Working Paper No. 282

The Economic and Monetary Union: Current and Future Prospects

by
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October 1999

1. INTRODUCTION

The euro was adopted as legal tender, albeit in a virtual form, by eleven countries of the European Union (namely Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain) on 1st January 1999. It is intended that this will lead into the full operation of the euro in 2002 with the introduction of notes and coins denominated in euros and the phasing out of national currencies during the first six months of that year.

This paper begins in section 2 by reviewing the current position of the EMU member states in relation to the convergence criteria.[1] It broadly shows that there must have been a considerable degree of 'fudge' for the criteria to have been met. Section 3 reasserts the central role of aggregate demand in the EMU area, along with concerns about unemployment. We examine future prospects of the current EMU arrangements in section 4, and conclude that they are highly deflationary. We propose in section 5 a new institution, the European Union Development Bank, to enhance the ECB and a modified *Stability and Growth Pact* , as steps towards overcoming the deflationary bias of the current proposals and as a way towards alleviating the serious unemployment problem. Finally section 5 summarizes and concludes.

2. CURRENT EMU SITUATION AND THE STABILITY AND GROWTH PACT

Institutional Arrangements

The institutional arrangements involve the creation of an 'independent' (of political control) European System of Central Banks (ESCB) with its operating arm, the European Central Bank (ECB) and the national central banks, which is given the sole policy objective of price stability, defined as a year-on-year increase in the Harmonized Index of Consumer Prices (HICP) for the euro area of below 2 percent over the medium term.[2] The dominant feature of the ECB's institutional structure is the complete separation between the monetary authorities (in the form of the Central Bank) and the fiscal authorities (in the shape of the national governments comprising the EMU), where the latter are constrained to keep their budget deficit below 3 percent according to the *Stability and Growth Pact* . It follows that there can be little co-ordination of monetary and fiscal policy. Apart from the separation of the monetary and fiscal authorities, there is also the requirement that national governments (and hence the fiscal authorities) should not exert any influence on the ECB (and hence the monetary authorities). Any strict interpretation of that edict would rule out any attempt at co-ordination of monetary and fiscal policies. Indeed as we explored elsewhere (Arestis, McCauley and Sawyer, 1999) the primacy of monetary policy over fiscal policy is guaranteed because of the institutional structure and rules of the ESCB.

The proposed ESCB would be accountable to the European Parliament through the monitoring of its performance, and in that way some degree of democratic accountability might be retained.[3] However, article 107 of the amended Treaty of Rome (EU, 1998) states that "When exercising the powers and carrying out the tasks and duties conferred upon them by this Treaty and the Statute of the ESCB, neither the ECB, nor a national central bank, nor any member of their decision making bodies shall seek or take instructions from Community institutions or bodies, from any government of a Member State or from any other body. The Community institutions and bodies and the governments of the Member States undertake to respect this principle and not to seek to influence the members of the decision making bodies of the ECB or of the national central banks in the performance of their tasks". This clearly rules out any notions of democratic accountability. Furthermore, the ESCB can decide on the definition of price stability to adopt; but there is no clear accountability in the sense of imposing any sanctions or introducing any incentives to change personnel, whenever the ESCB failed to meet the objectives it sets for itself, especially given the entrenched and non-renewable eight year term of office for the executive board of the ECB.[4]

Current EMU Situation

France and Luxembourg were the only countries which, on a strict interpretation, satisfied all the convergence criteria for membership of the euro. However, nine more countries have been deemed as meeting all the convergence criteria, even though they did not meet them on a literal interpretation. The decision on membership of the euro and whether the convergence criteria were met was based on data available in March 1998, and Table 1 reproduces the relevant figures. It can be seen that seven of them - Belgium, Germany, Spain, Ireland, the Netherlands, Austria and Portugal - failed on the debt/GDP criterion, one on the ERM participation for at least two years (Finland), and one on both of these criteria (Italy). In terms of the countries which will not participate from the birth of the EMU, Greece is the only country that meets none of the convergence criteria. Sweden failed both the debt and the ERM participation criteria, and the UK and Denmark both belong to the category of failing only one criterion, of ERM participation and the

debt/GDP ratio respectively. Sweden, the UK and Denmark negotiated the right to abstain from any move to the EMU and the single currency (so they are not members of the EMU as a result of political decisions rather than on the basis of the Maastricht criteria). On the independence of national central banks, Belgium, Germany, Ireland, Italy, the Netherlands, Portugal and Finland have legislation which meets the criterion of independence and price stability. Spain, France, Luxembourg and Austria have national legislation in place which, if enacted at the date of the establishment of the ECB, would meet this criterion. Greece is another country with relevant national legislation which is compatible with this criterion. Sweden's planned legislative changes are yet to be adopted, but the current legislation is not compatible with this criterion. Recent UK legislation has moved towards meeting the requirements (but still the independence granted to the UK central bank is operational, allowing the inflation target rate to be decided by the Treasury). Denmark needs to introduce relevant legislation. The two reports, EC (1998) and EMI (1998), confirm that with a few exceptions which will not jeopardise the overall functioning of the ESCB, the statutes of almost all national central banks are compatible with the Maastricht Treaty.

In general, the economic statistics for member countries show movement towards meeting the Maastricht criteria, and this is indicated in Table 1. Focusing on the 1997 record, upon which the EC and EMI based their decision on the eleven EMU members, a number of observations on the criteria are pertinent. With the exception of Greece, all EU member states have inflation rates less than 2 percent, which is below the reference value of 2.7 percent. Inflation is measured here using the HICP (Harmonized Index of Consumer Prices). These indices have been produced by Eurostat in conjunction with national statistical institutes. At least in the case of the UK, the rate of inflation based on HICP tends to be significantly below the rate of inflation based on the national RPI (see, for example, *Economic Trends* , December 1998)

Inflation has been falling across the EU since 1990, and within that general fall the variation in inflationary experience has narrowed. On the basis of national inflation data, the average rate falls year by year from 6.5 percent in 1990 to 2.5 percent in 1996, with the standard deviation falling from 5 percent to 1.8 percent over the same period.

The interest rate criterion was met by all member countries, with the exception of Greece. The average long-term interest rate in the fourteen countries converged to levels of between 5.5 and 7 percent, below the reference rate of 7.8 percent. Note, though, how high the real rate of interest is allowed to be: with the reference rate of 7.8 percent in nominal terms and with a reference inflation rate of 2.7 percent, the implied, and acceptable, real rate is over 5 percent.

The government budgetary positions show that, with the exception of Greece, all countries had government deficits of 3 percent of GDP or less, and three countries achieved a budget surplus. Despite the EC's (1998) and EMI's (1998) critical attitude of the one-off measures taken by a number of countries which contributed to the 1997 figures, the reports conclude that on the whole the deficit reductions can be maintained over time.

