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Recommended Citation

Harvie, Charles, European economic and monetary union: problems, prospects and global financial implications, Department of Economics, University of Wollongong, Working Paper 97-5, 1997, 42.
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**DEPARTMENT OF ECONOMICS
WORKING PAPER SERIES
1997**

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MONETARY UNION:
PROBLEMS, PROSPECTS AND
GLOBAL FINANCIAL
IMPLICATIONS**

Charles Harvie

WP 97-5

EUROPEAN ECONOMIC AND MONETARY UNION: PROBLEMS, PROSPECTS AND GLOBAL FINANCIAL IMPLICATIONS

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Working Paper Series WP 97-5

ISSN 1321-9774
ISBN 0 86418 504 9

ABSTRACT

The process of economic integration has made considerable progress during the 1990s. in the European Union (EU). Firstly, with the establishment of a single market in 1993 and now, within a relatively short period of time, the most significant yet, the movement towards a single currency for participating Economic and Monetary Union (EMU) members on 1 January 1999. This will have a major impact not only upon participating, and indeed non participating EU members, but also global financial markets in general with the establishment of a single currency (the euro) which has the potential to rival the US dollar as a major international reserve currency. The paper focuses upon the progress and potential problems arising from the establishment of EMU in the EU, and in doing so proceeds as follows. Firstly a brief review of recent developments in the EU is conducted focusing upon the framework for establishing EMU, the Maastricht Treaty. Secondly, economic theory and empirical evidence is analysed to establish whether the EU satisfies the necessary conditions for an optimum currency area. Thirdly, the prospects for the establishment of EMU on 1 January 1999 as well as its prospective members is identified. Finally, and importantly, the prospective global economic and financial implications arising from the establishment of a single currency for the EMU area is considered.

1. INTRODUCTION

The process of European economic integration has received much attention in recent years arising from four major developments, primarily within the context of the European Union (EU). Firstly, the establishment of a Single European Market (SEM)¹ has contributed to the free movement of labour, capital, goods and services between member countries arising from the gradual elimination of non tariff barriers. Secondly, and seen as a logical extension to reap the benefits of the first, there has been extensive movement towards the establishment of Economic and Monetary Union (EMU)² between EU member countries with the intended irrevocable fixing of exchange rates, the eventual replacement of national currencies by a single European currency, and the establishment of a supranational European Central Bank (ECB) responsible for the conduct of European monetary policy. Thirdly, the prospective enlargement of the EU with membership from the former centrally planned economies of Central and Eastern Europe³ and the republics of the former Soviet Union and, perhaps, eventually Russia itself. Finally, in Western Europe, most members of the European Free Trade Association (EFTA) reached agreement with the EU to form a European Economic Area (EEA) on 1 January 1994. The EEA allows for the creation of an area of free trade for goods, services, labour and capital between the member states of the EU and members of EFTA.

This paper focuses upon the progress and problems arising from the attainment of a crucial component of further integration

¹ From 1 January 1993. In reality the implementation of laws to achieve this across individual member countries has extended beyond this date.

² The final stage of EMU is to begin at the latest on 1 January 1999.

³ By 1997 the EU had received membership applications from ten Central and Eastern European countries – Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

of the European economy, specifically that of EMU in 1999. It is clear that if the full benefits of the single market are to be achieved, and, indeed, for the further enlargement of the EU to take place, this will crucially depend upon the successful attainment of monetary union. The paper proceeds as follows. In section 2 a brief review of recent developments in the EU is conducted focusing upon that of the Maastricht Treaty, which provides the framework for economic and monetary union. Section 3 conducts a theoretical and empirical review of the EU as an optimum currency area. Section 4 analyses the prospects for EMU in 1999 identifying in particular its prospective membership from the countries of the EU. Section 5 identifies important international economic implications arising from the establishment of a single currency for the EMU area. Finally section 6 presents a summary of the major conclusions to be derived from this paper.

2. THE MAASTRICHT TREATY AND ECONOMIC AND MONETARY UNION

Economic and monetary union has long been an aspiration of the European Community. In 1970 the Werner Plan proposed a decade long transition to a single currency by 1980. At this time the Bretton Woods system of fixed exchange rates, which pegged the currencies of the major industrial countries to the dollar, was still in place. The relative fixity of exchange rates gave plausibility to the plan for a single currency within the Community, but the proposal came towards the end of the Bretton Woods era at a time when rising worldwide inflation and the greatly increasing mobility of international capital were making it increasingly difficult for governments to maintain fixed parities. Within two years of the publication of the Werner Plan, the Bretton Woods system had collapsed, and exchange rates started to fluctuate markedly against each other. The European Community (EC)

attempted to create a zone of fixed intra European parities, leaving each currency to float against outside currencies such as the dollar and the yen. This European currency "snake" was a precursor of the European Monetary System that followed in 1979. It quickly failed and thoughts of monetary union were set aside as inflation took off in the industrial countries following OPEC's decision to raise the price of oil in 1973-74. The resulting differences in inflation among European countries made plans for monetary union implausible.

In 1979, after nearly a decade of exchange rate turbulence, the Community launched the European Monetary System, which was intended to make Europe a zone of exchange rate stability. By the end of the 1980s the EMS was regarded as a proven success, leading many to believe that the system should be developed further. Jacques Delors, the then President of the European Commission, produced in 1989 the Delors report, which proposed once more that the EC move in stages to monetary union. This later became enshrined in the Maastricht Treaty. However during the foreign exchange crisis of September 1992 and July 1993, when the UK and Italy were forced out of the system as a result of speculative attacks, it seemed that once again EMU had fallen victim to financial market speculation and exchange rate instability. However this did not deter members of the EU from continuing the process towards EMU.

