CENTRE FOR EUROPEAN POLICY STUDIES

THE IMPLICATIONS OF A SINGLE EUROEAN CURRENCY AND MONETARY POLICY: PROSPECTS AND POLICY ISSUES

Nicholas C. Garganas

CEPS Working Document No. 77

April 1993

CEPS Working Documents are published to give an early indication of the work in progress within CEPS research groups and to stimulate reactions from other experts in those fields. Unless otherwise indicated, the views expressed are attributable to the author(s) in a personal capacity and should not be interpreted as representing any institution or staff.

© Copyright 1993, Centre for European Policy Studies

All rights reserved.

ISBN 92-9079-155-1

THE IMPLICATIONS OF A SINGLE EUROPEAN CURRENCY AND MONETARY POLICY: PROSPECTS AND POLICY ISSUES

by

NICHOLAS C. GARGANAS*

---

* Bank of Greece. Paper presented at the Project LINK Fall Meeting, Ankara, Turkey, September 14-18, 1992. The views expressed are those of the author and do not necessarily represent those of the Bank of Greece.

THE IMPLICATIONS OF A SINGLE EUROPEAN CURRENCY AND MONETARY POLICY: PROSPECTS AND POLICY ISSUES

by Nicholas C. Garganas*

1. Introduction

The issues raised by Economic and Monetary Union (EMU) for Europe are enormous. When full monetary union starts for those member states judged eligible to participate by January 1999 at the latest, the proposed European Central Bank (ECB) and the European System of Central Banks (ESCB) will take over the responsibility for the common monetary policy practised by the participating countries, including the setting of interest rates. This will entail irrevocably fixing the mutual parities of all participating currencies and the introduction of the Ecu as the single currency of the Union in due course.

From the beginning of stage three of EMU there will be a fundamental change in the whole system of economic management, affecting the bases of monetary policy, the conduct of national budgetary policy and the orientations for exchange rate policy vis-a-vis non-Community currencies. Under the Treaty agreed at Maastricht[1] the principal objective of monetary policy will be to maintain price stability, and the ECB and ESCB will be independent of national and Community political authorities. They will be required to support the general economic policies in the Community without prejudice to the price stability objective. In contrast to monetary policy, there would be no EC-wide fiscal policy. Fiscal powers will be left to the member states, acting on their own, but their budgetary policy will be subjected to a number of provisions that introduce constraints on the size of fiscal deficits and their financing. There will be new competitive pressures on the public sector. The abolition of national currencies would mean that exchange rates cannot be used as a buffer to help the economy adjust to shocks. The Community would still be able to change its exchange rate vis-a-vis the rest of the world, but the agreed provisions clearly require that exchange rate policy is consistent with the goal of price stability.

These would be dramatic changes, and it is important to try to understand their implications, not so much in order to try to make a case for or against EMU, as to discuss the potential difficulties and costs of maintaining a single currency over an area so varied in cultural and economic terms and identify potential defects in these arrangements that will need to be correted in future revisions of the Treaty so as to ensure a successful operation of the monetary union. Economic and monetary union is part of a long-run process of integration in the Community and its underlying logic is strong enough to allow us to assume that monetary union will eventually be completed.

This paper contains a discussion of some of the implications of a single European currency. In doing so, the issues involved are divided into two broad categories. The first

---

* Bank of Greece. The views expressed are those of the author and do not necessarily represent those of the Bank of Greece.

1 See Council of the European Communities and Commission of the European Communities (1992).

contains a discussion of the issues of macroeconomic policy and control in the Community economy as a whole under EMU. As has been emphasised earlier, the Maastricht Treaty makes price stability the over-riding objective of monetary policy and much of the discussion about EMU has centered on the potential ability of a future European Central Bank to achieve that objective. This is hardly surprising, since concern about inflation has been a dominant factor in economic politics for many years. Nonetheless, inflation has not always been a central problem and it can be assumed that inflationary pressures will not always be the central problem in the future. Once price stability has been achieved, it will become the task of the authorities at the Community level to ensure a stable growth path.

Choices about the formulation and operation of monetary policy will be important in this respect. Section 2.1 of the paper is devoted to a discussion of some of these issues. There is currently a debate on the use of monetary targets as guides to policy and about the methods of monetary control. The ability of the central bank to control some monetary aggregate would depend on the stability of that aggregate and section 2.1 looks at whether the monetary relationships are indeed likely to be more stable at a Community level than at individual country level. It considers also the implications of adoption by the ECB of a stable path for the growth of nominal GDP for the Community as a whole. That objective might be appropriate in a wider range of circumstances than the simple objective of price stability. The implications of the interaction of a predetermined nominal GDP growth with price pressures which may arise as a result of wage pressures, external shocks or other exogenous factors are also discussed.

Section 2.2 contains a discussion of the implications and requirements arising from the Maastricht Treaty for budgetary policy, focusing on the role and effectiveness of fiscal policy as an instrument of EMU-wide demand management for stabilisation purposes. It opens with a discussion of the various binding fiscal rules laid down in the new Treaty, and considers their potential deflationary bias for the Community economy as a whole. Next, the interaction of international spill-overs and the intertemporal effect of present budget deficits on future tax rates are considered, and their implications for the effectiveness of national fiscal policies are discussed, together with the need for co-ordination between different national governments in order to achieve a desirable aggregate fiscal policy stance. Finally, section 2.3 contains a brief discussion of the implications of the ambiguous division of responsibility between finance ministers and the ECB for exchange-rate policy of the Community as a whole.

The second part of the paper will adress the question of how individual countries within EMU could respond to localised economic disturbances that affect them, when they will no longer be able to use domestic interest rates, and the nominal exchange rate as policy instruments. Are there alternative means of handling country-specific economic shocks?

For economies that are highly integrated into Europe output shocks should be felt symmetrically and adjustment to such shocks should be also symmetrical. So these countries should be able to cope with fixed mutual parities of their currencies and a single monetary policy within the proposed Union. Changes in the Community exchange rate vis-a-vis the rest of the world could be used to ease adjustment and help to cushion symmetric international shocks. However, there is evidence to suggest that peripheral European countries are susceptible to localised shocks because of their industrial structure and trading patterns. Section 3.1 surveys empirical work on the issue and adresses the question of whether asymmetries will have a tendency to decrease or to increase in EMU.

In the absence of exchange rate changes, adverse asymmetric shocks can be

countered in three other market-clearing ways, and the question is whether these adjustment mechanisms can substitute for the exchange rate in EMU. Section 3.2 discusses the responsiveness of wages and prices; section 3.3 regional labour mobility, the other principal mechanism by which a regional shock can be absorbed if wages and prices do not respond; and section 3.4 the role of investment in the context of EMU. This discussion reveals a high degree of uncertainty about the extent to which market clearing mechanisms can assist to correct country-specific disequilibria when the exchange rate is lost as a policy instrument for EC member states. Fiscal policy at the national level and central public finance are bound to play an important role in EMU as the only remaining means of assisting regional adjustment. These issues are discussed in section 3.5. It looks first at the factors that may limit, or even prevent, the effective use of national budgetary policy for the purpose of national economic stabilisation within EMU, and considers how fiscal policy helps to alleviate regional shocks in existing federal states. Fiscal transfers between different EC countries, and in particular the role of EC Structural Funds and the new Cohesion Fund, are then considered. Finally, the question of whether such flows are adequate in the context of EMU, and the need for a further examination of possible mechanisms for more substantial inter-regional redistribution, is adressed. Concluding remarks are contained in section 4.

2. Macroeconomic policy under EMU

2.1 A framework for a single monetary policy

The practice of setting target growth rates for a year or more ahead for some measure of money supply was followed by most major industrialised countries in the late 1970s and the early 1980s, but by mid-1980 technical monetarism was generally perceived to have comprehensively failed as the relationship between nominal income and the behaviour of the monetary aggregates had been found to be unstable and unreliable in a period of great financial change. Both causality relationships in which inflation followed monetary growth with a well defined lag, and national demand for money functions, in which money was related to nominal incomes and interest rates, appeared to deteriorate or break down. Financial innovation, resulting as a response to measures of deregulation and liberalisation, were held to be largely responsible for this (Goodhart, 1989).

Growing doubts about the predictability of domestic velocity (and increasing concern about foreign exchange misalignments) led many central banks to refashion their policies, shifting from intermediate monetary targeting to direct targeting of prices (or exchange rates), and returning to a more discretionary and pragmatic mode of determining short-term interest rates.

This experience of unstable velocities was, however, less evident in the continental European economies, possibly because of the different institutional framework operative in these countries, or because of delays in the process of financial liberalisation and innovation. Moreover, partly as a result of the development of new econometric techniques, confidence in the stability of money demand has revived in recent years. Consequently a number of continental European countries do still use monetary aggregates as targets or as indicators in the conduct of their monetary policy (though with some pragmatic blend of discretionary response to monetary developments), and therefore are likely to press for the adoption by the ECB of a monetary policy guided by an EMU-wide ex-ante money supply target.

The adoption of an EMU-wide monetary target would, however, present several

problems. Given that the ultimate objective of targeting the rate of growth of a European monetary aggregate would be to stabilise prices within EMU, a minimal necessary (but not sufficient) requirement for the success of such a policy would be the existence of a stable and well-behaved EMU-wide money demand function. Recent empirical work (see Kremers and Lane, 1990, Monticelli and Strauss-Kahn, 1991, and Artis, 1992) has shown that a stable and predictable aggregate demand for money holds for the countries participating in the exchange rate mechanism (ERM) of the European Monetary System and that such relationships are more stable at the ERM level than at individual country level. This might be interpreted as a result of currency substitution between the ERM currencies. [1] Such an interpretation would suggest that with the establishment of full monetary union the stability of the demand for money in the EMU area as a whole should be further enhanced when exchange rates are permanently fixed, as all currencies within the union will become perfect substitutes in investors' portfolios. However, the benefits of aggregation and the increased degree of European integration in respect of currency substitution effects may be insufficient to compensate for other destabilising aspects of the ongoing important changes in the financial structure of many Member States, associated with the process of financial integration. Financial innovation may even accelerate in the next few years owing to the increased competition in financial markets as liberalisation spreads more widely.