The government debt criterion was only met by four countries. The EC and the EMI report that substantial decreases in the debt ratio were recorded during the period up to 1997, for those countries with a debt/GDP ratio above the 60 percent reference value; and since for these countries, this ratio has been diminishing and approaching the reference value of 60 percent, the expectation is for a continuation of a sustained decline in this ratio in the years to come. The debt/GDP ratios in Belgium and Italy are much higher than in other countries, and it would require many years of government surpluses to reduce the ratio to the reference level of 60 percent. The EC and the EMI expect the debt ratio in Belgium and Italy to decline as they run a surplus in the budget. However, a combination of high interest rates and low growth rates will undermine the sustainability of any debt position.

The ERM participation criterion is deemed to have been met by all countries joining the euro. The eleven countries appear to have enjoyed exchange rate stability with their currencies trading very close to the unchanged central rates during 1996 and 1997. The Irish currency, though, deviated from its central rate significantly. The Italian and Finnish currencies have participated in the ERM only since November 1996 and October 1996 respectively, and the Greek currency only entered the ERM on 16 March, 1998. The Swedish and UK currencies did not participate in the ERM during the reference period. The overall conclusion, then, is that with the exception of the inflation rate and the interest rate, the criteria have not been met as comfortably as it might appear from the claims made by the EC (1998) and the EMI (1998).[5]

There is a critical question at this stage as to whether the outcomes achieved in 1997 and 1998 to meet (at least partially) the Maastricht criteria are sustainable and as robust as the two reports (EC, 1998; EMI, 1998) claim them to be. One aspect of this is the extent to which the convergence criteria are met may depend on the state of the business cycles in the member countries. In particular, it would be expected that it is more difficult to achieve the budget deficit condition during recessions than in boom conditions. Economic growth has generally been above trend since 1993, and the output gap (of actual GDP below potential) has fallen steadily from an average of 3.4 percent in 1993 to a projected average of 0.34 percent in 1998 (calculated from OECD, 1998). On the basis of output figures there has been some cyclical upswing, which tends to reduce the budget deficits. Buti et al. (1997) found that the budget balance is negatively linked to GDP growth, they estimated that a 1 percent change in GDP will also cause a 0.5 percent change in the budget deficit at the EU level. At the country level the effect can be more dramatically, for example the estimates were 0.8 and 0.9 percent for the Netherlands and Spain respectively. But this upswing has made little impression on the level of unemployment, which has been stuck at around 10 percent (see Table 2). It is particularly worrying that unemployment of around 10 percent is consistent with output close to what is deemed potential, which suggests that there is not sufficient capacity to underpin full employment.

The decisions taken by the EC (1998) and the EMI (1998) have been presented as having been taken against a background of an economic situation in Europe which is sound. It is claimed that the economic fundamentals in Europe are healthy, with low inflation, favorable monetary conditions, high profitability and sustained external demand leading to trade surplus (EC and EMI, op. cit.). However, this overlooks the high levels of unemployment and the wide disparities between regions and countries to which we refer below. Another aspect of the sustainability of current economic performance is that the deficit to GDP ratio has become the most important for the euro decision-makers. A number of `measures' have been taken with the specific aim of ensuring that the deficit criterion has been met. It is widely accepted that a number of `creative' devices were adopted and implemented by a number of

countries with respect to the deficit position. This appears to have been particularly the case in the major countries, France, Germany, Italy, Spain and Belgium.[6] It is estimated by the EMI (1998) that the impact of these temporary deficit-reducing measures in 1997 accounted for between 0.1 and 1 percent of GDP in the five countries just mentioned.

Whatever 'success' in terms of meeting the Maastricht criteria may be reported, this has been achieved at a high cost in terms of unemployment.[7] Table 2 shows the high levels of unemployment being experienced in Europe. The rate of unemployment exceeds 10 percent in all the major economies other than the UK, and above 5 percent in all with the exception of Luxembourg. There has been some convergence of unemployment rates as measured by the standard deviation since 1993 (cf. Table 2), but there had previously been an increase and the figure for 1997 is slightly above the figures for 1989 to 1991.

The Stability and Growth Pact

The lack of trust between Northern and Southern EU states has produced the *Stability and Growth Pact* which increases the restrictions imposed on the freedom of EU countries to use fiscal policy (Miller, 1997).[8] It calls for fiscal positions to be balanced or in surplus normally, and provides an early warning signal when the 3 percent budget deficit reference value is at risk. It stipulates that the national budget deficits would be constrained by threats of fines on any country which exceeds the 3 percent of GDP norm. A country which fails to keep its budget deficit within the 3 percent limit will have to pay in the first instance a penalty equivalent to the payment of a non-interest bearing deposit. If the situation persists the penalty becomes a fine equivalent to between 0.2 and 0.5 percent of GDP, depending on the size of the 'excess' deficit. It is assumed that any fine would be levied in respect of the *ex post* budget deficit since budget deficit forecasts are subject to both error and to manipulation (though this would also apply to deficit outcomes). But if the prospect of fines impacts on national government decision making, then a government would aim for deficits substantially below 3 percent of GDP in each year, regardless of the stage of the business cycle, to avoid unforeseen events pushing the actual deficit over 3 percent of GDP (for a retrospective application of the excessive deficit procedure see Buti et al., 1997). Furthermore, the penalty clause would add to the deficit it is meant to cure, and as such it could generate national opposition (Goodhart, 1996, p. 246). This constraint on the budget deficit effectively precludes the use of national fiscal policy for demand management purposes. If a government is running a budget deficit near to the 3 percent of GDP margin, then a degree of approval would have to be obtained from the EU for any actions involving expenditure which would take the deficit over 3 percent. Any budget deficit which does occur would have to be financed by borrowing, which, however, is itself subject to restrictions.[9]

This system of financial penalties for breaches of the budget deficit criterion, implies that deflationary fiscal policies will continue, and indeed intensify in order for those countries which have just met the 3 percent requirement in conditions of cyclical upswing will have to tighten the fiscal stance to meet the 3 percent requirement in times of cyclical downswing. The high rates of unemployment are likely to continue, and indeed may well worsen. The conditions of demand are unlikely to revive: for that an investment boom would be required. If it proves difficult to sustain the present convergence of inflation rates and/or the present deficit positions, there will be further deflationary pressures as countries deflate to meet the terms of the *Stability and Growth Pact* . There are thus potentially very high costs in terms of attempting to maintain the imposed discipline once within the EMU. The clear implication is that the introduction and use of the euro under these conditions would have severe deflationary effects. These may have some long lasting effects as the lower levels of demand reduce investment and create unemployment. The lower investment depresses productive capacity, thereby harming long-term unemployment prospects, and the experience of unemployment can depreciate skills and the work ethic.