The Maastricht Treaty

At the Maastricht summit in December 1991 the heads of state or government of the EU agreed on far reaching proposals for the transition to a single currency (to be later called the euro) and the establishment of a European System of Central Banks. In addition to the agreement on EMU the summit also agreed on a treaty that: formally established the European Union; committed the EU

members to strive for closer cooperation on foreign and security policy; and slightly expanded the powers of the European Parliament. The member states, with the exception of the UK, also agreed to work toward minimum requirements for social policies outside the treaty framework.⁴ The monetary union was to be reached in three stages as outlined in the report of the Delors Committee issued in April 1989. During Stage I which began on July 1, 1990 all EU countries were: to join the European Monetary System; the single market was to be completed; there was to be closer economic cooperation and a strengthening of competition policies. In Stage II which began on 1 January 1994 member countries endeavoured to achieve greater convergence of their economies as measured by four criteria: inflation; long term interest rates; exchange rate stability; and sustainability of the fiscal position. At the beginning of this stage a new institution the European Monetary Institute (EMI) was established, replacing the Committee of Central Bank Governors. The EMI is directed and managed by a Council consisting of the governors of the central banks of the member states and a President appointed by the European Council. Although the EMI is not responsible for monetary policy it provides a forum for strengthening the coordination of monetary policies of the member states. The EMI also promotes greater cooperation in all aspects of central bank policy; facilitates the use of the ECU⁵ and oversees the smooth functioning of the ECU clearing system; prepares the instruments and procedures necessary for carrying out a single monetary policy in the third stage; and supervises the technical preparation of the euro bank notes. The European Monetary Institute is effectively the forerunner of the ECB.

⁴ Referred to as the Social Chapter. The UK later joined in May 1997 under the new Labour Government.

⁵ European currency unit.

At the start of Stage III, which could begin as early as 1997 but no later than 1 January 1999, member states which satisfied the convergence criteria would participate in the final stage, and would irrevocably fix their exchange rates (no bands) and subsequently introduce a single currency. Other members would join once their economies were found to meet the necessary conditions (a multi-track system was envisaged). The UK and Denmark, however, retained the right not to join the monetary union. The EMI will be replaced by a European Central Bank (ECB) which, together with the central banks of the member states, will form the European System of Central Banks (ESCB). The basic tasks of the ESCB will be to formulate and implement the monetary policy of the Community; conduct foreign exchange operations; hold and manage the official reserves of the member states; and promote the smooth operation of the payments systems. The ECB would be totally independent and have full power to control EU monetary policy, with national central banks becoming, in effect, branch offices of the ECB. The EU Council of Finance Ministers (Ecofin) would decide exchange rate policy, leading to potential conflict with the ECB. In the area of fiscal policy the EU would be required to limit members' budget deficits, hence the subsequent agreement on a stability and growth pact.

The Maastricht Treaty firmly established that the primary objective of monetary and exchange rate policy 'shall be to maintain price stability and, without prejudice to this objective, to support the general economic policies in the Community, in accordance with the principle of an open market economy with free competition'. In support of the price stability objective, the member states in avoiding excessive budget deficits agreed to eliminate central bank financing of public expenditure by the beginning of Stage II. They also agreed to make their central banks independent of governments by the beginning of Stage III. Once a single currency has been adopted the participating member states

are obliged to continue to avoid excessive budget deficits. Procedures were agreed upon that would allow the Council of Ministers to take measures against a member state which failed to comply with a Council decision that its deficit must be reduced. This was to be furthered clarified at the Dublin summit in December 1996, and is discussed in more detail below.

For each country the economic conditions for participation in the monetary union and adoption of the euro are expressed in quantitative, and nominal, terms for a range of indicators:

- *consumer price inflation* in the year prior to examination by the European Council must not exceed by more than 1.5 percentage points the average for the three member countries with the lowest inflation rates;
- *interest rates on long term government securities* must not be more than 2 percentage points higher than those in the same three member states;
- *the currency* must have been held within the narrow band of the exchange rate mechanism of the EMS for two years without a realignment at the initiation of the member state in question;
- *a sustainable financial position* must be attained. This is defined as a general government financial deficit no greater than 3 percent of GDP and a ratio of public debt to GDP of no more than 60 percent.

In the evaluation of progress toward the economic convergence criteria the treaty allows for a degree of discretion. In particular, it requires a substantial and continuous decline of fiscal deficits toward the reference value, while the debt ratio must be approaching the benchmark at a "satisfactory pace". The final judgement on whether a member state meets the economic criteria was to be made by one or more summits of EU heads of state or government. The first of these was held in 1996 and had to decide

as a precondition for EMU to begin in 1997 whether a majority of countries had achieved economic convergence. Since this was not the case an additional summit will be held in April 1998 to determine which, if any, member states satisfy the convergence criteria based predominantly on member country performance in 1997. Stage III in any event will begin 1 January 1999 at the latest. In coming to a decision the summit will also take into account other indicators of economic performance such as: unit labour costs; the current account of the balance of payments; and the integration of markets.

The advocates of a single currency advance the following arguments: EMU would eliminate the cost of foreign exchange transactions and exchange rate hedging (estimated to be some US\$30 billion a year); it would help to stabilise international currency markets; the elimination of exchange rate uncertainty would enhance the efficiency of the price mechanism as a resource allocator; the elimination of exchange rate uncertainty would stimulate the manufacturing sectors of member countries since unpredictable and volatile exchange rates are an incentive for resources to be shifted toward the non traded goods sector which is not exposed to international competition and is largely unaffected by sizeable and unanticipated exchange rate changes; the elimination of exchange rate uncertainty would stimulate competitive forces in the union and yield benefits in terms of higher growth rates of intra union trade and investment; the independence of the ECB in the conduct of European monetary policy with its primary objective of price stability, will result in German style lower inflation and contribute to lower interest rates. The latter will have particular benefits for member countries that traditionally have had higher inflation.

However, there are a number of serious counter arguments including: the beneficial effect on transactions costs are exaggerated; the single market would be best improved by

liberalising Europe's energy and telecom industries and ensuring open public sector procurement policies; EMU will mean a loss of sovereignty since monetary policy would be set by a supranational European central bank, and governments would lose the ability to devalue their way out of a crisis; monetary policy will have a differential impact across member states resulting in stronger economic cycles in some countries in comparison to others; EMU will ease the market constraints on profligate governments resulting in excessive borrowing and an EMU "debt trap"; in a monetary union uncompetitive labour costs could no longer be offset by a falling exchange rate, instead workers would lose their jobs and be required to move elsewhere or have to accept lower wages. This would further exacerbate regional income disparities, and skill shortages in relatively poorer regions; it will result in a two track EU which will exacerbate differences between those members who participate in EMU from the beginning from those which initially fail to satisfy the convergence criteria. The latter development could fundamentally undermine the achievements of the single market, and prevent the further enlargement of the EU.

