these restrictions is to make more evident to the public authorities the costs of financing budget deficits, and to prevent the financial requirements of governments from exerting pressure on national monetary policies.

II.2.2. Monetary policy

The beginning of Stage Two also has important consequences as regards the institutional status of national central banks and the creation of a European monetary institution.

The Treaty of Maastricht stipulates that during Stage Two the national central banks of Member States should become independent from the political authorities. Accordingly, their statutes will be modified, when required, to ensure that central banks can pursue their monetary policy objectives without governmental interference and with the necessary instruments to achieve these objectives.

The main reason behind the insistence of the Treaty on the independence of national central banks is to establish an institutional framework that would facilitate the pursuit by monetary policy of price stability. As is well known, there is ample empirical evidence that central bank independence and success in fighting inflation are closely related. This notwithstanding, I would like to mention that the effects from legislative changes oriented to increasing central bank independence will be all the more beneficial if national fiscal policies are not at odds with monetary policy. Indeed, as established by economic principles and confirmed by experience, the anti-inflationary credibility of monetary policy does not only depend on the degree of independence of the central bank but on the coherence and credibility of the overall macroeconomic policy[15].

The other major change in the monetary domain during Stage Two is the creation of the European Monetary Institute (EMI). Since January 1st 1994 the EMI has succeeded the Committee of Governors of European Central Banks and has been entrusted, among other objectives, with the responsibility for reinforcing the coordination of national monetary policies in the Community. Although the Treaty clearly states that there will be no transfer of monetary policy sovereignty from the national level towards the EMI, the Institute

nevertheless has the possibility of exercising moral suasion on national authorities through the publication of its opinions and recommendations.

While the above changes still fall short from what would be necessary to achieve full coordination of national policies, they may nevertheless help to move in that direction. In particular, the existence of more independent central banks, now free from the obligation to finance budget deficits, and the role that the EMI can play in ensuring the mutual consistency of national monetary policies, could lead to a situation where the policies underpinning exchange rate stability within the ERM become more explicitly oriented towards the pursuit of the medium-term goal of price stability.

III. WHERE ARE WE GOING? THE FUTURE EUROPEAN MONETARY POLICY

In the first section of the paper it was mentioned that the main economic benefit to be obtained from EMU would be enhanced economic and financial integration in the Community in an environment of price stability. For this reason, it is of paramount importance that the future monetary authority, the European System of Central Banks (ESCB), is equipped with the mandate and the means to pursue the objective of price stability.

The statutory design of the ESCB has been carefully crafted to strengthen its orientation towards the pursuit of a strongly anti-inflationary policy. However, a number of very important strategic and tactical questions have been left open in the Statute regarding how the future monetary policy will be formulated and executed. It is precisely for this reason that the other major task of the EMI is to prepare the logistical and institutional framework needed for the ESCB to run the single monetary policy effectively and efficiently from the first day of Stage Three. This section discusses the above issues.

III.1. The objectives of the ESCB[16]

III.1.1. Price stability as the primary objective

At present, the statutes of a number of central banks in the Community include various objectives, extending beyond the protection of the domestic and external value of the currency to the promotion of financial stability and economic growth. In contrast, the Statute of the ESCB sets price stability as the primary objective, and establishes that the general economic policies in the Community shall be supported as long as this does not conflict with price stability. There is no specific definition in the Statute of "price stability" nor of the criteria to judge whether the support for other policies "conflicts" with price stability. Yet the aim is clear: to avoid the potential trade-offs which arise when all the objectives are at par.

Regarding the desirability of price stability, there is an established consensus that inflation is viewed as costly by the public[17]. More importantly, both economic principles and historical experience suggest that higher inflation is not conducive to higher output growth on a medium-term basis. Indeed, as shown by the literature on the "time-consistency problem", when the authorities are expected to follow the short-sighted strategy of engineering surprise inflation to achieve a higher output level, the resulting time-consistent equilibrium is not characterised by higher output but by an inflationary bias. And, contrary to the past, there is now a broad consensus among policy-makers that price stability constitutes a precondition for achieving sustained economic growth. For all of the above reasons, it is very important that the ESCB pursues a strongly anti-inflationary policy. Otherwise, a worsening of inflation performance in EMU could more than offset the economic benefits of the single currency, thus threatening the economic viability of the whole integration project.

III.1.2. The quest for anti-inflationary credibility: Does independence suffice?

A credible commitment to fight inflation firmly reduces the inflationary bias resulting from the time-consistency problem and the short-term output costs of converging towards price stability. Moreover, as pointed out by Begg et al. (1991) and as empirically documented by Bernanke and Mishkin (1992), it increases the freedom of the monetary authorities to respond to well-identified shocks without damaging anti-inflationary credibility, as the risk that the public may misinterpret a temporary change in liquidity conditions for a shift in the stance of monetary policy is reduced.