3. AGGREGATE DEMAND AND UNEMPLOYMENT

The Maastricht convergence criteria contained no reference to either the level of economic activity (unemployment, output) or the balance of trade position (this is clear from Table 1). Countries will be entering the single currency with quite different rates of unemployment and GDP growth, and with differing balance of trade positions (see Table 2 above and Tables 3A/3B and 5 below). The rates of unemployment may be, to some degree, a reflection of countries being at different phases of the business cycle (though if that is so, it would raise issues not only of convergence but of the sustainability of the convergence of inflation which has been observed). But a major part of the differences in unemployment appear to reflect more than cyclical patterns. They could be labeled structural but the causes of the differences in unemployment could be much broader than is usually implied by the term structural. They could, for example, be arising from sustained differences in the level of aggregate demand or from the economy's trade performance.

Under the EMU arrangements, there will be a single EU level policy maker, namely the Central Bank, which will have the policy instrument of interest rate and the policy objective of low inflation (strictly speaking price stability). National governments will continue to operate fiscal policy but subject to the limitations of the *Stability and Growth Pact* . The impact of the limit on budget deficits of maximum of 3 percent of GDP will mean that since this is a maximum over the business cycle much smaller budget deficits on average. The impact of the upper limit on budget deficits of 3 percent of GDP will mean that the average budget deficit over the business cycle will have to be much lower than that. The ability of national governments to respond to major downturns and adverse shocks by the use of budget deficits will be heavily constrained. In fact, national governments will not be able to respond to major downturns and/or adverse shocks using budget deficits. Indeed the efforts of governments to limit the size of the budget deficit during a recession will make it much more severe.

A downturn in economic activity which was widespread across the EU would create a great deal of distress as each country deflated to preserve its budget position, which would not only add to the domestic deflation but also impose further deflation on fellow EU member countries. In applying the Stability and Growth Pact retrospectively Buti et al. (1997) found that countries holding a pre-recession deficit of 2 percent were likely to exceed the 3 percent reference value of the excessive deficit procedure if a recession occurred (GDP fell by at least 0.75 percent). Even in a mild recession (GDP fell by between 0-0.75 percent) some countries still exceeded the reference value (p. 29). It can also be noted in this context that the EU itself cannot run a budget deficit. Articles 199 and 201 of the amended Treaty of Rome (EU, 1998) require that "the revenue and expenditure shown in the [Community] budget

shall be in balance" and that "the budget shall be financed wholly from own resources".

The EMU approach to policy obviously means that there is *no* policy instrument at the EU level addressed towards the levels of employment and unemployment, and in effect (un)employment disappears as a policy objective. The loss of the exchange rate instrument means that shocks (positive or negative) which hit one (or a small number of) EU countries cannot be offset by movements in the exchange rate. In particular, negative shocks to an economy which raise unemployment cannot be offset by a currency depreciation, though it can be noted that in the volatile floating exchange rate system there may be perverse responses by the exchange markets to a negative shock. The overall effect is likely to raise unemployment: there is a clear upper limit to the degree to which countries that experience a positive shock can benefit through lower unemployment, while countries with a negative shock may suffer a considerable increase in unemployment. In a similar vein, limited labor mobility means that there will not be a great deal of movement of labor from areas of high unemployment to those with low unemployment.

The problem of unemployment will be particularly serious in those cases where governments have chosen the wrong exchange rate at entry. An overvalued entry exchange rate will mean an extended period of recession to accommodate its effects which emanate from the absence of the adjustable exchange rate safety valve. This is accentuated by the virtual absence of fiscal transfers, whether automatic or discretionary, from the relatively rich regions to the relatively poor ones. There is clearly not a tax and social security system operating at the Federal level which in other federal systems serves to make transfers between rich and poor in an automatic manner, and to provide an element of fiscal stabilization. The expenditures on regional aid and to a lesser degree agricultural policies do make some transfers from rich to poor, but on a very limited scale. In short, the European Federal budget is not on a sufficient scale nor of the right design to provide significant interregional insurance not present in the EMU (Fatas, 1998). Eichengreen (1997) offered the suggestion that the European Investment Bank (EIB) can borrow off-budget to perform these functions, however, this would exceed the EIB's remit. Article 198e of the Maastricht Treaty states that "the task of the EIB shall be to contribute, by having recourse to the capital market and utilizing its own resources, to the balanced and steady development of the common market in the interest of the community". Whether the functions of the EIB can be enlarged to include stabilization policy (distribution over time) is extremely questionable. It can entail redistribution across countries, and it is specifically this function which should be expanded and strengthened from its present form where assistance is only in the form of loans and guarantees.

The economic analysis which lies behind these type of policies appears to be one in which macroeconomic demand conditions, including monetary and fiscal policies, cannot affect the (equilibrium) level of unemployment of labor and more general of the level of economic activity. The level of unemployment and of economic activity is viewed as solely a supply-side phenomenon. Whatever the merits or otherwise of that line of analysis, let us consider its implications within the context of a European single currency which has been introduced across countries with widely differing levels of unemployment and balance of trade positions. The creation of the productive capacity and employable labor force consistent with full employment in regions currently suffering from high levels of unemployment requires the stimulus of high levels of demand to promote investment and supply-side improvements. In addition, investment and training would themselves add to the level of aggregate demand. Further, the balance of trade position of a region which is undergoing a growth of economic activity would tend to deteriorate. This would then require some combination of capital inflow through borrowing from elsewhere and a net drain of funds from the region concerned.

The policy framework is such that the ECB has the one instrument of interest rate to pursue the main objective of low inflation. At its meeting of 13 October 1998 the Governing Council of the ECB agreed on the main features of their stability-oriented policy strategy. First, the single monetary policy will have a euro area-wide perspective. The president of the ECB at a press conference on 13 October 1998, clearly stated that monetary policy "will not react to specific regional or national developments". Second, a quantitative definition of price stability was adopted (the annual increase in the HICP for the euro area should be less than 2 percent), which is to be achieved by announced quantitative *reference* values for the growth of the broad M3 monetary aggregate set at 4.5 percent (but, being a reference level, there is no mechanistic commitment to correct deviations in the short term, although it is stated that deviations from the reference value would, under normal circumstances, 'signal risks to price stability'). Third, it was also agreed that a broadly-based assessment of future price developments will be undertaken. In order to achieve these objectives, the ECB will conduct open market operations, it will offer standing facilities (overnight lending against eligible assets and deposit facilities to the institutions subject to minimum reserves with national central banks), and it will impose interest-rate bearing (at the repo rate) minimum reserve requirements on institutions holding accounts with it (the reserve ratio will be 2 percent of eligible liabilities,[10] and the reserves will be lodged with national central banks; the ECB will allow a lump-sum allowance of 100,000 euros to be deducted from an institution's reserve requirement).