(a) Targeting nominal GDP

Perhaps it would be preferable for the ESCB to pursue a target growth rate for EMU-wide nominal GDP rather than a particular monetary aggregate. The idea that intermediate monetary aggregates should be replaced with a nominal GDP target has been discussed by a number of authors e.g. Meade (1978, 1981) and his associates at Cambridge, [2] Tobin (1980, 1983) and Brittan (1981). Meade, for instance, argued that since the purpose of monetary targeting is to control the money supply so as to influence the total of money expenditures (i.e. the quantity of money, M, multiplied by its velocity of circulation in current transactions, V,) in such a way that this control of nominal income (i.e. the product of the output of final goods and services, Q, and their average price, P) restrains movements of prices, it would be preferable to target nominal GDP directly rather than movements in the quantity of money. He suggested that an excessive concentation on intermediate monetary targets rather than final objetives is confusing to economic agents and can lead to undesirable fluctuations in the demand for output when velocity shifts. [3]

1 As capital controls among member states were reduced, expectations of realignments led to shifts of funds from countries which were likely to depreciate to strong-currency couuntries and currency substitution both on the demand side and the supply side (via central bank interventions) rendered domestic monetary stocks more volatile.

2 Vines et. al. (1983), Blake and Weale (1988) and Weal et. al. (1989).

3 Bean (1983), examined the implications of such a proposal for the performance of the economy in the context of a contracting model in which the wage is fixed in a state of uncertainty about future levels of demand and productivity. Assuming that the objective of the authorities is to minimise the divergence of output from its full information equilibrium level, he demonstrated that in the face of demand shocks nominal income targeting is always preferable to money supply targeting. In the face of supply shocks, a sufficient (but not necessary) condition for nominal income targeting to be preferable is that the elasticity of aggregate demand with respect to real balances be less than one.

The first step in the process of setting an EMU-wide target for the growth of nominal GDP ($\dot{Y}_{emu}$) would have to be to choose a common inflation target for the EMU area as a whole ($\dot{P}_{emu}$). Since the Maastricht Treaty makes the goal of price stability the over-riding objective of a European Central Bank, this common inflation target would not obviously be an average, but the minimal feasible inflation rate. No absolute standard of price stability has been set down in the Treaty but the European central bank governors currently define price stability as an inflation rate between nil and 2 per cent (Duisenberg, 1992). However, one might hope that the rule for setting the price target would be such as to ensure that it is feasible for the entire EMU area rather than for the small number of "core" countries that can meet absurdly stringent price objectives, and it would be sufficiently flexible to accommodate different short-term price movements among member countries. It will be a mistake to replicate the asymmetry and rigidity of the ERM of the European Monetary System, with the central banks of the core countries dominating monetary-policy making, and forcing other members to follow the rigid, low-inflation rule, just as they must accept the hegemonic role of the Deutsche Bundesbank now within the ERM. [1]

The second step would be to agree on the potential output growth for the EMU area ($\dot{Q}_{emu}$). This target could be obtained, for example, by averaging individual countries' potential growth rates. Once this process is completed, then the target rate of nominal GDP growth could be set as the sum of the potential output growth of the area and the inflation target:

$$\dot{Y}_{emu} = \dot{P}_{emu} + \dot{Q}_{emu}$$

The adoption of a stable path for the growth of nominal GDP as the target for the ECB has some appeal for the EMU because that objective would be feasible in a wider range of circumstances than any simple anti-inflation rule, and would leave scope for a stable growth of output and employment when inflation has been brought down at a low and stable rate. It would also be compatible with the adoption of alternative monetary and fiscal policy rules.

Nominal GDP targeting could be used as a non-contingent rule. The ECB operations then should have as their ultimate target a stable path for the growth of the EMU-wide monetary demand, MV (money times velocity) jointly as a flow. This would be particularly appropriate if the velocity of the EMU-wide demand for money were unpredictable. Money growth will then be adjusted for changes in the velocity of the EC-wide demand for money to keep nominal GDP on its planned path without necessarily implying that fiscal policy should be actively used to support weak business cycles and dampen excessive aggregate demand growth, since this would depend on whether policy makers were willing to fine-tune the economy or not. [2]

If the velocity of circulation of money were constant, a steady rate of growth of nominal GDP could be achieved simply by a steady rate of growth in the supply of money.

[1] See for example the recent article in the Financial Times by Peter Kenen (1992).

[2] That was the way the "Medium-Term Financial Strategy" was developed in the UK in the mid-1980s. This is also the spirit in which monetary targeting is practised in Germany where changes in the velocity are accommodated by providing a range for the money supply growth target which is obtained as the sum of the potential output growth rate and the inflation target.

Alternatively, nominal income might well be maintained on a steady planned growth path by adopting a contingent monetary target and by fiscal policy adjustment. The issue of whether monetary or fiscal policy instruments would be needed to achieve a desired rate of growth of nominal income is a large subject which it would be impossible to do justice to here. Meade suggested that fiscal policy rather than monetary policy might be charged with the prime responsibility for the control of nominal GDP (see Meade, 1981, and Vines et. al.,1983). In the standard Mundell-Fleming model, [1] in which sticky prices are assumed, fiscal policy is most effective when exchange rates are fixed and there are free-capital movements, conditions which will be fulfiled in EMU.

However, since the Treaty gives primacy to price stability as a policy objective, discretion could be exercised only within this scope. In other words, monetary and fiscal policy could be actively used in the direction of a prefered nominal GDP objective only to the extend that the growth of total spending is compatible with the inflation target. (There is certainly no question of going back to demand management in real terms aimed at stabilising a chosen growth rate of real output and employment).

Of course, the use of discretionary policy to maintain nominal GDP at a target path cannot influence directly the division of this growth between output and price changes. How far this is translated to real growth, and how far it is dissipated in inflation, depends on the responses of firms and trade unions. Meade advocated that nominal income targets should be combined with a radical reform of wage fixing agreements so that rates of pay were fixed so as to maintain real output and employment. The solution of this problem depends very much upon the particular institutions, historical background and political possibilities of each member country. Given the diverse forms of national practices in the field of contractual relations, it is hard to see how a move to EMU would bring about a conversion in the structure and process of wage bargaining.

It is sometimes argued (see, for example, Horn and Persson, 1988 and the report of the Commission of the EC, 1990a) that because the ECB would be committed to price stability and would be independent of political pressures, it is likely to carry more credibility than many of the Community's national governments when it promises low inflation. As a result, wage demands by labour unions may also tend to adapt to a common inflation objective. But there has been little clear evidence so far that the ERM countries converged to low inflation with less costs in lower output (or higher unemployment) than might have been expected, e.g. in comparison with their own previous experience or relative to countries outside the ERM (see, for example, the recent study by Egebo and Englander, 1992), though much more empirical research is needed on this subject.

The nominal GDP rule could also be adopted in the context of an incomes policy as part of a deal with the unions by which the target growth of total nominal income is divided between profits, pay and the growth of employment, but it is hard to see this being accepted as a policy norm in the Community where incomes policy is rejected by the major countries, not only on ideological grounds but also because the mainstream view is that direct wage controls would lead to distortions, deflection and pent-up wage demands.

Nevertheless, changes in labour market practices or an incomes policy are neither necessarily a prerequisite, nor a logical consequence of nominal income targets. Ultimately nominal income targeting is superior to any purely price objective. One advantage of

[1] For a comprehensive treatment of the Mundell-Fleming model, see Frenkel and Razin (1987).

a nominal GDP objective is that it leaves some scope for discretionary monetary and fiscal policy to be used to offset fluctuations in total spending, generated through instabilities in savings or investment, or other changes in financial behaviour, when automatic corrective forces are inadequate or take long to operate. Thus it will enable the ESCB and the ECOFIN (the Council of the EC finance ministers) to achieve what can be achieved by central financial policy to prevent avoidable unemployment and depression without jeopardising the price objective. If a target for money GDP is followed there simply cannot be a collapse of nominal income and expenditure of the kind that occured in some countries during the Great depression. Moreover, whatever view one takes about the causation of business cycles and depressions, an effective target for nominal GDP also ensures that downward deviations in the growth path are monitored and do not continue through inadvertence (Brittan, 1981).

(b) Policy response to shocks

There is, however, a question about the treatment of symmetric EMU area-wide shocks within this nominal GDP framework. The policy response to shocks which are asymmetrical across the constituent regions or countries of EMU is a matter of later discussion.

Since the task of the ESCB and the ECOFIN Council will be to keep the flow of total nominal expenditure (MV) on a steady path, a demand shock would require an appropriate policy response to move back on course. A related issue is whether in the absence of a federal fiscal system, a countervailing area-wide fiscal adjustment would require policy co-ordination or not, but this subject is considered later when fiscal policy issues are discussed.

A sudden and unexpected rise in some major costs or prices, such as a union wage push or an oil price rise, will lead to an initial rise in the price level and to a decline in output and employment, if markets do not respond flexibly to compensate for such supply shocks, even if the authorities stand firm in their control of nominal income.

How far should demand be adjusted upwards to accommodate such supply shocks? At one extreme there is a policy of non-accommodation. The target growth for total nominal demand is maintained, and an output slump is accepted, until wages and prices fully adjust to the rise in those costs which provide a shock to the system. Next along the scale comes a policy of minimal accommodation, i.e. a once-for-all rise in monetary demand to accommodate the direct impact of a supply shock, but secondary wage and price increases triggered off by the shock rise in costs are not accommodated. Beyond this there are any number of degrees of accommodation in demand management. Of course, there is no way of predicting in advance the circumstances in which it would be appropriate for the ESCB and the ECOFIN Council to accommodate such shocks. In present circumstances, however, the mainstream view in the Community is that the general rule should be: no accommodation.