In the following section key theoretical conditions for an optimum currency area are considered, as well as a review of the empirical literature relating to whether the EU satisfies such conditions.

3. THE EU AS AN OPTIMUM CURRENCY AREA – THEORY AND EMPIRICAL EVIDENCE

The theoretical basis of the Maastricht convergence criteria has been questioned by economists, both in terms of the choice of criteria, which emphasise essentially nominal monetary and fiscal factors, as well as the reasons for the limit and band widths of the criteria. Given the diversity of opinion over the future role of

the EU which was apparent at Maastricht, it can be argued that the convergence criteria and the limits set for them were based on political compromise and not on sound economic principles. However, calls for the inclusion of real convergence criteria have been made with the most vocal that from the British government in the spring of 1995, which argued for the fulfilment of real economic convergence criteria in addition to the four monetary and fiscal criteria already laid down. This view has support from the Maastricht Treaty itself where the first paragraph of Article 109j requires that "the results of the integration of markets, the situation and development of the balances of payments on current account and an examination of the development of unit labour costs and other price indexes" be taken into account when assessing progress towards convergence. The British government amongst others viewed the Maastricht monetary and fiscal criteria "as a necessary but not a sufficient condition to justify a single currency".⁶

Optimum currency area theory

Attempts to put the British demand for structural convergence into practice largely failed although the question still remained as to the theoretical justification for making real economic convergence a requirement for membership of the EMU. In this regard the theory of optimum currency areas provides a framework for comparing the economic costs of flexible and fixed exchange rate systems. The main cost factor in a system of fixed exchange rates is the inability to adjust the exchange rate to shocks, and the level of associated costs depends upon the availability of alternative adjustment mechanisms. This in turn suggests that to make countries conducive to membership of a

⁶ Former British Prime Minister John Major in a speech delivered on 3 February, 1995.

monetary union requires the existence of certain characteristics to minimise the associated costs. Figure I provides a summary of these key characteristics, or conditions, which make monetary union more, or less, likely.

An exogenous shock which has symmetrical effects upon member countries suggests that such members are conducive to the formation of a monetary union. Alternatively, if the shocks do not have a symmetrical effect upon members it is essential to identify whether the causes of this can be reduced. In this regard a number of factors can be identified as producing asymmetrical effects: immobility of factors of production – countries with a high degree of factor mobility are more likely to be suitable candidates for monetary integration since such factor mobility can substitute for exchange rate flexibility in the international adjustment to shocks; wage and price flexibility- wage and price flexibility facilitates adjustment to adverse exogenous shocks and reduces the detrimental effects on unemployment and inflation. Hence countries with more flexible labour markets are more suitable members of a monetary union; fiscal integration – budgetary transfer payments between two countries can help reduce the negative effects of shocks on real economic activity. Currency areas are therefore optimum if there is also a willingness to undergo fiscal integration and hence to enter into an economic union in general; high degree of economic openness – open economies tend to be suited to systems of fixed exchange rates as exchange rate movements have relatively weaker effects on real competitiveness. This criterion suggests that smaller countries are better suited to monetary union than large countries; diversification of production structures – diversified economies are regarded as better candidates for monetary union as a high level of diversification offers protection against the effect of shocks specific to particular sectors; similarity of production structures – terms of trade shocks have a symmetrical impact in

countries with similar production structures so that the exchange rate is redundant as an adjustment instrument. Therefore countries with similar production structures are better candidates for monetary union; similar inflation rates – if inflation rates are similar a smooth flow of current account transactions can be expected. Consequently, monetary unions are optimum if the inflation rates in member states are similar; volatility of real exchange rates – as the previous conditions are difficult to quantify it has been suggested that the volatility of real exchange rates should be used as an all embracing criterion for admission to a monetary union. The smaller real exchange rate fluctuations have been in the past the better suited a country is for membership of a monetary union; political factors – the political desire for monetary integration is emphasised as a deciding factor for the success of a monetary union.

Countries contemplating the establishment of a monetary union, and therefore a fixed exchange rate between them, will find that this is optimum where the structure of their economies is similar, and if markets in goods and factors of production react flexibly to real economic changes. Moves towards far reaching integration should therefore be undertaken only if the real economies of participating countries react to changes with similar rapidity and flexibility, and if both the geographical and occupational mobility of labour is high. Otherwise shocks will have a strongly asymmetrical regional impact. Such criteria identified from economic theory focuses upon real rather than nominal convergence criteria for the attainment of an optimum currency area. This contrasts starkly with the nominal convergence criteria identified under the Maastricht Treaty. Hence there is a strong theoretical basis for suggesting the inclusion of real economic convergence criteria as a means of identifying the readiness of member countries for the formation of a monetary union.

Of particular concern regarding the non inclusion of real criteria is that if such real convergence is not taking place, and if economic and monetary union prevents individual regions (countries) from taking specific economic measures in response to shocks, there is the likelihood of major regional differences in terms of unemployment, incomes and growth. As Figure I suggests, as long as economic shocks affect different countries differently and as long as sectoral regional labour and/or capital mobility are low an optimum currency area cannot be achieved. Should such a monetary union still be formed it is likely to lead to significant regional unemployment differences, obvious international income disparities (core-periphery effects), with the increased likelihood of social and political tension. In addition growth theory would suggest that wide regional inequalities can lead to a reduction in overall long term economic growth.