The use of monetary policy to target the rate of inflation draws on two broad sets of assumptions. The first is that monetary conditions are the cause and inflation the effect, and that interest rates can affect monetary conditions. In the simple monetarist story, the money supply determines the rate of inflation. But if there is reverse causality, whereby inflation influences monetary conditions, then seeking to set the latter becomes much less attractive. The second broad assumption is the classical dichotomy under which there is a separation between the real and the monetary sides of the economy, and under which the monetary conditions do not influence the real side of the economy, either in the short-run or the long-run. The Non Accelerating Inflation Rate of Unemployment (NAIRU) is a reflection of this notion, as it represents a supply-side equilibrium rate of unemployment, at which inflation is constant. In its usual representation, the NAIRU is settled by labor market factors, and not influenced by capacity or by aggregate demand.

The ECB will have no choice but to raise interest rates when the prospect is of inflation rising. The ECB may operate on evidence of prices rising faster or any evidence such as unemployment falling below the estimated NAIRU (or some combination of factors). Interest rates are likely to be a rather blunt instrument for this purpose. There are questions over how much impact a rise in interest rates will have on the rate of change of the money supply, and further whether changes in the money supply have a causal effect on changes in prices. It is also the case that increases in interest rates raise prices, whether directly through impact on mortgage payments (particularly significant in the UK) or indirectly through impact on firm's costs.[11] The ECB though has no alternative to the use of interest rates and attempts to control the growth of the stock of money in the pursuit of the low inflation

objective. The range of other economic policies which have or could be used to influence the pace of inflation are out of reach of the ECB. Thus, incomes policy, co-ordinated pay bargaining, the creation of a more balanced, less inflation prone economy or even fiscal deflation are policy options which are simply not available to the ECB.[12]

4. FUTURE PROSPECTS

We can begin our consideration of future prospects by considering the possible impact on interest rates, with consequent effects on national fiscal policy and on the euro exchange rate. There are two major considerations concerning interest rates.

One line of argument is that there will have to be further convergence of interest rates since there will be a single 'repo' interest rate set by the ECB. How far that single 'repo' rate is translated into a uniform set of interest rates across member countries is a matter of conjecture. It should be noted that national governments will receive different credit ratings from the financial markets (as, for example, happens between different states in the USA) which would lead to different borrowing rates on government bonds. Further, different financial systems will generate different interest rates; for example, the mark-up of loan rates over the 'repo' rate would vary from country to country. However, if the 'repo' rate set by the ECB is in line with the lowest 'repo' rates currently set amongst member countries, then clearly the countries with currently relative high interest rates will be faced with lower interest rates. The rationale behind the policy use of interest rates for the control of inflation is clearly that higher (lower) interest rates generate lower (higher) rates of inflation. As the incoming Governor of the ECB, Wim Duisenberg, has recognized (*Guardian* , 30th June 1998), this would imply that those countries which appear to benefit from lower interest rates in the EMU would need to raise taxes or cut public expenditure in order to offset what is viewed as the stimulating impact of the lower interest rates.

The second line of argument (which is not necessarily inconsistent with the first) is that the ECB will have to set a relatively high repo interest rate, from which the general structure of interest rates will be relatively high. This could mean that while there would be convergence of interest rates, it would be convergence on a relatively high level. The ECB will necessarily lack reputation when it starts, and as such it would need to establish instant reputation as a stable and strong currency in the eyes of the markets, especially financial markets. Also, given that the ECB will lack transparency, it will have to be increasingly more conservative through the use of the rate of interest to establish credibility. These arguments suggest that higher interest rates than otherwise would almost be a certainty, and this would add to already high levels of unemployment in the EU. There would probably be political pressures in countries with continuing double-digit unemployment rates (see Table 2) and this may force them to reflate their economies. But then this would involve severe penalties for the countries in view of the *Stability and Growth Pact* . In any case, financial markets may force further increases in interest rates and the ECB, which would be expected to resist political pressures from national governments, would not be averse to such temptations. There is also the uncertainty of how financial markets would respond to the different debt/GDP ratios when the debt is denominated in euros rather than national currency, and when the national governments cannot print money to repay bonds and are limited on the size of the budget deficit.

It is useful to draw on the 'optimum currency area' literature for guidance on the future prospects of the EMU. This literature suggests three conditions should be met for an 'optimum currency area' (Mundell, 1961): (a) factor mobility and openness of markets; (b) relative price flexibility; and (c) fiscal transfers. It would be desirable for a single currency to be used in an economic area within which there is openness of goods markets and mobility of factors of production (labour, capital) and where members shared similar inflationary tendencies. Mobility of labour within the EU remains low (especially by comparison with the USA) and that is unlikely to change radically. Openness of goods markets may very well prevail in the EMU area, but integrated stabilization and political unification are distant possibilities. Furthermore, relative price flexibility is absent and the differences in labour market institutions, notably over wage determination, mean that there are differing inflationary tendencies and different responses to shocks. Fiscal transfers at the EU federal level are rather small as mentioned above.

The 'optimum currency area' literature suggests that there should not be substantial differences in underlying economic conditions in a common currency area. And yet, in terms of the structural rates of unemployment and the cyclical levels of economic activity within the EU, the differences are significant. The disparities in the underlying rates of unemployment are striking. As Table 2 shows, leaving aside the case of Luxembourg (on the grounds of the smallness of this economy), the average unemployment rate over the period 1992-7 varied from 4.4 percent in the case of Austria to 21.9 percent in the case of Spain. The standard deviation of the (country) average rate of unemployment is 4.75 percent. In 1997 Austria, Belgium, Denmark, Greece, Luxembourg, Netherlands, Portugal, Sweden and the UK, had rates of unemployment below 10 percent, while of the remaining six, four (France, Germany, Ireland, Italy) had rates above 10 percent, and two (Finland and Spain) had rates above 14.5 percent. The cyclical behavior of economic activity shows a similar story. The continent's bigger economies remain sluggish, while the smaller ones are enjoying more buoyant conditions. In Tables 3A and 3B the average GDP growth rate of the big economies (France, Germany, Italy, Spain, UK) is shown to be consistently lower than that of the smaller countries (Austria, Belgium, Denmark, Finland, Greece, Ireland, Luxembourg, Netherlands, Portugal, Sweden). The divergence of growth rates (on an annual basis) has fluctuated over time, and in particular the standard deviation of growth rates was rather high in the late 1980s and early 1990s and have declined somewhat during the 1990s. However, the figures for the mid-1990s are very similar to those of the early and mid-1980s, and there is little evidence from those figures of any general convergence of growth rates (see, also Artis and Zhang, 1999).