But how can the ESCB, a new institution, maximise its anti-inflationary credibility? In two ways: through a well-designed monetary constitution and through reputation.

The existence of conflicting policy goals is at the root of the inflationary-bias problem. Placing price stability as the primary objective of the ESCB creates a statutory commitment which minimises the risk that several objectives conflict in the shorter run and thus reduces the vulnerability of the new monetary institution to external pressures to accommodate inflation. However, the System must also enjoy independence if price stability is to be achieved.

A distinction can be made between political and economic independence, following Grilli et al. (1991). As concerns political independence, several provisions in the Statute try to ensure that the decision-making bodies of the ESCB will be able to perform their duties without being subject to constraints or influence by governments: prohibition of instructions from government bodies; compatibility of the statutes of national central banks with the Statute of the ESCB; assured tenure for the members of the Council and the Executive Board; financial autonomy of the ESCB; and stringent legal conditions to amend the Statute in any fundamental way. As concerns economic independence, the Statute endows the ESCB with the powers to use monetary policy instruments without restrictions: freedom to conduct open market and

credit operations and to use other appropriate instruments; power to conduct foreign exchange market operations; and the exclusive right to authorise the issue of bank-notes in the Community.

The ESCB ranks quite high in terms of formal independence on the basis of a comparison between the statutes of central banks, as confirmed by the analysis of Alesina and Grilli (1992). This is important because empirical evidence indicates that the average rate of inflation is generally lower in the countries with more independent central banks[18]. However, even a high degree of formal independence is not enough to establish the anti-inflationary credibility of the new institution.

In this respect, some observers have warned that since the Treaty places decisions on the exchange rate policy outside the ESCB, the effective independence of the new monetary institution might be compromised, as the monetary stance required to maintain price stability may conflict with exchange rate objectives[19]. Although there is more than a grain of truth in this argument, it should nevertheless be noted that the wording of the relevant articles in the Statute addresses this concern. In particular, although the decisions on the conclusion of formal exchange rate arrangements, the adjustment or the abandonment of the central rate, and the formulation of general orientations of exchange rate policy rest with the Council of the European Community, these decisions will be taken only after consulting the ESCB in an attempt to reach a consensus consistent with the objective of price stability.

Another source of concern regarding the performance of the ESCB is that the degree of tolerance for inflation may be higher in the Union than it is now in the country(ies) which at present exert the main influence on the monetary conditions in the Community[20]. In particular, if the votes in the ESCB Council reflect national attitudes to inflation, there is a risk that the anti-inflationary stance of the ESCB might be softened, interpreting "price stability" in a looser way. However, the standards set in the Treaty for entry

into EMU will act as a screening device for Union membership and may thus mitigate this problem.

Finally, the success of the ESCB in fighting inflation will not only depend on itself but also on the behaviour of the fiscal authorities. As evidenced by the recent experience of Germany following unification, even an independent and reputable central bank like the Bundesbank can face difficulties in achieving its anti-inflationary objectives as a result of overly expansionary fiscal policies. For this reason, it is crucial that monetary and fiscal policies work together towards the pursuit of the overall goal of sustained non-inflationary growth. Furthermore, while the inflationary risks posed by an "inadequate policy mix" for the Community as a whole exist, the provisions in the Maastricht Treaty oriented towards avoiding excessive budget deficit and public debt levels limit these risks. In addition, it should be recalled that the Statute explicitly prohibits monetary financing of the public sector by ruling out the granting of overdrafts (or any other type of credit facility) and the purchase of public debt instruments in the primary market.

III.1.3. Reputation: earned and inherited

As pointed out, formal independence is a necessary but not sufficient condition for achieving anti-inflationary credibility. Once the ESCB starts operating, it must demonstrate its effective independence. In other words, the ESCB will still have to build up a reputation to convince both the public and governments of its aversion to inflation. Furthermore, the longer it takes the ESCB to establish its reputation, the higher the output costs of achieving price stability in the Union will be, and the more likely it would be that popular discontent may arise with monetary policy.

As already mentioned, under the institutional design of Stage Two envisaged in the Treaty, there is no transfer of monetary sovereignty from the national spheres to the central institution until the beginning of Stage Three, contrary to some of the proposals tabled in the discussions on the transition to EMU. Consequently, since the precursor of the ESCB, the EMI, will not have

any monetary policy responsibilities, it will be unable to build up an anti-inflationary reputation to bequeath to the ECB. There are, however, good reasons to believe that the new monetary institution may inherit some credibility.