Empirical evidence

A brief review of the empirical evidence relating to the EU as an optimum currency area is now conducted as well as the identification of evidence in regard to the extent of labour mobility and flexibility in the EU. Table 1 summarises the results obtained from a number of empirical studies relating to whether the EU constitutes an optimum currency area on the basis of real convergence criteria. Overall the results are mixed, and depend upon the reference variable chosen. Poloz (1990) compares the adjustment of real exchange rates between the regions of Canada, as an existing monetary union, with the adjustment in the EU countries and finds lower real exchange rate volatility in the EU countries. He therefore concludes that a monetary union in Europe would not entail higher costs than in Canada. Neumann and von Hagen (1994) carried out a corresponding analysis for the regions of Germany, and they come to the conclusion that a monetary

union would be possible for a core group of countries (Austria, Belgium, France, Germany, Luxembourg and the Netherlands). While a monetary union comprising all EU countries would entail high costs. A study conducted by De Grauwe and Heens (1993) reached a similar conclusion.

Figure 1
A Theoretical Flowchart of the Concept of
Optimum Currency Areas

Source: F. Heinemann: Central Europe and European Monetary Integration, in *Intereconomics*, Vol. 30 (1995), No. 3, p. 119.

Table 1
Is the EU an Optimum Currency Area?

Author (year of publication)	Indicator	Reference variable	Is the EU an optimum currency area?
D Cohen, Wyplosz (1989)	Symmetrical-asymmetrical shocks	–	–
S Poloz (1990)	Real exchange rate variability	Regions of Canada	Yes
B Eichengreen (1992)	– Real exchange rate variability – Labour mobility – Relative share prices	USA, Canada	No
EC Commission (1990)	Macro-econometric simulations	–	Yes
P De Grauwe W van Haverbeke (1993)	Real exchange rate variability	Regions of: Germany Netherlands Spain United Kingdom	–
T Bayoumi B Eichengreen (1993)	Shocks (vector auto-regression, VAR)	Regions of USA	No
L Bini-Smaghi E Vori (1992)	Shocks (VAR)	Regions of USA	Yes
P De Grauwe H Heens (1993)	Real exchange rate variability	Regions of: - Germany - Netherlands - Spain - United Kingdom	No
M J M Neumann J von Hagen (1994)	Real exchange rate variability	Regions of Germany	No
H Erkel-Rousse J Melitz (1995)	Shocks	–	Yes

Source: C. Schmidt and T. Straubhaar (1995), 'Maastricht 11: Are Real Convergence Criteria Needed?', in *Intereconomics*, Sept/Oct, p. 218.

Bayoumi and Eichengreen (1993) compare the correlation of shocks to aggregate demand and supply in twelve EU countries and eight regions of the USA. They estimate that shocks in the EU countries are less highly correlated, and that accordingly monetary union in Europe would result in relatively high economic costs. On the other hand a monetary union in a core group of countries would give rise to costs comparable to those in the regions of the USA. Bini-Smaghi and Vori (1992) consider that the structure of production in EU countries is more diversified than in the regions of the USA so that asymmetrical shocks are less likely to occur in Europe than in the USA. This finding is confirmed by Cohen and Wyplosz (1989) who show that Germany and France are primarily influenced by symmetrical permanent shocks. A monetary union between these two countries would therefore be feasible. Eichengreen (1992) examines various indicators for a monetary union – real exchange rate variability, labour mobility, relative share prices – and compares the European performance with that of the USA and Canada. According to his findings a monetary union in Europe would entail higher costs than in the existing monetary unions in the USA and Canada. De Grauwe and van Haverbeke (1993) compare the adjustment mechanism at the regional level with that at the national level in a number of EU countries, and find that labour mobility plays an important role at the regional level whereas at the national level adjustment occurs mainly via changes in real exchange rates. They argue that a monetary union in Europe would have to be accompanied by increased labour mobility. In the absence of such mobility a monetary union would be in danger of triggering polarisation tendencies.

H. Erkel-Rousse and J. Melitz (1995) apply a structural VAR approach to data for six European countries (France, Germany, Italy, the Netherlands, Spain and the United Kingdom). First they find that the correlation of shocks across countries is very low.

This finding is in line with other empirical evidence indicating the empirical relevance of asymmetric shocks. Secondly, they analyse the importance of fiscal and monetary policies as a measure of response to asymmetric shocks. They find, first, that fiscal policies contribute significantly to output performance in all countries except Germany. Second, and of particular interest, they find that monetary policies do not contribute significantly to output performance except in Germany. This latter result indicates that monetary policy in these countries has no value as a stabilisation device and implies that the adoption of a common currency for those countries would impose much lower economic costs than previously believed. This work suggests that the mere existence of asymmetric shocks is not a sufficient argument against a currency union, because monetary policy may not after all be a useful tool for response to such shocks.

Regional labour mobility and flexible labour markets are important to the efficiency of a monetary union. Fatas and Decressin (1995) analyse the mechanism for adjustment to changes in the demand for labour across European regions. According to their findings, changes in labour demand in Europe are not offset by labour mobility across regions, as in the USA, but mainly by an age or gender specific decline in labour participation rates. On the other hand Eichengreen (1993) examined regional unemployment in England and Italy and showed that adjustment to changes in relative price occurs in much the same way as in the regions of the USA. Schmidt and Straubhaar (1995) conduct an analysis of the coefficients of variation of unemployment rates for various groupings of EU countries since 1969 which are shown to be significant and barely to have declined over the period studied and suggestive of low labour mobility in the EU.

Finally, Heinemann (1995) focuses on the issue of the degree of cyclical correlation between the economies of Europe. For a

successful European monetary union it is helpful if potential members of the common currency area have a high degree of cyclical correlation. Germany is taken as the reference economy. His results indicate, in particular, a core of economies around Germany: France, Austria, Belgium and the Netherlands, which are not only cyclically close to Germany but have also a similar order of magnitude of cyclical fluctuation. He concludes from this analysis that these economies appear to be ideal candidates for the formation of a monetary union.