Additional evidence can be adduced by examining the relative GDP variance ratio (V_w), which is the weighted average of GDP growth autocorrelations, and measures the volatility of the permanent and temporary components of GDP (Cochrane, 1988). In each country, the GDP relative to the aggregate of the other fourteen countries is utilised, where V_w is calculated as follows:

$$V_w = [1/w][\mathrm{var}(y_t - y_{t-w})]/[\mathrm{var}(y_t - y_{t-1})] = 1 + 2\sum_{j=1}^{w-1}[(w-j)/w]\rho_j$$

where y is the logarithm of GDP of the country concerned relative to the EU GDP, (ρ_j is the jth autocorrelation of the growth rate of

output and w is the 'window' for which the ratio is calculated. This formula is based on the premise that any series can be thought of as a combination of a random walk, which carries the permanent part of a shock, and of a stationary series, which carries the temporary part of a shock. The numerator in the above formula is the variance of the shocks to the random walk component (the permanent component of GDP growth rates), and the denominator is the variance of first differences (the temporary component of GDP growth rates). The variance of the permanent component of GDP growth rates can then be compared with the variance of the annual GDP growth rates. This is, therefore, a measure of whether an economic system dampens cyclical disturbances, and thus returns to its trend following a shock, or whether shocks are amplified leading to permanent effects on GDP.

When the variable in question is trend stationary, cyclical disturbances disappear through time, in which case the variance of the shocks to the random walk component is zero. If the relevant variable is a purely random walk, then shocks have permanent effects - the two variances in the V_w expression are equal. In Table 4, reproduced from Fatas (1998, p. 190), the variance ratio is calculated for the fifteen EU countries for three 'windows' (5, 10 and 15 years), over the period 1960-96 (using annual data). It is clear that relative GDP is far from being a stationary variable, implying that fluctuations in GDP growth are lasting and that permanent shocks are large and frequent. Indeed, in the case of France, Spain and Greece the high V_w ratio indicates that the relative GDP growth rates are unstable. Since, then, cyclical movements are persistent and have permanent effects on the level of GDP, a fiscal mechanism is required to deal with the shock and the interregional transfers caused by it. The generation of fiscal transfers by the authority would be redistributional and help create conditions of real convergence.

A number of problems are expected to surface in view of the architecture of the EU banking systems and financial markets. The banking systems are at different stages of development with different characteristics where the capacity of banks to create credit depends on their stage of evolution (Chick and Dow, 1995). Banking systems in the peripheral countries (Greece, Portugal, Spain, Ireland) differ substantially from the ones in the core countries in this respect. There are also important differences within the core countries, which are particularly pertinent. For example, the distinction between bank-based (for example Germany) and capital-market-based (UK is a good example) financial systems is pertinent in this context. These institutional and behavioral characteristics across EMU countries, along with differences in the timing and amplitude of cycles, are expected to have serious implications for the transmission mechanism and thus channels of monetary policy, throughout the EMU area. They are significantly different across the member states. The ECB monetary policy is thus expected to have asymmetric effects across the Union. So that "differences in the responsiveness of other financial markets to changes in money market interest rates and differences in the net financial positions and interest sensitivities of personal, corporate or financial sectors will mean that the burden of adjustment will not be evenly distributed" (Arrowsmith, 1995, p. 84).

The available empirical evidence on the transmission mechanism is on balance supportive of the view that monetary policy will have different effects across the EMU countries. Empirical studies which are based on large multi-equation econometric models suggest significant differences, while studies based on small VAR-type models suggest insignificant differences. Dornbusch et al. (1998) when reviewing the evidence conclude that in view of the usual difficulties associated with the interpretation and origins of reduced-form relationships, the evidence adduced from large-scale models is more reliable. Further support of the argument of asymmetric effects of monetary policy, is the finding that consumers display different responses to interest rate changes across the EU (Sefton and int Veld, 1998). For example, consumers in the UK may be more sensitive to interest rate changes than in some other countries in the EU, due in part to the system of mortgage finance. Additional institutional differences, such as the system of equity markets, may also account for differences in behaviour. Evidence based on simulations with macroeconomic models run by national central banks, confirm the differential impact of interest rate changes across the EU (CEPR, 1997).[13]

The increase in the degree of financial capital mobility within the EMU reveals additional problems. Financial institutions within the area hold about 90 percent of their portfolios in domestic assets. With the removal of foreign exchange risks and regulations which inhibit holdings of foreign assets, financial institutions will increase their holdings of euro assets substantially. The clear implication is that the amount of funds moving within the euro area will make a quantum leap. The regulatory and institutional environment will remain national at least during its initial phase when institutions have not adapted to the new environment. Rates of return will differ across EMU members, but banks will be able to borrow at the same interest rates. Under these circumstances financial disturbances are likely to materialize. A stronger boom in, say, Third Italy than in the rest of the EMU, will be associated with asset inflation there, with the ECB being unable to initiate policies specific to the needs of Third Italy. We can envisage that there will be substantial money flows into areas where asset prices are rising and which offer the prospects of high returns. The inflow will generate further rises in asset prices, generating further asset inflation. The boom cannot continue forever, and at some stage the bubble will burst, with asset prices collapsing causing financial distress in the local banking system. Recent experience in the Far East is illustrative of what may happen.

5. INSTITUTIONAL AND POLICY IMPLICATIONS

The figures cited above suggest that by the time the euro was launched in January 1999, there had been a degree of convergence with respect to inflation and interest rates (which is not surprising given the virtually fixed exchange rates amongst the member states of the EMU), but not with regard to unemployment and growth rates. Worse still is the fact that the EMU does not have any policy instruments to tackle the unemployment problem. Fiscal expansion is ruled out, with the eleven EMU starters having deficits near enough to the *Stability and Growth Pact* limit of 3 percent. No interest and exchange rate policy is in place for this purpose, and the EU budget, limited to 1.8 percent of the EU GDP, is already committed (essentially on agricultural subsidies). The overall conclusion is, then, that fiscal transfers to areas with high unemployment are not possible, nor are there other policy instruments to replace it. The figures on the current account position (see Table 5) indicate that the EU as a whole has generally been running a substantial surplus with the rest of the world in the past few years (though the UK is a clear exception to that). But within the overall EU surplus with the rest of the world, there are substantial variations in the degree of current account surplus across countries. The current account position will, of course, be influenced by the business cycle, which prevents any definitive answer to the question of whether the exchange rates are correctly set. But there is some suggestion in the figures of Table 5 that the European Union currencies have generally been undervalued relative to non-European Union ones (at the prevailing levels of economic activity), but

that the structure of exchange rates between European Union countries has not been compatible with current account balance of one member country with the others in the sense that some countries within the EU are running large trade surpluses (e.g. the Netherlands) and others significant deficits (e.g. Portugal). Despite the current account surplus, the euro has tended to fall (against the dollar) in the first six months of 1999. But whatever the external value of the euro vis-à-vis the dollar, there would still be large differences in the current account position of countries, and correspondingly flows of capital into or out of countries.