There are two problems with nominal GDP targets. One is that the relevant data are erratic and lagging. The other problem is that there are lags between the recognition that some fiscal action is needed and the time fiscal policy changes can be implemented, as in most member states tax and spending decisions only come round at a defined point once a year. But neither of these objections should rule out a nominal GDP objective for the EMU area as a whole. One can get the general direction right by setting annual or biannual targets

rather than trying to stabilise the quarter-to-quarter path.

If there is a need to resort to demand management at the union level for stabilisation purposes then a more unified approach to macro-economic policy than is at present contemplated will be needed within the EMU.

2.2 Fiscal policy issues

If fiscal policy is recognised as an essential instrument of EMU-wide demand management for stabilisation purposes, then the question arises whether the move to a monetary union will need a greater degree of fiscal centralisation or co-ordination of national fiscal policies than is envisaged in the new Treaty.

In contrast to monetary policy, fiscal policy will not become the responsibility of the new Community but will remain in the domain of national governments. The choice of fiscal policies is left in the hands of national governments because in a monetary union, by definition, individual countries will not be able to use exchange rates or to deploy internal monetary policy as a means by which they can stabilise their economies and adjust to localised shocks. The burden of adjustment will therefore fall mainly on fiscal policy, given the likely continuation of rigidities in labour markets. So member governments would be able to adopt stabilisation-oriented fiscal policies within EMU if they wish, but the Maastricht Treaty places a number of constraints on national fiscal policy. There are three basic binding rules in the provisions relating to the conduct of national fiscal policy: "no excessive fiscal deficits", "no bail-outs" and "no monetary financing of budget deficits". There are provisions in the Treaty to set up formal procedures of surveillance over fiscal policy, including numerical triggers (these being that the budget deficit of a country as a proportion of GDP should not exceed 3 per cent and gross public debt should not be higher than 60 per cent of GDP) designed to prompt a Commission investigation into the fiscal policy of member states, and in extreme cases there is provision for sanctions in member states failing to correct excessive deficits. There are also provisions that prohibit the ESCB from providing credit facilities to any government or other public sector body, and from purchasing debt instruments directly from them, and provisions that will prevent the Community and governments of member states assuming the financial commitments of other governments or public authorities in the Community.

The power of national governments to use fiscal policy as an instrument for stimulating domestic demand would be constrained also by limits on their capacity to raise tax revenues. They will loose the seigniorage revenue from issuing cash and bank reserves, and, in so far as economic unification will increase factor mobility, they will be unable to impose tax rates significantly different from those of other member countries. They may also be unwilling to impose further burdens on future taxpayers. The argument that deficit spending will be constrained arises from the proposition that governments would be unable to borrow more than a certain amount on the markets on acceptable terms, if the implied debt service exceeds their capacity to raise tax revenues. However, the strength of this argument is disputed (see, for example, Bayoumi and Russo, 1991, and Goldstein and Woglom, 1991 for a review of the debate).

There are three main reasons why fiscal discipline would be a major concern in EMU: First, national fiscal policies are likely, within EMU, to have fewer adverse effects on the country concerned, as changes in fiscal policy will have negligible effects on interest rates

and the value of its currency, but they will also have potentially spill-over effects - "pecuniary externalities" - on other member states. Budget policy will stimulate demand for imports, and hence boost activity elsewhere. Whether this leads to a net increase in output depends on whether the EMU-wide interest rate rises as well. Budget policy in one country may also affect the exchange rate of the Ecu against the dollar and the yen, which is also a key variable for other member countries. Second, excessive fiscal deficits would distort the overall fiscal/monetary policy mix of the EMU area as a whole, and could give rise to strong pressure for accommodation, thus undermining the ECB's counter-inflationary objectives. Third, the enhanced financial market discipline forseen in EMU cannot guarantee adherence to fiscal discipline, as markets may misprice the risk that countries could default, without being bailed out by other members, encouraging governments to borrow excessively in the broader European financial market.

While the need for the various binding fiscal rules built into the Treaty is widely recognised, there is some concern (see, for example, Gross and Thygesen, 1990 and Goodhard, 1990), about their asymmetric bias in that attention is directed only against excessive fiscal laxity rather than excessive fiscal conservatism, and that the central policy response is to constrain the countries with the biggest percentage deficits, rather than make the responsibility for adjustment symmetric by imposing an equal burden of adjustment on member states with conservative/deflationary fiscal policies.

Moreover, in so far as it will be necessary to use fiscal policy as an instrument of national demand management for stabilisation purposes, it would not seem appropriate to constrain the limits of such policy by imposing an arbitrary ceiling on the national budget deficit and debt as a proportion of GDP, without reference to the existing economic situation e.g. the domestic private sector investment-saving imbalance, within the country concerned. As noted by Goodhart (1990), limits on the ability to run a budget deficit should not be a severe constraint on the more inflationary countries within the EMU, since the appropriate posture for fiscal policy in these countries would be one of tighter fiscal policies than prior to entry into EMU, as they will no longer be able to use tight domestic monetary policies to contain inflationary pressures. Instead, it could be the low-inflation countries, whose real interest rates might be forced upwards by EMU, that might need to run budget deficits to offset domestic stagnation and the emergence of a chronic investment/saving imbalance. There is thus a potential deflationary bias in the arrangements agreed at Maastricht in that the existence of binding fiscal rules and common surveillance of national policies by the ECOFIN Council will force countries experiencing inflationary pressures to adopt tight fiscal policies to correct a situation where, say, private sector investment came to outstrip private sector saving, but there is no mechanism in the system that will force countries to ease budgetary policy when the economic situation requires such action, if governments refused to undertake expansionary fiscal action.

An important issue is whether EMU might weaken the incentive of national governments to accept a higher fiscal deficit to help stabilise the national economy. With the move to EMU, the member states' economies will become more interdependent, and the channels by which economic developments in one country can spill-over to its partners will increase. Any fiscal expansion will therefore tend to spill-over more into other economies, providing governments with less of an incentive to undertake it. The larger the overspills through the current account, the less will be the inducement to undertake stabilising fiscal action.

A government may also refuse to use fiscal policies to offset an adverse demand

shock because of the intertemporal effect of present debt creation on future tax rates. A fiscal deficit will have to be debt financed. Given the binding rules on fiscal deficit financing accepted in the Maastricht Treaty, i.e. no monetary financing of deficits and no bail-outs, present debt creation will imply higher future taxation. If we may assume that higher taxation will have adverse effects on the equilibrium, supply-side, level of output, then higher taxes will impose a real burden on the working of the economy. [1] The more serious the burden of future taxes is seen as being the more disinclined a national government will be to use fiscal policy to stabilise the national economy. These points have been made clearly by Goodhart (1990) who concludes that "because of the interaction of international overspills and the intertemporal effect of present budget deficits on future tax rates, local, regional and national use of fiscal policies is likely to be less common, and less effective, than federal fiscal stabilisation would be within EMU". A centralised mechanism to at least co-ordinate fiscal policy across member states will therefore be required within EMU if the authorities were to use a common policy of demand management for the overall Community economy.

Fiscal policy co-ordination would be required also within EMU if the Ecu exchange rate and the current account of the whole currency area needed correction. If the Community's combined current account deficit reaches serious proportions, and this is in turn troubling the financial markets into depressing the Ecu, it will become the key policy target for policy makers within EMU. Since a rise in the interest rate of the EMU area will have an ambiguous effect on the deficit (higher interest rates reduce demand and hence imports, but they also raise the Ecu. This can lead to a real loss of competitiveness and is likely to increase the gap between exports and imports) the correction of this deficit could require fiscal policy changes. But the benefits of fiscal tightening by a national government would benefit the group as a whole, whereas the home economy would bear all the costs. Without new arrangements for co-ordination, national governments would be inclined to let other members bear the burden of adjustment.

2.3 Exchange-rate policy

Another matter that gives rise to concern is the potential conflict that may arise from the ambiguous division of responsibility for the common exchange-rate policy vis-a-vis the rest of the world. Under the Maastricht Treaty exchange-rate policy will be divided between the ECB and the ECOFIN Council just as it is divided now in most western countries between central bank and government. The Treaty asserts that the ECOFIN Council will have ultimate responsibility for the key decisions on exchange-rate, especially the negotiation of exchange-rate agreements vis-a-vis other currencies. But the Council must consult the ECB before reaching a formal agreement, "in an endeavour to reach a consensus consistent with the objective of price stability". Furthermore, the Treaty requires the Council to consult the ECB on the "general orientations" of exchange-rate policy and declares that the Community's exchange rate policy vis-a-vis the rest of the world must be consistent with the goal of price stability.

However, it is difficult to foresee how, in practice, such a unified front on exchange-

---

[1] This may occur because a rise in tax rates locally may cause labour and capital to emigrate, if tax rates in other member states remained unchanged (Branson, 1990). Even if factor mobility is limited, higher tax rates may lead to distortions, and reduce effort, in ways that will reduce potential output.

rate policy would be achieved since the Council will not be bound to accept the ECB's advice. The ECB's task could obviously be made extremely difficult, if not impossible, if the Council concluded an exchange-rate agreement with the US and Japan conflicting with the price stability. For its part, the ECB will not be bound to adjust their monetary policy instruments to conform to the ECOFIN Council's exchange-rate guidelines. These arrangements therefore leave a large scope for potential conflict (see Leigh-Pemberton, 1992). If the overriding factor in setting interest rates is the need to meet the ECB's objective of price stability, then higher interest rates will, other things being equal, tend to put upward pressure on the Ecu and an appreciation of the overall EMU exchange rate may not be consistent with an agreed target for the exchange rate between the Ecu and the US dollar or yen. The volatility in the DM and the Ecu exchange rate against the dollar and the yen observed over the past 20 years underlines the potential importance of exchange rate policy problems. Credibility may also be adversely affected, if exchange-rate policy and monetary policy appear to be pulling in opposite directions. A unified front on monetary policy will clearly be required if the authorities want to maintain an exchange-rate objective.