4. PROSPECTS FOR ECONOMIC AND MONETARY UNION IN 1999

At an intergovernmental summit to be held in April 1998 the member nations of the EU will be required to determine, on the basis of a qualified majority, those member countries which satisfy the Maastricht criteria, and can therefore proceed to form an economic and monetary union. This will be based primarily on their performance in 1997 but will also consider prospective developments in 1998 and subsequently. This section identifies the prospects of EMU amongst these members. In doing so it reviews the recent performance of these countries focusing upon the key criteria of inflation, long term interest rates, general government budgetary position and general government gross debt.

Convergence of price stability

Table 2 summarises the inflation performance of EU members covering the period 1991-97 as well as the reference value below which EMU participating economies would be required to satisfy. This is based on the arithmetic average inflation rate of the three best performing countries plus 1.5 percentage points. The average

of the three best performing countries it is argued can provide a good starting point for the assessment of compliance with the reference value if there are no outliers. It is noticeable from this table that major success has been achieved in reducing CPI inflation in the EU countries since 1991, and particularly so in countries such as Greece, Portugal, Sweden and the UK. In addition this reduction in inflation has occurred in conjunction with a convergence of inflation rates across member states. A number of underlying factors can be identified as having contributed to this overall trend. Firstly there has been a move among member countries to orient their monetary policies increasingly towards the objective of price stability, and towards central bank independence. Secondly, increased competition has arisen from the development of the single market as well as globally. Thirdly, labour market reforms in some countries as well as the recession of the early 1990s contributed to an easing of price and cost pressures. Fourthly, Maastricht criteria pressures to attain a fiscally sustainable policy focused upon the need to reduce fiscal deficits and debt ratios which is conducive to the maintenance of price stability over the longer term. Finally, the liberalisation of domestic and international financial markets has also contributed towards price stability.

From Table 2 it can be observed that by 1996 four countries – Greece, Spain, Italy and Portugal did not satisfy the Maastricht inflation criteria. However the key performance year will be that of 1997. Forecasts for the inflation performance of EU members for 1997 are also contained in Table 2, based upon those of the European Commission and the Economist Intelligence Unit. Both are in agreement that most countries will satisfy the criteria or reference value in 1997 with the exception of Greece.

Table 2
Consumer Price Inflation (%) 1991-97

	1991	1992	1993	1994	1995	1996	EC ^a	Projections 1997	EIU ^b
Austria	3.3	4.1	3.6	3.0	2.2	1.9	✓		2.2
Belgium	3.2	2.4	2.8	2.4	1.5	2.1	✓		1.5
Denmark	2.4	2.1	1.3	2.0	2.1	2.1	✓		2.5
Finland	4.3	2.9	2.2	1.1	1.0	0.6	✓		1.4
France	3.2	2.4	2.1	1.7	1.7	2.0	✓		2.0
Germany	3.6	4.0	3.4	2.7	1.8	1.5	✓		2.0
Greece	19.5	15.9	14.4	10.9	9.3	8.2	x ^c		7.5
Ireland	3.2	3.1	1.5	2.4	2.5	1.7	✓		3.0
Italy	6.5	5.4	4.2	3.9	5.4	3.8	✓		3.0
Luxembourg	3.1	3.2	3.6	2.2	1.9	1.4	✓		1.9
Netherlands	3.1	3.2	2.6	2.7	2.0	2.1	✓		2.3
Portugal	11.3	8.9	6.5	5.2	4.1	3.1	✓		2.8
Spain	5.9	5.9	4.6	4.7	4.7	3.6	✓		3.0
Sweden	9.7	2.6	4.7	2.3	2.9	0.8	✓		2.4
UK	6.8	4.7	3.0	2.4	2.8	2.4	✓		2.8
Maastricht									
Reference Value	4.4	3.8	3.1	3.1	2.9	2.4	-		3.1

a European Commission; b Economist Intelligence Unit

c Figures in bold indicate projected failure to achieve criteria

x Fails criteria; ✓ Satisfies criteria

Source: European Commission, OECD, EIU.

Convergence of long-term interest rates

Long-term interest rate developments for the EU countries over the period 1991-97 are contained in Table 3. This shows ten year government bond yields for each country as well as the Maastricht reference value for each year for this variable. Over this period there has been a general decline in the reference value for the long term interest rate. In 1996 only three countries, Greece, Italy and Portugal, failed to have a long term interest rate below the reference value. In general these countries failed to satisfy the reference value throughout the period identified. Forecasts for 1997 are provided from the European Commission, the OECD and the Economist Intelligence Unit.

Table 3 suggests that there has been a clear process of convergence of long term interest rates across EU countries over the period identified with a noticeable decline over the period 1991-96. This is anticipated to continue during 1997. This general downward trend was only interrupted in 1994 when rising yields on the US market resulted in a comparable steep rise in long term interest rates in the EU. A combination of factors appears to have accounted for this general downward trend. In some countries inflation expectations appear to have decreased while an important role also seems to have been played by a reduction in risk premia. The decrease in risk premia may be attributed to a change in financial markets' perceptions of longer term progress towards price stability, related factors such as ongoing efforts towards fiscal consolidation, the stability of exchange rates and a decrease in political uncertainty. Improved expectations regarding prospects for monetary union has also played a role. For individual countries, the outturns may be interpreted as an indication that markets anticipate broadly similar macroeconomic

Table 3

Long Term Interest Rates (%) 1991-97

	1991	1992	1993	1994	1995	1996	EC ^a	Projections 1997 OECD	EIU ^b
Austria	8.6	8.2	6.7	7.0	7.1	5.3	✓	5.0	5.9
Belgium	9.3	8.7	7.2	7.8	7.5	6.3	✓	5.9	6.7
Denmark	9.3	9.0	7.3	7.8	8.3	7.1	✓	6.3	7.8
Finland	11.7	12.0	8.8	9.0	8.8	6.0	✓	4.8	7.0
France	9.0	8.6	6.87	7.2	7.5	6.5	✓	5.8	5.8
Germany	8.5	7.8	6.5	6.9	6.9	6.2	✓	5.8	5.7
Greece	-	24.1	23.3	30.8	17.4	15.1	x	-	13.0 ^c
Ireland	9.2	9.1	7.7	7.9	8.3	7.5	✓	6.5	7.4
Italy	13.3	13.3	11.2	10.5	12.2	9.2	x	7.5	8.8
Luxembourg	-	-	6.5	7.7	7.6	7.0	✓	-	5.6
Netherlands	8.7	8.1	6.4	6.9	6.9	6.1	✓	5.7	5.8
Portugal	14.5	13.8	11.2	10.5	11.5	9.4	x	-	8.0
Spain	12.4	11.7	10.2	10.0	11.3	8.7	x	6.9	8.0
Sweden	10.7	10.0	8.5	9.7	10.2	8.0	✓	6.9	8.2
UK	10.1	9.1	7.5	8.2	8.3	7.8	✓	7.2	8.3
Maastricht									
Reference Value	10.7	10.7	9.3	10.0	9.7	9.0	-	8.2	8.5