The first reason relates to the fulfilment of the convergence conditions set in the Treaty for the move to Stage Three. Member States must show their resolve in lowering inflation in order to enter the Union, and thus the ESCB may inherit, at least partly, the credibility achieved by national central banks in the successful process towards EMU. Furthermore, since well-known unpleasant monetary arithmetic shows that the credibility of monetary policy ultimately also depends on the overall macroeconomic policy mix[21], the fulfilment of the fiscal convergence conditions during Stage Two and the excessive deficit procedure provided for Stage Three should strengthen the credibility of the ESCB on its inception.

The second argument refers to the choice of monetary policy strategy and tactics by the ESCB. To the extent that one or several central banks have achieved a high degree of anti-inflationary credibility during Stage Two, the ESCB could follow similar monetary policy strategies and tactics as a device to signal the continuity with past experience and thus to build on the inheritance of credibility from certain national central banks.

In sum, the institutional design of the Treaty goes a long way towards endowing the ESCB with the formal independence necessary to run a credible anti-inflationary monetary policy. Credibility can also be enhanced from the very outset of Stage Three by the preceding compliance with the Maastricht convergence criteria, and perhaps by the adoption of certain strategies and tactics for the conduct of monetary policy. However, it is the degree of success of the ESCB in achieving and maintaining price stability during Stage Three which will ultimately forge its credibility over the longer term. Let's not forget that for success to be reached it is of paramount importance that there is a sound monetary and fiscal policy mix in the Union as a whole.

III.2. The formulation and execution of the single monetary policy

Having discussed the objectives of the ESCB, we now turn to examining the main issues involved in the formulation and execution of the future European monetary policy. As already mentioned, settling these issues is fundamental for the ESCB to run monetary policy efficiently and effectively from the beginning of Stage Three. This is why the EMI has been entrusted with the responsibility of preparing the single monetary policy during the transition.

The scale and complexity of the task facing the EMI can be readily gauged on the basis of the following considerations.

Firstly, since the Treaty of Maastricht rules out any transfer of monetary powers to the EMI during the transition, Stage Three will imply a sudden shift from the coexistence of national monetary policies, formulated to achieve national objectives and implemented through different procedures, to a single monetary policy, set by the ESCB with Union-wide objectives, and operated in a consistent way throughout the area.

And secondly, although the Statute of the ESCB provides the broad guidelines for the operation of the future monetary policy, there are numerous strategic and tactical issues which are left fully open in the Statute and which have yet to be addressed.

Fortunately, the EMI is not starting from scratch. Over the past couple of years, the national central banks of the Community have, within the framework of the Committee of Governors, studied a number of key issues related to the future single monetary policy. In particular, they have explored: the relative advantages of different procedures for implementing monetary policy in EMU; the problems associated with the adaptation and the interconnection of national payment systems throughout the Union; the creation of an adequate statistical basis which would provide in a timely manner to the ESCB the information required to carry out monetary policy; the printing and

distributing of the ECU note; the harmonisation of central banks' accounting standards and practices; and the interconnection of the information and communication systems of national central banks.

In preparing the single monetary policy, the EMI must address several concerns. On the one hand, it must develop an adequate framework for formulating monetary policy. This involves considering whether intermediate targets in general, and monetary targets in particular, will be useful in the conduct of the future monetary policy as well as exploring which variable is most suited to play that role. On the other hand, the EMI must study the tactical aspects of the execution of monetary policy so as to ensure that the single monetary policy is effectively and efficiently run from the very first day in full EMU. This involves identifying the minimum requirements for guaranteeing the uniformity of monetary conditions throughout the Union and exploring the options available to execute the single policy in a decentralised form through national central banks.

I have examined the above issues in detail in a recent paper (Monticelli and Viñals, 1993). Therefore, I will confine myself to recalling briefly its main conclusions.

As regards the strategic aspects of formulating the single monetary policy, it is likely that national central banks will settle for a framework which combines considerable measures of simplicity and transparency and which enhances the anti-inflationary credibility of the ESCB. According to some, these principles will be best served through the use of intermediate targets given their relative advantages in terms of simplicity, transparency, and of helping the public to monitor monetary policy and the central bank to avoid external pressures. Furthermore, it is argued that since some of the most successful central banks in the Community rely at present on intermediate monetary targets, this could allow a degree of continuity in the practical conduct of monetary policy and, possibly, also the transfer of some degree of anti-inflationary credibility to the ESCB. Those who argue against monetary targets point out that recent experience with monetary targets in a number of

European countries has been less than fully satisfactory, as financial innovation has tended to progressively erode the stability of the national demand functions for these aggregates. While it is too early to say wether monetary aggregates will end up playing a central role in the formulation of the future European monetary policy, in any case I think that it is very important to avoid a mechanistic interpretation of monetary aggregates, especially at the start of Stage Three and if such aggregates are explicitly targeted. In particular, the regime-change resulting from the irrevocable locking of parities may lead to shifts in liquidity preference for the area as a whole, complicating the management of monetary policy at the very time where the ESCB has to start establishing its anti-inflationary record.