3. Regional adjustment problems and the need for balancing mechanisms

So far, we have discussed the issue of macroeconomic control in the Community economy as a whole in the context of EMU and looked at the implications of changes in the system of economic management, affecting monetary policy, rules for national fiscal policy and overall EMU exchange-rate policy vis-a-vis third currencies, for the stabilisation of the Community economy as a whole. We now address the question of how individual countries within EMU could respond to localised economic disturbances that affect them, when they will no longer be able to use domestic interest rates, and the nominal exchange rate as policy instruments.

If economic shocks are symmetric in their impact, i.e. if they affect all the Communities' economies in the same way, the appropriate monetary policy is generally the same everywhere; little is to be gained by changing real exchange rates within the proposed currency area. But shocks that are asymmetric in the sense that they affect different countries in different ways, are likely to be major sources of tension within any fixed-exchange-rate regime.

A common macroeconomic policy will be operated so as to achieve whatever is the desired outcome (e.g. price stability, or a stable growth of nominal demand) in the EMU area taken as a whole, but not in each constituent country or region, and the impact on different countries or regions of the union may not reflect the need for local adjustment. Even when countries or regions face an apparently common shock, EMU-wide targets would imply that there will still be a need for national economic stabilisation in addition to the common policy response, if different countries are in different initial situations, have different economic structures and trade patterns, and display different degrees of wage and price flexibility.

In the absence of an independent national monetary policy and flexible nominal exchange rate, an adverse shock to a national economy can in principle be handled by the use of national fiscal policy. But, as already noted, the constraints that the move to full EMU will place on the use of fiscal policy suggest that for countries having high debt levels at least, the extent to which such policy can be used to help adjustment or cushion shocks, would be limited. If, in effect, policy makers may find that they cannot resort to local demand management for stabilisation purposes, then policy may have to rely on increased flexibility of wages and prices to facilitate adjustment to country-specific disturbances. If wages and

prices are slow to adjust to changing demand/supply conditions, labour may have to migrate towards another country. Where labour remains imperfectly mobile, capital mobility may substitute for labour migration as a mechanism that might facilitate adjustment. The less effective these adjustment processes are, the more output and employment will suffer as a result of some economic shock. Each of these adjustment mechanisms has to be analysed separately, therefore. But first, it seems useful to discuss the incidence of shocks and to see whether asymmetries will have a tendency to decrease or to increase in EMU relative to the present situation.

3.1 Identifying the incidence of shocks

There have been a few empirical studies of the symmetry and magnitude of shocks across countries in Europe, as compared with the United States. Cohen and Wyplosz (1989) used quarterly data on real GDP for France and Germany, spanning the period 1965I-1987IV, to measure the relative importance of symmetric and asymmetric shocks. They compared the sums and differences of the series for these two countries, and interpreted movements in the sum as symmetric disturbances and movements in the difference as asymmetric disturbances. They found that symmetric shocks are much larger than asymmetric shocks. They also compared the standard deviation of the detrended sum and the difference relative to the standard deviation of the original series and found that detrending the sum eliminates much of its variability, while detrending the difference has a smaller effect. They interprete this as indicating that symmetric shocks are predominantly permanent, while asymmetric shocks are predominantly transitory. [1]

A limitation of this approach, as pointed out by Bayoumi and Eichengreen (1991), is that observed movements in output reflect the combined effect of shocks and policy or market responses (such as labour migration and wage/price flexibility), which may themselves vary across countries. Using this method it is impossible to distinguish disturbances from the effects of economic policies or market response mechanisms.

This has led Bayoumi and Eichengreen (1991) to analyse data on output and prices for 11 EC member countries to extract information on underlying aggregate supply and demand disturbances using structural vector autoregression. In addition to identifying the underlying disturbances, their method allows them to look at the response to these disturbances, and hence permits them a measure of the speed of the economy's adjustment to such shocks. They used that information to examine the correlation of disturbances across EC member states, and compared that correlation with that exhibited by disturbances to different regions within the United States. They found that shocks to EC countries are larger than shocks to US regions, and that they are less closely correlated. Their results also indicated that EC countries adjust to shocks more slowly than do US regions.

Asymmetric disturbances are more common in Europe than in the US, but a strong distinction emerges between the shocks affecting a core of EC countries, made up of Germany and four of its close neighbours (France, the Netherlands, Denmark and Belgium) and the very different shocks affecting other EC members (the UK, Ireland and southern Europe). Shocks to the peripheral EC countries tend to be twice the size of those suffered by the core group and the US. Excluding these countries produces, for the EC core, a

[1] Weber (1990) has extended their analysis to a broader group of the EC countries, reaching a similar conclusion.

correlation of shocks similar to that of US regions. There is little evidence that the gap between the peripheral and the core countries of the Community tends to close over time. The distinction between the two groups of countries is reinforced by evidence that peripheral countries adjust to shocks more slowly than the EC core. [1]

Peripheral European countries suffer substancially different shocks because of differences in their patterns of production and trade. In general, any country whose industrial structure differs significantly from the average among community countries is more vulnerable to demand or supply shocks affecting only those sectors in which it specialises. On the other hand, if intra-industry specialisation is taking place, the shock will be more symmetric affecting all industries in different countries involved in the product concerned.

A study by the Commission of the European Communities (1990b) analysed the different sectoral strengths and weaknesses of each country within the single European market. It showed that trade within industry sectors was less developed in member countries with low incomes per head and less important in Portugal and Greece than in any other member countries. Spain and Ireland, and in some respects Italy too, are in an intermediate position.

Will asymmetric shocks diminish in EMU?

Commission of the European Communities (1990a) argues that integration of product markets in the Community will increase the scope of intra-industry trade, rendering the industrial structures of member countries increasingly similar over time. Other studies (see, for example, Krugman, 1991a, or De Grauwe and Vanhaverbeke, 1991) suggest, however, that the completion of the single market may lead to greater industrial specialisation across regions making countries more susceptible to shocks which might affect sectors on which they are reliant. In part the analysis is motivated by the experience of large countries, such as the United States or Canada, which shows that these countries are more regionally specialised than European countries. Such regional specialisation may tend to increase in a large single market since the removal of barriers obstructing the exploitation of economies of scale is likely to encourage countries to specialise in producing those products for which they have a comparative advantage. In addition, Bayoumi and Eichengreen (1991) found that US regions experience relatively large demand shocks compared to their European counterparts. They argue that this finding suggests that completing the internal European market may increase regional economic specialisation and thereby magnify another source of disturbances.

The evidence reviewed in this section then indicates that asymmetric disturbances in the Community, not only do exist, but are unlikely to diminish with the disappearence of trade barriers through the completion of the internal market. Indeed, the greater regional specialisation that should result from the completion of the single market should increase these asymmetries. Furthermore, there are divergencies among Community countries in the degree of wage rigidity which suggests that wage behaviour may have been a component of asymmetric shocks, and will remain so in the future unless real wage responses in the Community to common shocks become more similar, for instance through structural reforms. The evidence on wage rigidity and the response of EC countries to cost disturbances is discussed briefly below.

[1] In a more recent study, Bayoumi and Eichengreen (1992) extended the analysis to the EFTA countries. They found that Austria, Sweden and Switzerland behave more similarly to

the EC core than do Norway, Finland and Iceland, which display distrubances more similar to those of some of the periphery countries in the EC.

The preceding analysis therefore suggests that the Community may find it difficult to operate a monetary union unless other adjustment mechanisms could substitute for national monetary policy and flexible exchange rate to counter country-specific economic disturbances. The findings reported by Bayoumi and Eichengreen (1991) suggest that the EC core countries come much closer than the Community as a whole to satisfying the requirements of an optimal currency area, and so these countries should be able to cope with fixed mutual parities of their currencies and a single monetary policy within the proposed union. Changes in the Community exchange rate vis-a-vis the rest of the world could be used to ease adjustment and help cushion symmetric international shocks. It is the peripheral European countries that are most likely to suffer regional output shocks that differ substantially from those in other EC countries. These are the countries for which the problem of adjustment may be more complicated, requiring asymmetric policy response.

3.2 Wage and price flexibility

In the absence of nominal exchange rate adjustments, an adverse asymmetric shock can be countered through changes in relative wages and prices among regions which can provide an alternative form of adjustment to achieve the realignment of real exchange rates needed to restore competitiveness and to bring output and employment back to equilibrium. Obviously, the more flexible wages and prices are, the less will be the cost of adjustment to disturbances in terms of loss of output or employment.

As noted earlier, under the Maastricht Treaty the ECB would be required to maintain price stability in the EMU area as a whole, but this would not preclude price changes in one part of the union compared with another. In existing federal states, price inflation tends to diverge by a few percentage points across states or regions. However, available empirical evidence does not provide a strong basis for suggesting that flexibility of wages and prices can provide an effective substitute mechanism when adjustments of real exchange rates are needed in individual European countries to offset negative localised shocks.

On the basis of estimates of expectations-augmented Phillips curves (with a productivity effect), the OECD (1989) obtained a measure of real wage rigidity based on the short-run elasticity of nominal wages with respect to consumer prices and the elasticity ofnominal wages with respect to unemployment. The evidence reveals a high degree of real wage rigidity in those EC member states for which estimates are presented, far above the rigidity observed in the United States, Canada and Japan, but there are nevertheless considerable differences between Community countries (see Table 1). In addition, the OECD (1989) presents evidence suggesting that countries with a higher degree of short-run real wage rigidity also suffered the steepest rise in unemployment in the 1970s and the 1980s (see Chart 1). This appears to indicate that Community countries would need a far larger increase in unemployment to restore the initial level of wages and prices quickly following a price shock, than would the United States, Canada or Japan. The high proportion of long-term unemployed and the low likelyhood of going from unemployment to employment observed after several years of fairly strong output growth - between 1983 and 1988 (see Table 2), also suggest a slow adjustment of labour markets in Community countries over the long-run. Such sluggishness obviously implies that labour markets in these countries would rebound slowly from a negative supply shock and only after a fairly long period of increased unemployment.