a European Commission

b Economist Intelligence Unit

c Figures in bold indicate projected failure to achieve criteria

x Fails criteria

✓ Satisfies criteria

Source: European Commission, OECD, EIU.

developments in those member states showing no or only very small differences in long term interest rates. This is particularly the case for Belgium, Germany, France, Luxembourg, the Netherlands and Austria. In countries whose rates remain above the reference value namely Greece, Italy, Portugal and possibly Spain, although a significant convergence of yields has occurred, differentials still remain wide which indicates that progress towards overall convergence needs to be strengthened. However, more recently a general acceleration of the convergence of long term interest rates has been observed. This has been particularly the case in those countries whose long term interest rates stand above the reference value during the year 1996. For 1997 country specific factors – such as inflation expectations and changing risk premia, and thereby issues related to sustainability as well as prospects relating to EMU will play an important role.

The European Commission predicts that Greece, Spain, Italy and Portugal will be unable to achieve the reference value in 1997, however the EIU is more optimistic forecasting that only Greece and Italy will fail to meet the anticipated reference value of 8.5%. The OECD forecast is incomplete but tends to take a more optimistic view of prospective developments in 1997.

Financial sustainability

In terms of attaining the Maastricht criteria it is particularly in regard to the attainment of fiscal sustainability that major difficulties are arising.⁷ From the early 1990s there was a substantial deterioration in the public finances of nearly all of the EU countries. As a result the average fiscal deficit for the EU as a whole widened rapidly from 2.4% of GDP in 1989 to a high of

⁷ A recent formalisation by EU members to sustain efforts towards fiscal consolidation was made in the form of a "Stability and Growth Pact" in December 1996 at the Dublin Summit.

6.2% in 1993. At that point in time most countries faced major challenges in reversing what was an unsustainable trend. Responding to this EU member governments have taken intensive measures in an effort to place their deficits on a downward path. This has included cuts to welfare and general government expenditure. Traditional sizeable welfare state spending in Europe, the recession of the 1980s and 1990s, and the high interest rates following Germany's unification, have increased the size of government deficits. The cuts in government spending required to attain the Maastricht fiscal sustainability criteria will be painful in terms of lost jobs and cuts to welfare expenditure at a time of already very high rates of unemployment in the EU. Such problems have recently come to the fore in both France in 1995 and 1997 with the election of a socialist government committed to the creation of jobs where necessary at the expense of the criteria on budget deficits and Germany in 1996. In the case of Germany, for example, its projected unemployment rate of 11.1%⁸ in 1997 will put intense pressure on government expenditure and the budget deficit and public sector debt. Germany's budget deficit in particular is likely to exceed the Maastricht criteria in 1997, and particularly given the Bundesbank's rejection of a revaluation of the country's gold reserves as a means of generating additional government revenue.

Table 4 indicates the nature of the difficulty facing EU members in regard to the fiscal criteria, specifically in regard to that of the General Government budget deficit. It is clear from this table the number of occasions that EU members have failed to achieve the 3% budget deficit criteria. In 1995, for example, only Denmark and Ireland achieved a budget deficit of less than 3% of GDP while Luxembourg achieved a surplus. In eight of the other countries government imbalances were reduced, and in some cases

⁸ OECD, June 1997.

quite noticeably. However for Germany, Spain, the Netherlands and Austria the deficit situation worsened. During 1996 only five countries had deficits less than 3% of GDP or a budget surplus, namely Denmark, Finland, Ireland, the Netherlands and Luxembourg. All other EU member states achieved a reduction in budget deficits although most were still well above the reference value with the exception of Germany which experienced a further deterioration.

The performance of EU countries in terms of their budgets in 1997, and their ability to sustain this in 1998, will be crucial in the determination of which countries will form EMU. In this regard the European Commission takes a very optimistic position in its latest projections,⁹ anticipating that only Greece and France will fail to achieve the reference value for 1997. The most pessimistic position is taken by the EIU which anticipates that in addition to these countries Italy, Germany, Portugal, Spain and the UK will also fail to satisfy the criteria. The OECD takes a more middle ground anticipating that Greece, Italy, France and Germany will fail to satisfy the criteria. It is now largely accepted by the government of France that it will fail to satisfy the criteria, and the position for Germany, Greece as well as Italy will remain difficult. A majority view would suggest that these four countries are most in danger of not satisfying the Maastricht criteria. However the Treaty does allow for such countries to still comply if the ratio has declined substantially and continuously and reached a level that comes close to the reference value, or, alternatively, the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value. On this basis anticipated outcomes for 1998 will

⁹ October 1997.