As regards tactical aspects, it is reasonable to assume that monetary policy instruments and procedures will still differ across member countries at the start of Stage Three, and that substantive decentralisation will characterise, at least in the early years. the execution of the European monetary policy. The first assumption is justified because central banks feel comfortable with their own way of executing monetary policy and can thus be expected to maintain their customary practices, which reflect specific market and institutional features. The second assumption rests on the fact that central banks have accumulated considerable human capital in terms of knowledge of national financial institutions which would not be used if operations were to be centralised fully. Over time, I would expect the above arguments gradually to lose some force, thus pushing towards greater centralisation in the execution of monetary policy.

In the light of the above considerations, what would be the minimal requirements for the conduct of the single monetary policy? The most important one is to achieve the integration of national interbank markets so as to ensure that interest rate arbitrage brings about a single monetary stance throughout the Union. This must rest, in turn, on the integration of national payment systems, which permits credit institutions rapidly to transfer their interbank positions across borders and to achieve final settlement within the same day.

Although not strictly necessary for the above purpose, achieving a greater degree of similarity among national monetary policy instruments and procedures may also be advocated to prevent regulatory arbitrage and shifts in financial location resulting from differences in the cost-subsidy mix implicit in the way monetary policy is managed; and to facilitate the understanding of monetary policy signals on the part of market participants. These arguments, however, merely point to the benefits of harmonisation and leave the standard and terms of harmonisation indeterminate.

Other key issues which need to be tackled in preparing the technical infrastructure for the future monetary policy are the relative importance that should be given to the currently available instruments (reserve requirements, standing facilities and open market operations) in regulating liquidity conditions, and the degree to which policy execution can be delegated to national central banks.

As is well known, over the past years open market operations have generally become the main channel through which monetary conditions are influenced in Community countries, and money market interest rates the principal operational target in the daily conduct of national monetary policies. Nevertheless, as described in the last Annual Report of the Committee of Governors of EC Central Banks, there are still very significant differences in the use which is made in different countries of two other channels for regulating liquidity conditions: reserve requirements, and standing facilities. For example, while reserve requirements are used significantly in a country like Germany, they do not play any role in the United Kingdom. In turn, standing facilities play a very important role in the Netherlands and in Germany compared with other European countries.

As regards the issue of decentralisation, while decision-making is centralised in accordance with the principle of indivisibility of monetary policy, the Statute contemplates the decentralisation of the execution of the single monetary policy since, as explicitly stated: "to the extent deemed possible and appropriate (...), the European Central Bank shall have recourse to the

national central banks to carry out operations". Undoubtedly, the issue of decentralisation in the execution of the future monetary policy is very closely related to the final decision taken as regards the relative importance to be given to the various instruments and procedures available for regulating liquidity conditions. For instance, the management of reserve requirements and standing facilities can, provided they are adequately harmonised, be decentralised to a much greater extent than open market operations, since the latter must be executed in a timely and flexible fashion to offset liquidity shocks.

Although very complex technical issues are involved in comparing the merits of alternative models for executing the future monetary policy, what may well happen is that an evolutionary model is chosen which, starting from a relatively higher degree of decentralisation, can evolve over time towards a more centralised system. This would naturally imply that the role of reserve requirements cum standing facilities would be relatively more important in regulating liquidity conditions in the early rather than the later stages of EMU.

IV. CONCLUSIONS AND POLICY IMPLICATIONS

This paper has reviewed some of the most important issues concerning the process of European monetary integration. It draws a number of tentative conclusions about its overall economic desirability, the problems potentially present during the transition, and the key role to be played by the future European monetary authority.

Firstly, regarding the economic desirability of EMU, it is suggested that it will be economically advantageous for the Community as a whole. In particular, there will be significant benefits from fostering economic and financial integration provided this takes place in an environment of more stable prices. Furthermore, the costs associated with renouncing the exchange rate as a tool for macroeconomic adjustment are smaller than sometimes claimed since symmetric shocks are likely to be relatively frequent given the production

patterns of Community countries, and since national fiscal policies have enough room for manoeuvre to offset asymmetric shocks.