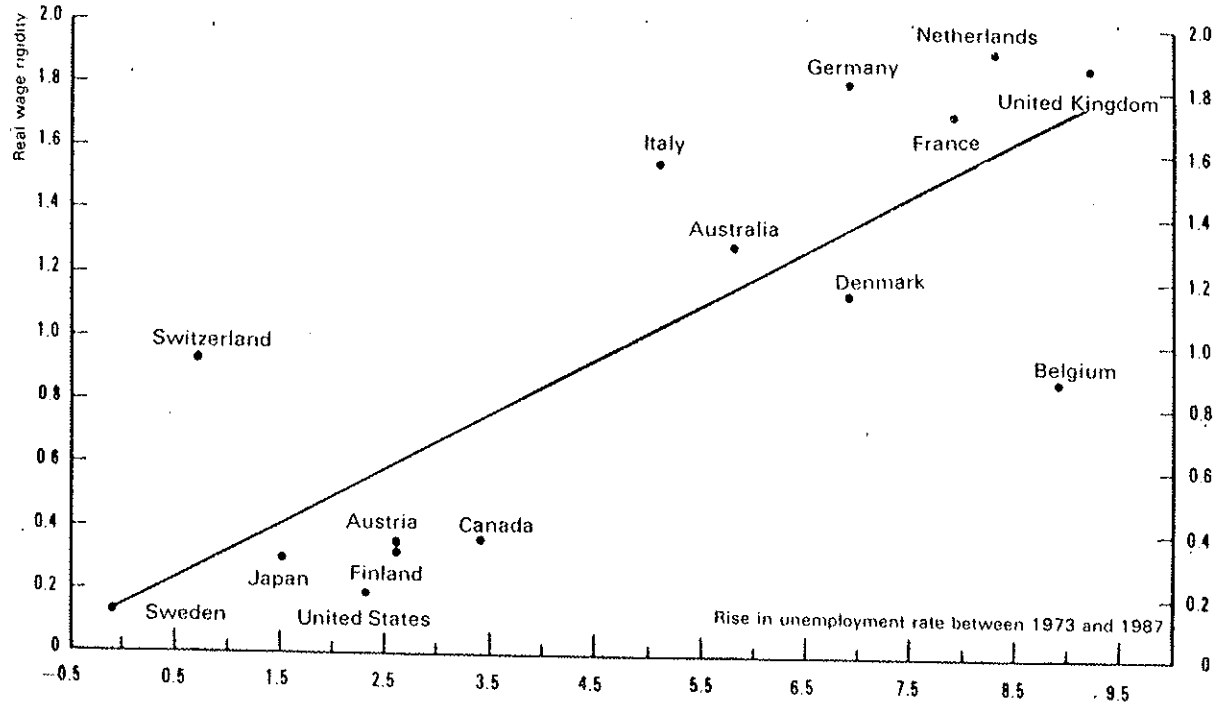
Table 1. Measuring real wage rigidity in EC countries

	Elasticity of nominal wages with respect to		Short-run real wage rigidity
	Prices Short-run	Unemployment rate	
Belgium	0,25	- 0,25	0,86 (a)
Denmark	0,25	- 0,10	1,13 (a)
France	0,50	- 0,29	1,52 (b)
Germany	0,75	- 0,11	1,80 (a)
Italy	0,60	- 0,39	1,00 (b)
Netherlands	0,50	- 0,27	1,85 (b)
Spain	0,25	- 0,20	0,54 (a)
United Kingdom	0,33	- 0,15	2,01 (b)
For comparison:			
United States	0.14	- 0,61	0,18 (a)
Canada	0.18	- 0,51	0,35 (b)
Japan	0,66	- 1,87	0,27 (b)

Source: OECD (1989), Table 2.6, p. 44

(a) Calculated with a productivity impact
(b) Calculated without a productivity impact

Chart 1: Real wage rigidity and rise in unemployment



Source: OECD (1989), p.45.

Note: Real wage rigidity is measured by the short-run rigidity indicator referred to on page 14 above.

Table 2. Measures of labour market rigidity in EC countries

	Long-term unemployment as a percentage of total unemployment[(a)]			Monthly flows out of unemployment as a percentage of total unemployment	
	1983	1987	1990	1983	1988
Belgium	66,3	74,9	69,9	3,0	2,7
Denmark	33,0	30,6	33,7	6,9	8,3
France	42,2	45,5	38,3	3,5	5,7
Germany	39,3	48,2	46,3	6,2	6,3
Greece	35,0	45,9	51,7	9,2	5,3
Ireland	36,9	66,4	67,2	5,4	3,2
Italy	57,7	66,4	71,1	1,7	2,3
Netherlands	50,5	46,2	48,4	---	---
Portugal	----	56,6	48,1	---	3,2
Spain	52,4	62,0	54,0	1,0	1,3
United Kingdom	47,0	45,9	36,0	7,4	9,5
For comparison:					
United States	13,3	8,1	5,6	37,8	45,7
Canada	9,9	9,4	5,7	25,2	30,8
Japan	12,9	20,2	19,1	14,8	17,2

Sources: OECD, Employment Outlook, Paris, 1992, Statistical Annex, Table N, for data on long-term unemployment;

OECD, Employment Outlook, Paris, 1990, Table 1.2, pp. 12, 13, for data on monthly flows out of unemployment.

(a) One year and over

The results of simulations with the OECD's INTERLINK model, reported in a recent study by Englander and Egebo (1992), appear to confirm these conclusions. The simulations assumed an initial one percentage point increase in nominal wages in ERM economies (excluding Portugal). It is concluded (p. 13) that "following a localised wage shock, misaligned wages and prices and higher unemployment persist in significant degree even five years after the initial distrurbance, although some movement back towards restored competitiveness tends to begin sooner. In sum, it takes more than 1-2 additional percentage points of unemployment over five years to offset an initial one percentage point disturbance to wages". Englander and Egebo compared these findings with the results of a simulation in which labour market flexibility is increased to roughly US levels, by doubling the responsiveness of wages to unemployment. "Outside Germany, the effects of the initial wage disturbance on wages are about 50 per cent less and on unemployment about a third less after five years when wage sensitivity is doubled. Most of the improvement accurs two to five years after the initial disturbance because the greater responsiveness to unemployment prevents the initial shock from becoming entrenched in a wage-price spiral" (p. 14).

Commission of the European Communities (1990a) argues that wages are likely to be more responsive to market conditions in a credible EMU regime, as witnessed already in the EMS. However, as discussed earlier, little convincing evidence of ERM-related credibility effects in labour markets is found (see, for example, the work reported in Egebo and Englander, 1992). It is also possible that the move to EMU, will make labour markets less flexible. Programmes that establish legal minima for certain benefits, such as minimum wage levels or unemployment payments, though desirable on equity grounds, may add to labour market rigidity in poorer and less successful regions. There may also be a tendency within EMU to look at wage rises and wage levels of workers in other Community countries, while disregarding differences in productivity growth and levels between countries. If this becomes a Europe-wide wage norm, regardless of performance, there could be serious costs to lagging countries of loosing their currencies as a mechanism of adjustment to adverse shocks.

The conclusion from the evidence examined in this section seems to be that wage and price flexibility may not be able to substitute for the nominal exchange rate as a means of adjusting to country-specific shocks.

Many have argued that nominal exchange rate changes are of little value as a mechanism of international adjustment because devaluing the currency would merely raise wage and price inflation, leaving the real exchange rate unchanged. The loss of a separate exchange rate in EMU would thus involve little real sacrifice. Some, however, would dispute that proposition (see, for example, Krugman, 1991b). There are many historical experiences that confirm the crucial role of real exchange rate changes in adjustment, and the facilitating role of nominal exchange rate changes in achieving such real changes. The 1987 devaluation of sterling and the 1971-73 depreciation of the US dollar, for example, had just about the effects that conventional theory would have predicted. The evidence of the period from 1985 to 1990 also shows that changes in nominal and real exchange rates were closely correlated for the US and Japan; and there was also a close correlation between changes in real exchange rate changes and the US and Japanese current accounts (Krugman, 1991b). The same has been true, to a lesser extent, for the United Kingdom. [1] So the evidence appears

[1] But it has been less true in the other European countries adhering to the exchange-rate mechanism of the European Monetary System, where changes in both nominal and real exchange rates have been also smaller.

to indicate that the beneficial effects of devaluation are not always wiped out quite quickly by faster inflation and that real exchange rate changes do indeed work. The inability to adjust nominal exchange rates in EMU is therefore likely to impose some real costs.

Concern about the loss of a separate currency does not arise only because exchange rate adjustments provide a mechanism which can help a country to stabilise the cyclical consequences of asymmetric shocks. Equally important is the loss of a separate exchange rate as a means of adjustment that can help a country bring its real exchange rate to its equilibrium value in the long run. The equilibrium real exchange rate of a country may shift gradually over time because of secular movements in productivity and quality or changing trends in demographic factors or tastes. Such long-run changes in equilibrium real exchange rates can be expected, particularly for some of the Community's poorer countries, which will be undergoing serious structural adjustment during the next two decades. In the absence of nominal exchange rate changes, trend changes in real exchange rates will have to be brought about by changes in relative costs and prices; but given the slow response of wages and prices to changes in demand and supply, a decline in domestic prices is likely to require a prolonged period of painful adjustment, with sluggish growth and high unemployment.

3.3 Labour mobility

Within an optimal currency area, the movement of labour from depressed to prosperous regions or countries can provide a plausible mechanism by which long-term changes in demand or supply conditions can be absorbed if wages and prices are slow to respond. However, the evidence on regional labour mobility in existing federal states, such as the United States, Canada, or Australia, and even within Community member countries (see Table 3) does not suggest that it would be large enough to be regarded as a main mechanism of resolving imbalances between regions or countries within the EMU. Moreoever, differences in language, culture and social relationships between European countries are too great to allow any large-scale movements of labour from economically depressed regions to areas of stronger growth. Table 4 shows the cumulative flow of migrants (as a percentage of population) among selected Community countries. A comparison with the migratory flows between states in the United States, between provinces in Canada and between states in Australia (Table 3) shows that, with the possible exception of Belgium, the rates of migration between European countries are much lower than the rates of regional migration in the United States, Canada and Australia.