Table 4

General Government Financial Balances – 1991-98 (% of GDP)

	1991	1992	1993	1994	1995	1996	EC ^a 1997	Projections 1997/98 OECD ^b 1997	1998	EIU ^c
Austria	-2.6	-1.9	-4.2	-4.4	-5.9	-3.9	-2.8	-3.0	-2.6	-3.0
Belgium	-6.5	-7.2	-7.5	-5.1	-4.1	-3.4	-2.6	-2.8	-2.3	-3.0
Denmark	-2.1	-2.9	-3.9	-3.5	-1.6	-1.6	+1.3	0.0	+1.9	+0.7
Finland	-1.5	-5.9	-8.0	-6.2	-5.2	-2.6	-1.4	-2.0	-0.2	-1.4
France	-2.2	-3.8	-5.6	-5.6	-4.8	-4.2	-3.1	-3.2 ^d	-3.0	-3.0
Germany	-3.3	-2.8	-3.5	-2.4	-3.5	-3.8	-3.0	-3.2	-2.6	-2.7
Greece	-11.5	-12.3	-14.2	-12.1	-9.1	-7.4	-4.2	-5.2	-3.0	-4.0
Ireland	-2.3	-2.5	-2.4	-1.7	-2.0	-0.9	+0.6	-1.2	+1.2	-1.0
Italy	-10.2	-9.5	-9.6	-9.0	-7.1	-6.7	-3.0	-3.2	-3.7	-3.8
Luxembourg	1.9	0.8	1.7	2.6	1.5	0.9	+1.6	-	+1.0	1.2
Netherlands	-2.9	-3.9	-3.2	-3.4	-4.0	-2.4	-2.1	-2.3	-1.9	-1.7
Portugal	-6.7	-3.6	-6.9	-5.8	-5.1	-4.0	-2.7	-2.9	-2.4	-2.8
Spain	-4.9	-3.6	-6.8	-6.3	-6.6	-4.5	-2.9	-3.0	-2.4	-3.5
Sweden	-1.1	-7.8	-12.3	-10.8	-8.1	-3.6	-1.9	-2.1	-0.2	-4.0
UK	-2.6	-6.3	-7.8	-6.8	-5.8	-4.4	-2.0	-2.8	-0.6	-4.0
Maastricht Reference Value	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0

^a European Commission, projections made October 1997.

^b OECD projections made June 1997.

^c Economist Intelligence Unit, projections for 1997 only.

^d Figures in bold indicate projected failure to achieve criteria.

Source: European Commission, OECD, EIU.

also be taken into consideration. This being so Italy presents a major problem according to the EC, and Italy Austria and Greece according to the OECD.

Table 5 summarises developments over the period 1991-98 in terms of government debt. Over this period of time it is apparent that most members have failed to achieve the reference value, and in a number of cases to a significant degree. For several countries there has over this period been a trend towards high and rising government debt to GDP ratios, and this persisted through 1995 and 1996. This underlies the pressing need for reinforcing fiscal consolidation. According to the European Commission's autumn 1996 forecast, EU wide government debt was expected to reach 73.5% of GDP in 1996 which would be almost twice as high as in 1980. A particularly marked increase in this ratio occurred in the early 1990s under the influence of a vicious circle of ever increasing debt interest payments, deficits and further debts. The focus of such a development has shifted towards issues related to the sustainability of government finances. In this respect the major emphasis is on future challenges such as the need to reduce current high debt ratios and to cope with the growing burden of social security old age pensions. The growing burden of debt service obligations tends to crowd out non interest expenditures and makes national government budgets increasingly vulnerable to exchange rate and interest rate volatility. This is mostly the case when the debt is at short maturity or is indexed to short term interest rates.

Only five member states attained a position below the reference value of 60% of GDP in 1995, namely Germany, France, Luxembourg, Finland and the UK. Of the ten remaining members with a debt ratio above the reference value only Ireland and Denmark achieved a major reduction while Belgium, Italy and Sweden attained a slight decline. For 1996 the debt ratio fell slightly for Finland, the Netherlands, Portugal, Denmark, Sweden

and Italy, but noticeably more so for Belgium and Ireland. However it increased in Germany, Spain, Austria, France, Luxembourg, Greece and the UK. In 1996 only four member states achieved a debt ratio below the 60% reference value, namely France, Luxembourg Finland and the UK. However the key year again will be the performance of these countries in 1997, as well as the anticipated performance in 1998. Projections by the European Commission, the OECD and the EIU are contained in Table 5, and do not make optimistic reading. Even for the more optimistic European Commission, only Finland, France, Luxembourg and the UK are likely to satisfy the strict reference value of 60% in 1997. The OECD projections also come to the same conclusion. In the case of the EIU only France, Luxembourg and the UK will satisfy the criteria. Projections for 1998 from the EC would add Ireland to this list. However as with the case of government deficits an EU country can still qualify for membership of EMU if the ratio of government debt to GDP is sufficiently diminishing and approaching the reference value at a 'satisfactory' pace. On this basis a majority view of the three forecasts would suggest that Belgium, Denmark, Greece, Ireland, Italy, the Netherlands, Portugal, Spain and Sweden, along with Finland, France, Luxembourg and the UK would satisfy this criteria. Only Germany and possibly Austria would have difficulty in satisfying this criteria. However the EC appears to be very elastic in interpreting this condition.

Table 5

General Government Gross Debt – 1991-98 (% of GDP)

	1991	1992	1993	1994	1995	1996	EC ^a		Projections 1997/98 OECD ^b		EIU ^c
							1997	1998	1997	1998	
Austria	58.7	58.3	62.8	65.1	69.0	69.8	66.1 ^d	65.6	71.3	72.6	74.0
Belgium	129.4	130.6	137.0	135.0	133.7	130.1	124.7	121.3	127.2	124.5	127.0
Denmark	64.6	68.7	80.1	76.0	71.9	70.2	67.0	62.2	66.8	61.9	70.0
Finland	23.0	41.5	57.3	59.5	59.2	58.7	59.0	57.3	58.1	56.8	62.0
France	35.8	39.6	45.6	48.4	52.8	56.5	57.3	58.2	57.8	58.5	58.0
Germany	41.5	44.1	48.2	50.4	58.1	60.7	61.8	61.7	61.8	62.0	62.0
Greece	92.3	99.2	111.8	110.4	111.8	111.9	109.3	106.4	106.9	103.4	108.0
Ireland	95.0	92.0	94.5	87.9	81.6	73.0	65.8	59.2	69.0	64.5	80.0
Italy	101.4	108.5	119.3	125.5	124.9	124.3	123.2	121.9	123.3	122.2	125.0
Luxembourg	4.2	5.2	6.2	5.7	6.0	6.4	6.7	6.9	---	---	7.0
Netherlands	78.8	79.6	80.8	77.4	79.7	78.5	73.4	71.5	74.5	72.6	78.0
Portugal	71.1	63.3	68.2	69.6	71.7	67.6	62.5	60.8	66.3	65.2	72.0
Spain	45.8	48.4	60.5	63.1	65.7	70.3	68.1	66.5	69.8	69.6	70.0
Sweden	53.0	67.1	76.0	79.3	78.7	77.7	77.4	75.3	77.3	74.3	80.0
UK	35.7	41.9	48.5	50.4	54.1	54.5	52.9	51.5	54.1	52.8	59.0
Maastricht Reference Value	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	6.0	6.0

a. European Commission, projections made October 1997.

b. OECD projections made June 1997.

c. Economist Intelligence Unit, projections for 1997 only.

d. Figures in bold indicate projected failure to achieve criteria

Source: European Commission, OECD, EIU.