These observations lead us to certain institutional and policy recommendations. On the monetary side, the key question is the role of the independent central bank. We would argue for the objectives of the bank to include the pursuit of full employment and economic growth as well as price stability (recognizing that there may be interdependence between the objectives, though not necessarily in the manner suggested by the Philips curve).[14] The Central bank would also have the objective of the regulation of the financial system, with the further aim to provide an orderly functioning of the credit system. It is imperative, therefore, that the ECB is able and willing to assume the traditional role of any central bank, that of the lender of last resort. In this context there is also a requirement for more effective accountability, as argued above, which requires mechanisms of democratic influence (if not control) over the central bank from the European Parliament (and we would extend that to national Parliaments). This accountability would reinforce the legitimacy of the institution and avoid at the same time dramatic conflicts between monetary policy and other EU objectives. A much wider membership of the board of directors than what it is now (see footnote 12) to include representatives of industry, trade unions, regions, etc. would help a great deal on this score.

A further recommendation would be to have a new institution to supplement the activities of the ECB, with the specific objective of enhancing investment activity in those regions where unemployment is acute. Enhanced investment activity will, thus, aim to reduce the dispersion of unemployment within the framework of reducing unemployment in general. This could be achieved through encouraging long-term investment whenever this is necessary by providing appropriate finance for it. Such a new institution, which may be named as the European Union Development Bank (EUBD), should apply appropriate and strict investment criteria in a way to achieve and maintain credibility. The creation of the EUBD along with a modification of the *Stability and Growth Pact* may provide the missing institutional and policy muscle of the current EMU arrangements.

We would argue for a new *Stability and Growth Pact* in a way that involves the objectives of both 'stability' and 'growth', not merely 'stability'. This proposal emanates from the obvious recognition that within a single country there are substantial, often virtually automatic, transfers of income from the more prosperous to the less prosperous regions. The automatic elements come from the tax and social security system and other elements come through regional policy and allocation of funds to local government. Countries with federal structures have a significant (say around half) of government expenditure at the national level with the national government having an ability to run deficits and operate fiscal policy, as well as to re-distribute income between states. This is completely absent from the EU. Transfers from the operation of automatic stabilisers do not occur at the EU level and the discretionary transfers are relatively small. Hence the check on the decline of weak regions which emanates from these transfers is largely absent. The problems this entails will be particularly acute for those regions (countries) of the EMU and any entering the single currency with a trade deficit and high levels of unemployment (witness the high unemployment rates in some EMU countries as discussed above). Given the lower degree of labour mobility in Europe across national borders than within them, the complete loss of the exchange rate adjustment possibility requires an adequate policy of regional transfers through an EMU fiscal policy to accompany the proposed common EMU monetary policy. The absence of such co-ordination, indeed the non-existence of fiscal policy at the EMU level, implies that the interest rate variations necessary to achieve price stability, become even more uncertain. This raises concerns about the volatility of euro in relation to the Dollar and the Yen which is expected to be unusually high (Goodhart, 1998). A new *Stability and Growth Pact* along the lines suggested in this paper, could potentially alleviate the problems just identified.

6. SUMMARY AND CONCLUSIONS

The current proposals for the EMU are based on the classical dichotomy with a separation between the real and the monetary sides of the economy with the (equilibrium) level of unemployment (effectively the NAIRU) and output determined on the supply-side of the economy and the level of prices (and hence the rate of inflation) set by the rate of expansion of the money supply. The monetary and financial sector is viewed as essentially stable and, of course, the classical dichotomy serves to, in effect, insulate the real side of the economy from the monetary side. As the EMU is launched, the EU may become more prone to financial upheavals. This would come about in view of the vast movements of financial assets as a result of the removal of any remaining obstacles to 'free' financial markets, which will increase dramatically the amount of funds floating within the euro area seeking profitable opportunities - and there may very well be many of them in view of the expected 'tough' stance on interest rates to establish credibility. A different institution framework is required to safeguard EMU from potential financial and banking crises.

We have argued in this paper that the transition to a single European currency entails essentially two serious problems. The first is that a number of countries which are not strictly able to meet the Maastricht criteria comfortably, have been recommended to join the EMU. As a result, the ECB is expected to be more deflationary than otherwise. The second is that the attempt to meet these criteria has been accompanied by higher unemployment rates throughout the EU. The problem of unemployment will persist for countries within the EMU and the single currency in view of the requirement not to deviate from the set criteria. It follows that individual EMU countries will face long periods of recession, with very few instruments to influence the outcome. In view of these problems we have suggested a new *Stability and Growth Pact*, the focus of which will be a common fiscal policy, along the ECB monetary policy.

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ENDNOTES

1. The convergence criteria under the Maastricht Treaty for a country's membership of the single currency and, by implication, membership of the independent European System of Central Banks are (1) a high degree of price stability, with an inflation rate within 1.5 percent of the three-best performing member states; (2) `healthy' government finance, defined as a maximum ratio of 3 percent government deficit to GDP at market prices, and a maximum ratio of 60 percent of government debt to GDP at market prices; (3) observance of the normal ERM fluctuation margins for at least two years without any devaluation among the member state

currencies; and (4) long-term interest rate levels that do not exceed two percentage points from the nominal long-term government bond rates of the three best-performing member states in terms of price stability. In addition to these Maastricht criteria, there is the additional important condition of national central bank independence. This criterion refers to the statutes of National Central Banks regarding their independence and whether price stability is the prime objective of monetary policy (see EU, 1998, article 108).

2. The ECB and the national central banks in the pursuit of the objectives of the ESCB may "operate in the financial markets by buying and selling (spot and forward) or under repurchase agreement and by mending or borrowing claims and marketable instruments, whether in Community or in non Community currencies, as well as precious metals; conduct credit operations with credit institutions and other market participants with lending being based on adequate collateral" (Article 3 of Protocol on the Statute of the European System of Central Banks and of the European Central Bank).

3. The Maastricht Treaty accountability requirements are twofold: the first is that quarterly and annual reports on the activities of the ESCB will have to be published; and the second is that members of the ECB's executive board will give testimony to the European Parliament four times a year. However, since the Governor of the Bank has an eight year contract, presumably from the Council of Ministers, there is the question of what the Parliament can really do to hold the Governor accountable. It is also worth pointing out that the minutes of the regular ECB Council meetings will not be published until *sixteen* years later.