In any case, it is hard to see a large migration of unemployed workers to the more prosperous core countries of the Community being accepted as an adjustment mechanism in peripheral Community countries, such as Ireland, Portugal, or Greece, where emigration is regarded as a problem, not as a solution. Quite apart from the moral and social issues involed, from a purely economic perspective any such large-scale migration is not desirable because it could exacerbate differences in the capacity of weaker regions or countries to generate self-sustaining growth. A vicious downward spiral may in fact develop if the more active and skilful parts of the labour force emigrate; and if this, coupled with lower demand, discourages private investment in the depressed regions, while local public investment is reduced through loss of local revenue. At the same time the inflow of people into the more prosperous areas can cause problems of greater congestion and increased pressure on local services and infrastructure and could exacerbate social tensions. So labour mobility neither could, nor should be regarded as a main mechanism for dealing with regional disparities within the Union.

Table 3. Internal migration in selected industrial countries: persons who changed region of residence in percentage of total population (average rates per annum)

Country	Number of regions	Average rates per annum 1984-87
Australia	8	1.6
Canada	12	1.5
France	22	1.3
Germany	11	1.1
Italy	--	0.6
Japan	47	2.6
Norway	20	2.5
Sweden	24	3.9
United Kingdom	10	1.1
United States	50	2.9

Source: OECD, Employment Outlook, Paris, 1991, Table 2.14, p. 54.

Table 4. Labour migration in selected EC countries
Sum of emigrants from each country plus imigrants into the country from other EC countries as a per cent of 1984 population

Belgium	1.59
France	0.41
Germany	0.57
Italy	0.72
Netherlands	0.64

Source: De Grauwe and Venhaverbeke (1990), National sources.

3.4 The role of investment

If large-scale labour mobility in the Community is neither feasible nor desirable then the question arises of whether capital flows can substitute for labour migration as a mechanism of resolving imbalances between regions or countries of declining demand and rising unemployment and regions or countries of stronger demand and low unemployment.

Physical capital mobility can indeed eliminate the need for labour mobility among the member states of the Community only to the extent that firms are induced to expand their operations in the areas with lower wages and readily available labour and to reduce the rate of expansion in others. The issue of physical capital mobility in response to country-specific disturbances leads naturally to the issue of the movement of capital between core and peripheral countries or regions of the Community since such differences in the ability to attract investment can be thought of as reflecting the effect of more permanent economic shocks or structural factors. Neo-classical theory implies that with a unified capital market resulting from European economic and financial integration, investment will tend to be attracted to those areas where the returns on it are highest, and the returns on investment will be highest in less developed parts of the Community because labour costs are lower and the ratio of capital to labour used in the production process is relatively low.

The effect of increased investment would be to raise capital/labour ratios in the less developed regions, pushing up productivity and, in time raising average wage earnings. Firms would be attracted to invest by the prospect of high rates of return as productivity rises ahead of increases in wage earnings and this process would continue until productivity levels were equal to those of richer regions. In the more prosperous areas the reverse tendency may occur. These areas would tend to experience a relative decline in investment. As a consequence, the rate of increase in wage earnings and the capital/labour ratio would be reduced relative to those in the poorer areas.

If there were no other impediments, cross-border flows of investment would continue until capital/labour ratios and, ultimately productivity and wage levels, were equal across the Community in each industry and activity.[1,2] In practice, there are many reasons why convergence of capital/labour ratios and wage levels will remain modest and why, in some cases, these ratios may even tend to diverge. First, returns to investment in poorer regions are often associated with a higher degree of risk than in more developed areas, partly because they take longer to materialise. So capital may not necessarily flow in the direction predicted, at least not to a sufficient scale to have a substantial effect. Second, differences in wage levels between different regions or countries are generally associated with large disparities in labour productivity. As a consequence, costs of production are not necessarily lower and rates of return are not always higher in low wage regions or countries than elsewhere (Table 5). The incentive to shift physical capital to high-unemployment-low-wage areas is not, therefore, clear.

1 Increased labour mobility and trade should also push labour costs closer.

2 Estimates of wage convergence between Community countries are contained in a recent study by McWilliams (1992), as referred to in The Economist, 24 January 1992. These estimates indicate that Spanish wages, for example, rose from 29 per cent of German wages in 1970 to 68 per cent in 1991, while wages in Italy rose from 42 per cent to 74 per cent. But McWilliams concludes that, because of low labour mobility in Europe, the pace of convergence will slow, and estimates that two-thirds of the existing wage gap between Community countries will remain in 2010.

Table 5. Rates of return on capital in the business sector: EC countries

Countries	Average for the period 1980-87	1988-91
Belgium	11.4	14.3
Denmark	9.4	10.2
France	11.0	14.1
Germany	12.4	14.2
Greece	10.1	10.0
Italy	12.6	13.6
Ireland	6.5	9.4
Netherlands	14.9	17.3
Spain	15.6	20.0
United Kingdom	9.4	9.7

Source: OECD Economic Outlook, Paris, June 1992, Table 5.8, p.133.

Finally, less developed regions or countries generally suffer from an excess of adverse externalities, such as inadequate infrastructure, poor education and training, inefficient public administration and inadequate business services, and a shortage of favourable externalities, such as low transport costs and large markets, so the capacity of firms in these regions or countries to achieve profitable returns on capital may often be less than that of businesses in areas of stronger growth.

Some direct evidence on the importance of externalities is provided by a survey conducted for the EC Commission in 1989, where businessmen were asked to assess the factors shaping regional competitiveness with regard to location of production. This survey was organised by the IFO Institute of Munich, and covered some 10.000 companies located in three types of region: lagging, declining industrial, and prosperous. [1] Among the regional factors perceived as being most important in determining competitiveness are: the proximity of vocational training facilities, the availability and quality of school education and training facilities, the availability of certain types of infrastructure such as transport, communication and cultural and social facilities, the business culture and the social climate. Such forms of "backwardness" served to reinforce the effect of purely economic factors such as the insufficient supply and the high cost of energy, and the inadequate availability of business

[1] For a detailed description and analysis of the results of this survey see Nam, Nerb and Russ (1990, 1991).

services. If these underlying factors are not tackled, industry is unlikely to relocate to the peripheral regions in response to changes in demand or supply conditions.

Another consideration which ought to be taken into account in trying to assess the extent to which capital mobility can be a component of the path towards a new equilibrium in the case of a country-specific shock, is the existence of economies of scale which also play an important role in the location of production factors and economic activity. Eichengreen [1] argues, for instance, that capital mobility can eliminate the need for labour mobility only under constant returns to scale in production. If production is characterised by increasing returns, a sector-specific shock may require both labour and capital to move to another sector in response to achieve full efficiency.

Some have expressed concern (see, for example, Doyle, 1991) that European integration may, in fact, increase the ability of core countries to attract investment vis-a-vis peripheral countries, because of greater exploitation of both comparative advantage and economies of scale. It is, however, impossible to say, merely on theoretical grounds, whether free trade and financial integration will inhibit rather than aid a movement of capital towards peripheral regions.

The evidence on the disparities in real income between EC member countries over the past 25 years (Chart 2) indicates that there was a narrowing in the gap in per capita GDP between richer and poorer members from the late 1950s to the mid-1970s, but this trend was reversed in the ten years from the mid-1970s to the mid-1980s. Though the gap in per capita GDP has narrowed since 1985, it remains considerable.

3.5 The need for balancing mechanisms

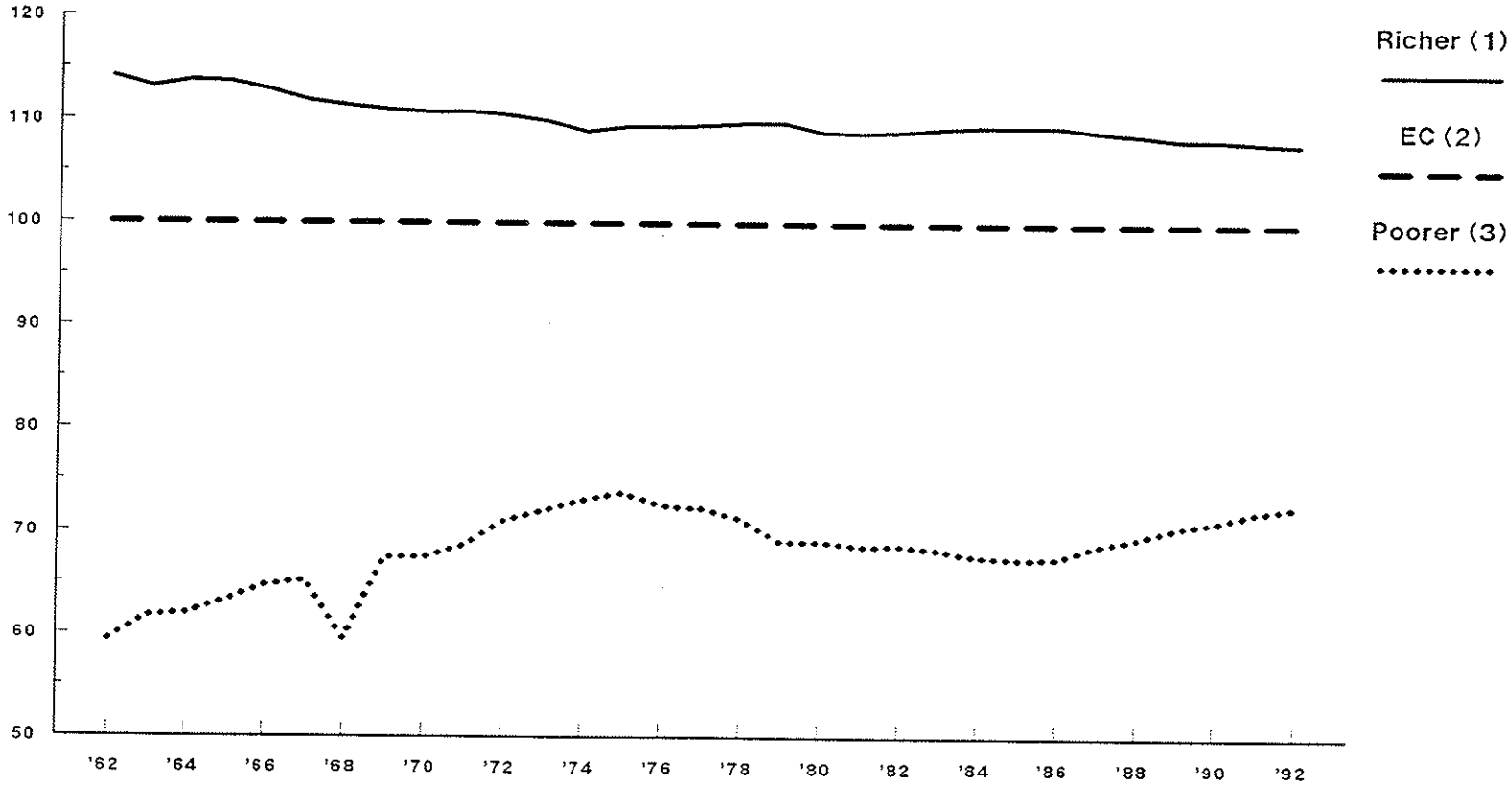
The above discussion reveals a high degree of uncertainty about the extent to which market clearing mechanisms can assist to correct country-specific disequilibria when the possibility of changing the nominal exchange rate is not available for individual countries in EMU. In a well-functioning economic and monetary union wage-price flexibility will be the basic adjustment channel as a substitute for the nominal exchange rate. However, in the face of labour market rigidities which appear to characterise the European economies, this adjustment could well take time; relying on it would be costly because it would require a period of increased unemployment in some regions and inflation in others. Welfare considerations may also put a certain limit on real wage reduction as an adjustment instrument. On the other hand, and quite apart from its desirability, the role of labour mobility as an alternative mechanism by which a regional shock can be absorbed if wages and prices do not respond, will remain small. Physical capital mobility can substitute for labour migration as a mechanism for reallocating resources across countries or regions, but only under restrictive assumptions.