This notwithstanding, present differences in national economic structures imply that the relationship between benefits and costs is not likely to be equally favourable in all Member countries. In particular, those economies with less flexible goods and labour markets are likely to experience relatively more important costs in terms of macroeconomic instability. In the latter economies, the best way to improve the relationship between costs and benefits is to undertake forthwith the necessary structural reforms which would increase the flexibility of wages and prices. In this respect, in so far as the nominal convergence criteria contained in the Maastricht Treaty induce the above countries to adopt the necessary structural policy measures during the transition, the potential economic net gains from EMU could be increased even further.

Secondly, concerning the transitional period, the potential problems of maintaining exchange rate stability in the ERM in an environment of free trade and capital movements can only be solved by strengthening the coordination of national economic policies in the direction of promoting sustained non-inflationary growth, as well as by implementing the necessary changes to safeguard ERM cohesion in the presence of speculative attacks. These are undoubtedly important tasks for the European Monetary Institute and national central banks.

Thirdly, the whole balance between the costs and benefits to be obtained from EMU depends critically on the orientation of the future monetary policy to be conducted by the European System of Central Banks. Accordingly, the institutional design of the future European monetary authority gives primacy to the objective of price stability and goes a long way towards ensuring the economic and political independence which is required to establish the anti-inflationary credibility of the new monetary institution. Furthermore, the reduction of national inflation rates and of budget deficits, which needs to be made during the transition to comply with the EMU-membership convergence

conditions set in the Maastricht Treaty, plus the processes set in motion to make national central banks independent will play an important role in ensuring that the anti-inflationary objective is widely shared by future EMU members. In addition, the role played by the European Monetary Institute in the next few years in preparing the technical and logistical framework needed to conduct the future monetary policy is of paramount importance. In this regard, the decisions which are finally taken regarding to the strategy and tactics of the European monetary policy will be crucial in shaping its effectiveness and underpinning its overall anti-inflationary orientation.

Finally, while the paper has concluded that European monetary integration is a desirable development from the economic point of view, what it has not tackled is the more difficult question of identifying the minimal elements of political integration which are needed for EMU to be sustainable. This issue will be discussed in the forthcoming European Intergovernmental Conference on Political Union starting in 1996.

NOTES

1. See Werner Report (1970) for the original document, and Gros and Thygesen (1992) for a description of the circumstances that surrounded the launching and later shelving of the Werner Plan.

2. See Delors Report (1989) and the collection of papers attached.

3. See Treaty on European Union (1992).

4. On this point see Giavazzi and Giovannini (1989).

5. Critical views on EMU have recently been voiced by Feldstein (1993) and Krugman (1992).

6. Throughout the paper it is implicitly assumed that a single currency will be circulating in EMU. Thus the discussion of the costs and benefits of the European monetary union should be related to those incurred when moving from the present situation to a single currency.

7. For some recent surveys on the costs and benefits of EMU see: European Commission (1990), De Grauwe (1992), Eichengreen (1992), Gros and Thygesen (1992), Masson and Taylor (1993), and Goodhart (1993).

8. The paper by Goodhart (1993) explores the politicial economy issues surounding EMU and makes this and other interesting points.

9. See, for example, Eichengreen (1993), De Grauwe and Vanhaverbeke (1993), Bini-Smaghi and Vori (1993), and Decressin and Fatás (1992).

10. A review of the recent ERM experience and its impact on inflation is made by Svensson (1994).

11. See Barro and Gordon (1983) and De Grauwe (1992).

12. Among the former, see OECD (1989) and Jackman, Layard and Nickell (1991); among the latter, see Eichengreen (1992), Bean (1993) and Bini-Smaghi and Vori (1993).

13. See Sachs and Sala-i-Martin (1992) and Von Hagen (1991). Goodhart (1993) clearly summarises the results from these and other studies.

14. Eichengreen and Wyplosz (1993) discuss the recent ERM crises and the role of speculative capital flows. Among the official reports on the ERM crises, see Committee of Governors (1993), Monetary Committe (1993) and Group of Ten (1993).

15. Swinburne and Castello-Branco (1991) survey the main issues surrounding the economic impact of central bank independence.

16. This section draws heavily on Monticelli and Viñals (1993).

17. See, for example, European Commission (1990) and Gros and Thygesen (1992).

18. Recent studies on this issue are Alesina (1989), Grilli et al. (1990) and European Commission (1990).

19. Among others, see Begg et al. (1992) and Kenen (1992).

20. On this point, see Begg et al. (1992) and Currie (1992).

21. Sargent and Wallace (1981) and Swinburne and Castello-Branco (1991).

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