4. The key points in the ESCB mandate are the following. First, to maintain price stability; the Protocol on the ESCB (article 105) states that "The primary objective of the ESCB shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community..." (EU, 1998), using whatever monetary policy will be necessary regardless of the costs involved in unemployment and lost output. Second, to support the general economic policies of the EU, provided that it does not interfere with the objective of price stability. Third, to act in accordance with the free market economy principles. Fourth, to set interest rates, to conduct foreign exchange operations and to manage member states foreign exchange reserves. Fifth, to ensure smooth functioning of the payment system which links banks across the EU.

5. There were also rounding-up rules which helped a number of marginal cases to be deemed to have met the criteria.

6. Belgium sold some of her gold reserves; France included a one-off transfer of `France Telecom' pension fund to public-sector accounts; Germany reclassified hospital debt which took billions of marks of this debt out of the public sector (and, also, revalued her gold reserves); Italy levied a repayable euro-tax; and Spain privatized a series of State-owned companies. All of this `creative' accounting enabled countries to achieve the all-important budget deficit criterion, and keep it below the 3 percent benchmark. For these and other relevant accounting practices, see Dafflon and Rossi (1998).

7. It is instructive to compare EU unemployment rates with those of comparable countries outside the EU. The latter do not appear to have been experiencing the same high unemployment rates, as the EU members. Comparable countries to the EU member-states, Canada and the US in particular, have actually been enjoying falling unemployment rates continuously since 1992. See, however, Palley (1998), who suggests that although the US unemployment has been lower and more jobs have been generated than in the EU, "these jobs have been produced at great cost in terms of income inequality, stagnating wages, and increased income insecurity" (p. 338). Norway is another good example of a country which has chosen to remain outside the EU and her unemployment rate has been falling steadily since 1993. We may even refer to the UK case where since 1992, when the UK left the ERM mechanism, unemployment has been falling steadily with the exception of 1993 when it increased slightly.

8.The 'growth' part in the *Stability and Growth Pact* is merely cosmetic. It was added to conciliate the French authorities who insisted on the inclusion of growth and other activity variables in the Pact. They also managed to change the German proposal that any budget revenues should be used to pay off debts, to one which requires government financial positions to be close to zero or in surplus in the medium term.

9. There are, of course, exceptions to these rules. Countries would be automatically exempted if their real GDPs have declined by at least 2 percent within a given year. Concurrence of the Council of Ministers would be required if the decline is less than 2 percent but more than 0.75 percent. However, countries would have to demonstrate that their recessions are exceptional. See, for example, Eichengreen and Wyplosz (1998) for more details on the *Stability and Growth Pact* .

10. Eligible liabilities are: overnight deposits; deposits with agreed maturity up to 2 years; deposits redeemable at notice up to 2 years; debt securities issued with agreed maturity up to 2 years; and money market paper.

11. Whether interest rates have the direct effect postulated depends on the way which the consumer price index is constructed. But it is also of relevance how people regard interest rate rises. If they are perceived as having caused prices to rise, whether or not recorded in the official statistics, there may be some impact on other prices and on wages.

12. The Executive Board of the ECB will comprise the President, Vice President and four other members who "shall be appointed from among persons of recognised standing and professional expertise in monetary and banking matters" (Article 11 of Protocol on the Statute of the European System of Central Banks and of the European Central Bank). The Governing Council comprises the Executive Board and the governors of the national central banks. The ESCB "shall be governed by the decision making bodies of the ESCB" (Article 8). It is clear that financial and banking interests will be well represented but there will be no representation of national or regional governments, trade unions, industrial and business interests. This heavy reliance on banking and financial interests is likely to generate an emphasis on `sound' money and the pursuit of overly deflationary policies. Little regard will be paid to issues of unemployment or growth.

13. One result of the exercise referred to in the text, which is particularly relevant, is the one which suggests that "for the UK, the impact of an interest rate change on domestic demand after two years is four times the EU average", so that "the impact of any change in European monetary policy would be disproportionately channeled through the UK" (CEPR, 1997, p. 17).

14. Worries about unemployment have been expressed by a number of contributors, both academics (see, for example, Eltis, 1998; Goodhart, 1998), and central bankers (see, for example, George, 1998).

Table 1 Economic indicators and the Maastricht Treaty convergence criteria

		HICP inflation[a]		Long-term interest rate[b]		General government surplus (+) or deficit (-)[c]		General government gross debt[c]		Exchange rates
REFERENCE VALUE		**2.7 (1997)**		**7.8 (1997)**		**3.0 (1997)**		**60.0 (1997)**		**ERM participation**
Belgium	1996 1997[d] 1998[e]		1.8 1.4 -		6.5 5.7 -	# #	-3.2 -2.1 -1.7		126.9 122.2 118.1	YES
Denmark	1996 1997[d] 1998[e]		2.1 1.9 -		7.2 6.2 -	# # #	-0.7 0.7 1.1	#	70.6 65.1 59.5	YES
Germany	1996 1997[d] 1998[e]		1.2 1.4 -		6.2 5.6 -	# #	-3.4 -2.7 -2.5		60.4 61.3 61.2	YES
Greece	1996 1997[d] 1998[e]		7.9 5.2 -		14.4 9.8 -	#	-7.5 -4.0 -2.2		111.6 108.7 107.7	YES[f]
Spain	1996 1997[d] 1998[e]		3.6 1.8 -		8.7 6.3 -	# #	-4.6 -2.6 -2.2		70.1 68.8 67.4	YES
France	1996 1997[d] 1998[e]	**	2.1 1.2 -	**	6.3 5.5 -	# #	-4.1 -3.0 -2.9	# # #	55.7 58.0 58.1	YES
Ireland	1996 1997[d] 1998[e]	***	2.2 1.2 -	***	7.3 6.2 -	# # #	-0.4 0.9 1.1	#	72.7 66.3 59.5	YES
Italy	1996 1997[d] 1998[e]		4.0 1.8 -		9.4 6.7 -	# #	-6.7 -2.7 -2.5		124.0 121.6 118.1	YES[g]
Luxembourg	1996 1997[d] 1998[e]	***	1.2 1.4 -	***	6.3 5.6 -	# # #	2.5 1.7 1.0	# # #	6.6 6.7 7.1	YES
Netherlands	1996 1997[d] 1998[e]		1.4 1.8 -		6.2 5.5 -	# # #	-2.3 -1.4 -1.6		77.2 72.1 70.0	YES
Austria	1996 1997[d] 1998[e]	*	1.8 1.1 -	*	6.3 5.6 -	# #	-4.0 -2.5 -2.3		69.5 66.1 64.7	YES
Portugal	1996 1997[d] 1998[e]		2.9 1.8 -		8.6 6.2 -	# #	-3.2 -2.5 -2.2	#	65.0 62.0 60.0	YES
Finland	1996 1997[d] 1998[e]	**	1.1 1.3 -	**	7.1 5.9 -	# #	-3.3 -0.9 0.3	# # #	57.6 55.8 53.6	YES[h]