Given the likely continuation of rigidities in labour markets and weak factor adjustment capacities, the elimination of the possibility for member states to use independent monetary policies and exchange rate adjustments, puts a heavy burden on fiscal policy as the only remaining means of assisting adjustment to shocks affecting individual countries within EMU.

---

[1] See Eichengreen (1991), as referred to in Bayoumi and Eichengreen (1992).

Chart 2: GDP in richer & poorer EC countries
(PPS per capita, 1962 - 1992)



Source: European Economy No 50, December 1991

Notes: (1) Weighted average of B,DK,D,F,NL,UK.
(2) EC average.
(3) Weighted average of GR,E,IRL,P.

As discussed earlier, national budgetary policy could be used to help stabilise a national economy within EMU. However, there are several factors that may limit, or even prevent, the effective, or flexible, use of such a policy for the purpose of national economic stabilisation and demand management. First, participation in EMU would imply the loss of seigniorage revenue. Second, the increasing integration of goods and factor markets may intensify tax competition between countries, eroding their tax base, and making it difficult to levy taxes on mobile factors, though pressures for minimum standards of taxation may increase as the member states' markets become more integrated. Third, the intertemporal effect of present budget deficits on future tax rates may make countries reluctant to incur additional obligations, particularly as they cannot expect a financial bail-out if debt becomes unmanageable. Finally, the high degree of international spillovers associated with increased economic integration may reduce the incentive to use national fiscal policies to offset demand shocks.

EMU may also create conditions that will make national fiscal policy more easy to operate. In particular, the integration of financial markets across the Community will deepen the market for government securities, and hence should reduce the cost of public borrowing in most member states. Although the Maastricht Treaty contains a no bail-out clause, markets are likely to expect that there will be some solidarity between member states. Equally, governments will know that a rise in their budget deficits would not necessarily involve any offsetting rise in domestic interest rates or the fear of a fall in the value of their currency. However, as discussed earlier, the binding fiscal policy rules adopted at Maastricht, including ceilings on budget deficits and government debt, would compensate for these factors. Combined with the considerations discussed above, these rules in fact would be a severe constraint on countries that might need to run counter-cyclical budget deficits to stabilise their economies and adjust to asymmetric shocks.

Such considerations point to the need for a system of automatic fiscal transfers between members of EMU to provide some degree of automatic stabilisation of regional income in the case of economic shocks, as is done in existing federal states. There are two major ways in which central finance in a federal system can contribute to the cushioning of country-specific shocks through inter-regional fiscal equalisation. A large part of the total redistribution between regions arises automatically and is in a sense "invisible"; high incomes are associated with high tax payments and low incomes with relatively high receipts of centrally provided transfer payments. Thus, if a region is hit by an adverse shock, the effect is automatically mitigated (although not completely offset) through lower tax payments to the federal government and higher receipts of centrally provided transfer payments. In addition to this automatic stabilising transfer of income in federal states, inter-governmental grants and tax-sharing also play an important part in regional income equalisation.

Estimates of the size of the automatic stabilising fiscal transfers of income across regions are provided by Sala-i-Martin and Sacks (1991) for the United States and Masson and Taylor (1992) for Canada. Sala-i-Martin and Sacks find that each dollar decline in regional pre-tax income per head triggers a decrease in federal taxes of some 34 cents and an increase in federal transfer payments of about 6 cents. Hence, 40 per cent of the fall in regional per capita income in the United States is offset by automatic fiscal transfers. The estimates for Canada indicate that in the face of a dollar decline in local income the federal tax and transfer system reimburses 20 cents.

There is no such mechanism in operation on any significant scale between member countries of the Community. National fiscal systems can, and typically do, provide such

transfer mechanisms to cushion problems of income differentials and unemployment between regions within countries. Some have in fact suggested (see, for example, Bayoumi and Russo, 1991) that existing automatic stabilisers in EC countries should be allowed to assist adjustment to country-specific economic shocks. They argue that, such a policy would provide the same type of support for EC countries that occurs automatically within regions of federal states. However, countries may be reluctant to let automatic stabilisers operate, mindful of the potential rise in their government debt and interest payments. This effect, of course, is not present in a federal system where the debt incurred in such operations does not accrue to the individual national governments but is common to the entire currency area.

As already noted, nothing comparable to the federal fiscal system in the United States or Canada exists in the Community, whose budget, besides being very small - it represents only about 1.2 per cent of Community GDP - has a weak redistributive effect per Ecu spent and received. Virtually all taxes in the EC are paid to national and local governments and there is no fiscal transfer from the Community as a whole to countries or areas that experience a relative cyclical decline. The structural funds are not such a system, since they are fixed sums given for specific purposes - to improve infrastructure and training - and are not responsive to movements in regional incomes. At the moment the development of a European fiscal federalist system is regarded as quite unrealistic.

As well as aiding the transfer of resources to regions hit by temporary economic shocks, the fiscal system in existing federal states also produces long-run resource flows that redistribute income regionally on a continuing basis. Such fiscal transfers between member states, however, will not be automatic in EMU.

The Community has recognised the need to develop policies which ensure an acceptable balance of employment and economic development between member states and regions within those states, in order to give substance to its commitment to achieve economic and social "cohesion", an objective referred to, albeit only in rather general terms, in the Maastrich Treaty. In particular, following the European Council at Maastricht, the Commission of the EC proposed that the total allocation for the cohesion policies (i.e. the Structural Funds and the new Cohesion Fund) should be increased by about 160 per cent by 1997. The total allocation in 1997 for the four least prosperous member states (Greece, Spain, Ireland and Portugal) would be twice the amount they received in 1992 (see Commission of the European Communities, 1992). These proposals would increase the Community Budget from 1.2 per cent of GDP in the Community in 1992 to only around 1.37 per cent in 1987, but are strongly oposed by many member states. The proposed Community budget would, however, still fall short of the modest "interim" budget of 2 - 2 1/2 per cent of Community GDP, suggested in the "MacDougall Report", and is much less than the figure of 5-7 per cent that the MacDougall Study Group thought would be necessary to sustain monetary union (see Commission of the European Communities, 1977, and Sir Donald Mac Dougall, 1992). It is interesting that their suggested Community Budget was only about one-quarter the size of that in existing federal states, as a percentage of GDP.

The conclusion from this analysis, and from the discussion of fiscal policy issues in section 2.2, is that the move to full monetary union without a much more centralised fiscal system, involving automatic inter-regional transfers, and a much larger Community budget than is presently envisaged, may lead to substantial divergencies in unemployment and living standards and could, therefore, set back, rather than promote, European integration.

It is not politically feasible or even necessary to make these arrangements in advance

of the final stage of monetary union. On the other hand it seems unlikely that full currency integration will be successful unless there is some willingness on the part of member states to share the burdens of adjustments which might otherwise be made by changes in exchange rates.

4. Concluding remarks

This paper has looked at the implications of a single European currency and monetary policy. Two broad sets of issues were discussed. The first focused on the issue of macro-economic policy and control in the Community economy as a whole under EMU. The discussion on the possible formulation and operation of a single European monetary policy considered the suggestion that the ECB should adopt an EC-wide ex ante money supply target as a guide to policy formation. The conclusion drawn from this analysis is that the use of such a monetary target would present problems. The literature suggests that monetary relationships are more stable at a Community level than at individual country level but this stability is unlikely to persist, as the benefits of aggregation in respect to currency substitution effects may be insufficient to compensate for other distabilising aspects of financial integration and innovation. It would be preferable for the ECB to pursue a target growth rate for EC-wide nominal GDP rather than a particular monetary aggregate. That objective might be appropriate in a wider range of circumstances than a money supply target or the simple objective of price stability. A nominal GDP objective, for instance, would leave some scope for discretionary monetary and aggregate fiscal policy to be used to offset fluctuations in total spending generated by European-wide shocks, when automatic corrective forces are inadequate or take long to operate. If the ECB can provide a stable growth path for nominal demand that would facilitate adjustment of disequilibria among countries or regions of the Community by the operation of market processes at the microeconomic level.

However, the new monetary authority cannot be expected to formulate the Community's economic policy. In designing the new arrangements for macro-economic control it will, therefore, be necessary to develop a unifed approach to economic policy which would enable the Community to take some expansionary action when that is appropriate.

If fiscal policy is recognised as an essential instrument of demand management to counter EC-wide economic shocks, then the approach adopted at Maastricht is clearly insufficient. Member governments would be able to adopt stabilisation-oriented fiscal policies in EMU, if they wish, but as was argued in section 2.2, national use of fiscal policies cannot be expected to produce an appropriate fiscal stance for the Community as a whole. The fiscal rules contained in the new Treaty are aimed exclusively at eliminating the risks that unsustainable national deficit and debt paths would present for the monetary stability of the Union and are not concerned with the appropriateness of the fiscal policy stance for stabilisation purposes in the member states and the Community as a whole. Given the interaction of international spill-overs and the intertemporal effect of present budget deficits on future tax rates, national fiscal policies are bound to be ineffective. This bias would need to be corrected by co-ordinated fiscal policy changes.

On the issue of exchange-rate policy of the Community as a whole, the ambiguous division of responsibility between finance ministers and the ECB is a matter for concern. This issue will have to be resolved so as to maintain a unifed front on exchange-rate policy vis-à-vis the rest of the world. The second part of the paper addressed the question of

how individual countries within EMU could respond to localised economic disturbances that affect them, when they will no longer have the option of using domestic interest rates, and the nominal exchange rate as policy instruments.

For economies that are highly integrated into Europe economic shocks should be felt symmetrically and adjustment to such shocks should be also symmetrical. So these countries should be able to cope with fixed mutual parities of their currencies and a single monetary policy within the proposed Union. However, the evidence reviewed in section 3.1 suggests that peripheral European countries suffer shocks that are substantially different, much larger and more persistent than those suffered by the core countries of the Community. Economic integration will make the occurance of country-specific shocks more likely since it may lead to greater industrial specialisation across regions. These findings seem to suggest that EMU will create severe adjustment problems for peripheral countries in the Community.

The discussion considered alternative methods of assisting adjustment to country-specific economic shocks in EMU. In the face of labour market rigidities which appear to characterise European economies, it was argued that relying on wage-price flexibility as a substitute mechanism when adjustments in the real exchange rate would be needed to offset negative localised shocks, could be costly because it would require a period of increased unemployment. On the other hand, labour mobility neither could, nor should, be regarded as a main means of dealing with regional or national disparities within an overall monetary union. A healthy result in a unified European economy would be an adjustment of the inter-area differences by movements of capital from the more prosperous areas to the less prosperous ones. However, it is difficult to be confident that greater integration will of itself bring greater investment to the periphery, given externalities which currently inhibit business development in poorer regions.

In so far as nominal rigidities and externalities hamper market adjustments, the move to a single currency will put a heavy burden on national or central public finance as the only remaining means of preventing heavy unemployment emerging in less productive regions. Given the limits that the move to EMU will place on the use of national fiscal policy, the role of central public finance will have to be strengthened. The Structural Funds may improve the adjustment capacity of regions, but some federal transfer mechanism would also be needed to provide insurance against the remaining burden of shocks. This is said to be politically difficult. On the other hand, it seems unlikely that full currency integration will be successful unless there is some willingness on the part of member states to share the burdens of adjustments.

REFERENCES

Artis, M.J. (1992) "Monetary policy in Stage two of EMU: what can we learn from the 1980s?", mimeo, forthcoming in A.S. Courakis and G. Tavlas (eds) Financial and Monetary Integration, Greek Economic Review, Supplement, 14, 1993.

Bayoumi, T. and Eichengreen, B. (1991) "Shocking aspects of European monetary unification", NBER Working Paper No.3949.

_____ (1992) "Is there a conflict between EC enlargement and European monetary unification?", NBER Working Paper No.3950.

_____ and Russo, M. (1991) "Fiscal policy and EMU", paper presented at a conference on European Economic and Monetary union, Barcelona, 1-5 July.

Bean, C.R. (1983) "Targeting nominal income: an appraisal", Economic Journal, 93, No. 372.

Blake, A. and Weale, M. (1988) "Exchange-rate targets and wage formation", National Institute Economic Review, No.123, February.

Branson, W.H. (1990) "Financial market integration, macroeconomic policy and the EMS", CEPR Discussion Paper No. 385, March.

Brittan, S. (1981) How to End the "Monetarist" Controversy, Hobart paper No.9, London: Institute of Economic Affairs.

Cohen, D. and Wyplosz, C. (1989) "The European monetary union: an agnostic evaluation", CEPR Discussion Paper No. 306.

Commission of the European Communities (1977) Report of the study group on the role of public finance in European integration, Collection of studies, Economic and financial series, Nos A13/B13, Brussels/Luxembourg, April.

_____ (1990a) "One market, one money: an evaluation of the potential benefits and costs of forming an economic and monetary union", European Economy, 44, October.

Commission of the European Communities (1990b) "The impact of the internal market by industrial sector: the challenge for the member states", European Economy, special issue.

_____ (1992) The Community's finances between now and 1997, Communication from the Commission to the Council and Parliament, COM (92) 2001, Brussels, March.

Council of the European Communities and Commission of the European Communities (1992) Treaty on European Union, Brussels/Luxembourg.

De Grauwe, P. and Vanhaverbeke (1991) "Is Europe an optimum currency area? Evidence from regional data", CEPR Discussion Paper No. 555, May.

Doyle, M.F. (1991) "The impact on Ireland of European monetary union" Address to Business International's Roundtable with the Government of Ireland in Dublin on 18.6.91, as reproduced in the Quarterly Bulletin of the Central Bank of Ireland, September.

Duisenberg, W. (1992) "Financial and monetary policy in a Europe without frontiers", Address at the XXXIInd Annual Eurofinas Conference at Maastricht, 19 May, as reproduced in the BIS Review of the Bank for International Settlements, No. 104, 29 May.

Egebo, T. and Englander, A.S. (1992) "Institutional commitments and policy credibility: a critical survey and empirical evidence from the ERM", OECD Economic Studies, No.18, Spring.

Eichengreen, B. (1991) "Labor Markets and European monetary unification", unpublished manuscript, University of California at Berkeley.

Englander, A.S. and Egebo, T. (1992) "Adjustment under fixed exchange rates: application to the European monetary union", OECD Working Papers No. 117, Paris.

Frenkel, J. and Razin, A. (1987) "The Mundell-Fleming model-a quarter century later", IMF Staff Papers, 34.

Goldstein, M. and Woglom G. (1991) "Market-based fiscal discipline in monetary unions: evidence from the U.S. municipal bond market", IMF Working Paper, September.

Goodhart, C. (1989) "The conduct of monetary policy", Economic Journal, 99.

_____ (1991) "Fiscal policy and EMU" with an Appendix on "A simple model of intertemporal tax policy" by E. Hansen, in Karl Otto Pohl et. al. Britain & EMU, LSE, Center for Economic Performance in association with Financial Markets Group, London.

Gros, D. and Thygesen, N. (1990) "Concrete steps towards monetary union", in Governing Europe, Brussels: Centre for European Policy Studies.

Horn, H. and Persson, T. (1988) "Exchange rate policy, wage formation and credibility", European Economic Review, 32, No 8, October.

Kenen, P. (1992) "Speaking up for Emu", The Financial Times, 28 July.

Kremers, J.M. and Lane, T. (1990) "Economic and monetary integration and the aggregate demand for money in the EMS", IMF Staff Papers, 37, December.

Krugman, P. (1991a) Geography and Trade, Cambridge: MIT Press.

_____ (1991b) "Has the adjustment process worked?", in C.F. Bergsten (ed.), International Adjustment and Financing: The Lessons of 1985-1991, Washington DC: Institute for International Economics.

Leigh-Pemberton, R. (1992) "Assessing progress towards, and the implications of monetary integration in Europe", Fourth 1992 Green College Lecture, Oxford, as reproduced in the BIS Revies of the Bank for International Settlements, No. 37, 21 February.

Masson, P. and Taylor, M.P. (1992) "Common currency areas and currency unions: an analysis of the issues", CEPR Discussion Paper, No 617.

McDougall, Sir Donald (1992) "Economic and Monetary Union and the European Community Budget", National Institute Economic Review, May.

McWilliams, D. (1992) "Will the single European market cause European wage levels to converge?", London Economics.

Meade, J.E. (1978) "The meaning of internal balance", Economic Journal, 88.

_____ (1981) "Comment on papers by Professors Laidler and Tobin", Economic Journal, 88.

Monticelli, C. and Strauss-Kahn, M.O. (1991) "European integration and the demand for broad money", unpublished manuscript, Economic Unit of the Committee of Governors of EC Central Banks, Bank for International Settlements, Basle, December.

Nam, Ch.W., Nerb, G., Russ, H. (1990) An empirical assessment of factors shaping regional competitiveness in problem regions, Document, Commission of the EC, Luxembourg.

_____ (1991) "Measurement of regional competitiveness in Europe by survey: application of survey technique in a new field", Paper prepared for the 20th CIRET Conference, Budapest, October.

OECD (1989) Economies in Transition: Structural Adjustment in OECD Countries, Paris.

Sala-i-Martin, X. and Sachs, J. (1991) "Fiscal federalism and optimum currency areas: evidence for Europe from the United States", NBER Working Paper No. 3855.

Tobin, J. (1980) "Stabilisation policy ten years after", Brookings Papers on Economic Activity, 1.

_____ (1983) "Monetary policy: rules, targets and shocks", Journal of Money, Credit and Banking, 15.

Vines, D., Maciejowski, J.M. and Meade, J. (1983) Stagflation Volume 2: Demand Management, London: George Allen & Unwin.

Weber, A.A. (1990) "EMU and asymmetries and adjustment problems in the EMS: some empirical evidence", CEPR Discussion Paper No 448.

Weale,M., Blake,A., Christodoulakis,N., Meade,J. and Vines, D. (1989) Macroeconomic Policy, Inflation, Wealth and Exchange Rate, London: Unwin Hyman.