Sweden	1996 1997[d] 1998[e]	*	0.8 1.9 -	*	8.0 6.5 -	# #	-3.5 -0.8 0.5		76.7 76.6 74.1	NO
United Kingdom	1996 1997[d] 1998[e]		2.5 1.8 -		7.9 7.0 -	# # #	-4.8 -1.9 -0.6	# # #	54.7 53.4 52.3	NO

Source: European Commission (1998) and EMI (1998).
*, **, *** = first, second and third best performer in terms of price stability.
= general government deficit not exceeding 3% of GDP; general government gross debt not exceeding 60% of GDP.
(a) Annual percentage changes; HICP is the harmonised index of consumer prices.
(b) in percentages.
(c) As a percentage of GDP.
(d) Data for HICP inflation and long-term interest rate refer to the twelve-month period ending January 1998; European Commission (spring 1998 forecasts) for general government surplus or deficit and general government gross debt.
(e) European Commission projections (spring 1998 forecasts) for general government surplus or deficit and general government gross debt.
(f) Since March 1998.
(g) Since November 1996.
(h) Since October 1996.

Table 2 Unemployment rates (percent of work force)

	1992	1993	1994	1995	1996	1997
Austria	3.6	4.2	3.8	3.9	4.4	6.6
Belgium	7.3	8.9	10.0	9.9	9.8	9.7
Denmark	11.2	12.3	12.2	10.3	8.7	7.8
Finland	12.7	17.3	17.8	16.7	15.8	14.5
France	10.4	11.7	12.3	11.6	12.3	12.6
Germany	7.7	8.9	9.6	9.4	10.4	11.4
Greece	7.6	7.1	7.2	7.1	7.5	7.9
Ireland	15.5	15.6	14.1	12.2	11.8	10.8
Italy	8.8	10.2	11.3	12.0	12.1	12.3
Luxembourg	1.6	2.1	2.7	3.0	3.3	3.6
Netherlands	5.3	6.4	7.5	7.0	6.6	5.9
Portugal	4.1	5.5	6.8	7.2	7.3	6.7
Spain	18.4	22.7	24.2	22.9	22.2	20.8
Sweden	5.3	8.2	8.0	7.7	8..0	8.3
UK	9.7	10.3	9.3	8.2	7.5	5.8
Average for EU countries	8.6	10.1	10.5	9.9	9.9	9.7
Standard deviation	4.6	5.3	5.4	5.0	4.7	4.3

Source:EMI (1998)

Table 3A GDP growth rates (annual percentage rates)

	1992	1993	1994	1995	1996	1997	1998
Austria	1.3	0.5	2.5	2.1	1.6	2.5	3.1
Belgium	1.5	-1.5	2.4	2.6	1.3	3	2.9
Denmark	1.3	0.8	5.8	3.2	3.2	3.3	2.4
Finland	-3.6	-1.2	4.5	5.1	3.6	6.1	5
France	1.2	-1.3	2.8	2.1	1.6	2.3	3.1
Germany	2.2	-1.2	2.7	1.2	1.3	2.2	2.7
Greece	0.7	-1.6	2	2.1	2.4	3.2	3
Ireland	4.2	3.1	7.3	11.1	7.4	9.8	9.1
Italy	0.6	-1.2	2.2	2.9	0.7	1.5	1.5
Luxembourg	4.5	8.7	4.2	3.8	3	4.8	4.7
Netherlands	2	0.8	3.2	2.3	3.1	3.6	3.8
Portugal	2.5	-1.1	2.2	2.9	3.2	3.7	4
Spain	0.7	-1.2	2.3	2.7	2.4	3.5	3.8
Sweden	-1.4	-2.2	3.3	3.9	1.3	1.8	2.8
UK	0.1	2.3	4.4	2.8	2.6	3.5	2.7
Average for EU countries	1.19	0.25	3.45	3.39	2.58	3.65	3.64

Source: OECD, *Economic Outlook* , December 1998

Table 3B EU average GDP growth rates

	1992	1993	1994	1995	1996	1997	1998
Big EU Economies	1.03	-0.35	3.03	2.25	1.55	2.38	2.50
Small EU Economies	1.19	0.33	3.49	3.73	2.77	3.90	3.84
Difference	0.16	0.68	0.46	1.48	1.22	1.52	1.34

Source: Calculations based on Table 3A

Table 4 Variance ratios: relative GDP growth rates			
Country	**V_5**	**V_{10}**	**V_{15}**
Germany	1.072	0.884	0.778
France	1.698	2.501	2.921
Italy	0.829	0.986	1.005
Netherlands	1.014	1.031	0.689
Belgium	1.028	0.816	0.841
Luxembourg	1.314	1.563	1.648
UK	1.460	1.530	1.853
Ireland	1.514	1.594	1.398
Denmark	0.887	0.318	0.282
Spain	2.291	2.694	2.980
Greece	1.705	2.703	3.165
Portugal	0.898	0.890	0.920
Sweden	0.930	0.613	0.440
Finland	1.288	0.907	0.619
Austria	0.940	0.698	0.425
Source: Begg et. al. (1998)			

Table 5 Current account balances as a percentage of GDP

	1992	1993	1994	1995	1996	1997	1998*
Austria	-0.4	-0.5	-1.5	-2.3	-2.2	-2.2	-2.3
Belgium	2.9	5.3	5.4	5.2	5.3	5.6	5.7
Denmark	2.8	3.5	2.1	1.1	1.7	0.5	-1
Finland	-4.6	-1.3	1.3	4.1	4	5.5	5.7
France	0.4	0.8	0.6	0.7	1.3	2.7	2.6
Germany	-1	-0.7	-1	-0.9	-0.6	-0.2	0.4
Greece	-2.2	-0.8	-0.2	-2.5	-3.7	-4.1	-4
Ireland	1.1	3.9	2.8	2.7	2.7	2.8	3.7
Italy	-2.5	0.9	1.4	2.4	3.3	2.9	3.2
Netherlands	2.3	4.4	5.3	6	5.8	6.1	5.8
Portugal	-0.2	0.4	-2.5	-0.2	-1.4	-1.8	-1.7
Spain	-3.7	-1.2	-1.4	0.1	0.1	0.4	0.3
Sweden	-3.5	-2.2	0.4	2.1	2.3	2.8	2.1
UK	-1.7	-1.6	-0.3	-0.5	-0.3	0.6	-0.6
Average for EU countries	-0.74	0.78	0.89	1.29	1.31	1.54	1.42
United States	-0.8	-1.3	-1.8	-1.6	-1.8	-1.9	-2.7

* Figures for 1998 OECD estimates Source: OECD Economic Outlook (December , 1998)