In 1994 only Luxembourg and Germany satisfied the fiscal convergence criteria in full but by 1995 and 1996 only Luxembourg did so. The above financial sustainability analysis suggests that progress towards fiscal consolidation has generally been very slow. To attain the Maastricht criteria in this regard will require a faster correction of fiscal imbalances. Most countries have not achieved a situation that could be judged as sustainable in the medium term as indicated by worrisome debt developments. To produce a virtuous circle of a continuously diminishing debt ratio the authorities will need to achieve and maintain a sufficiently high primary surplus. This will require decisive corrective measures that are primarily directed at cutting expenditure, which could reward governments with lower interest rates and thereby reduce the interest payable on government debt. For countries with a legacy of high debt ratios this implies aiming for an extended period of overall budget balance or surpluses to correct earlier fiscal excesses. One off deficit improvement measures will be insufficient to ensure sustainable consolidation. The need to sustain such efforts towards consolidation has been formalised in the form of a "stability and growth pact" among EU members agreed at the Dublin summit of December 1996, which would apply in the period after monetary union was achieved. Under this arrangement countries that run excessive budget deficits, in excess of the 3% of GDP convergence criteria under the Maastricht Treaty, will be subject to fines, unless they experience a natural disaster or a fall in GDP of at least 2% over a year. In cases where GDP has fallen between 0.75% and 2% EU Finance Ministers will have discretion as to the imposition of penalties. By implication those with a fall of GDP by less than 0.75% will automatically be subject to fines. Such fines would be substantial amounting to 0.2% of GDP for a breach of the 3% ceiling with a further 0.1% for each further 1% breach of the ceiling up to a

maximum of 0.5% of GDP. The scale of these fines, while less than that originally proposed by Germany, are still substantial.

What, then, are the prospects for the complete monetary integration of the EU. It is difficult to conceive the economic and political conditions that would enable all EU countries to become members of the currency union by 1999. Indeed by the end of 1996, in conjunction with the projections for 1997, the prospects for monetary union among EU members look bleak particularly if the convergence criteria were to be strictly applied. Without German and French membership from the outset the process of attaining monetary union does not look credible. It is clear that a number of countries would wish to proceed, if possible, with the full implementation of the Maastricht Treaty. At least France, Germany, the Netherlands, Belgium and Luxembourg would wish to form a monetary union, and it is also possible to envisage Ireland and Denmark joining this group of countries. This will inevitably result in the emergence of a "two-speed" or "multi track" Europe. However the emergence of a "two-speed" Europe would not be without cost and would certainly be resisted particularly by the member countries excluded from moving on the fast lane. But even this development, based upon the recent performance of the member states in regard to financial sustainability, may only be possible if the starting date for EMU is postponed or the convergence criteria liberally interpreted.

5. INTERNATIONAL ECONOMIC IMPLICATIONS OF ECONOMIC AND MONETARY UNION

While the consequences of economic and monetary union has dominated political and economic debate in Europe over a number of years, only recently has attention focused upon an analysis of its global implications (see OECD (1997). The creation of a single currency in the EU will represent the biggest change in

global monetary arrangements since the demise of the Bretton Woods arrangement of fixed exchange rates in the early 1970s. The extent of its impact on the rest of the world will depend upon two related issues. Firstly, the extent of the challenge by the euro to the US dollar as the world's major foreign exchange reserve currency, and secondly the consequences of EMU upon the stability of the global monetary system.¹⁰ In regard to the former the potential for the euro to play an important role as an international unit of account will depend on several factors: the relative weight in both total global output and trade of the euro area; the relative stability of domestic prices in the euro area; the comparative macroeconomic performance of the euro area with that of other global economic blocs such as Japan and the USA; the existence of large and liquid euro financial markets; and exporters' and importers' preferences. While the extent of these developments is difficult to anticipate they are likely to exert a major bearing upon the stability of the global monetary system overall, and are therefore too big to ignore.

Table 6 uses a number of economic indicators to identify the global significance of the EU, and to compare and contrast its performance with that of the two other major global economic blocs, the USA and Japan, during the period of the 1990s. On the basis of these measures the influence of the European Union is substantial. The EU single market and currency area, assuming all EU members participate, will consist of an economy which is roughly comparable in size to that of the USA based on 1991 PPP rates, and about 18 per cent larger based on 1996 exchange rates

¹⁰ The prospect of a single currency, however, has not gone unnoticed amongst foreign multinationals with extensive involvement in Europe. Toyota, for example, provoked a furore in the UK in January 1997 by indicating that the company might redirect its European investment to continental Europe if the UK stayed out of EMU. While Toyota has since re-affirmed its commitment to the UK, it showed that foreign investment could be influenced by developments in EMU.

and prices. It is noticeable that the average performance of these three major economic blocs differed only slightly during the period of the 1990s. The average growth rate of GDP in the EU area was between that of the USA and Japan while inflation was noticeably higher in the EU area. It is anticipated that once EMU is established in the EU, in conjunction with a European Central Bank having price stability as its primary objective, that this will lead to convergence of lower inflation in the area. The average unemployment rate during the period of the 1990s was noticeably higher in the EU, representing its major economic policy challenge, arising from structural rigidities in markets, particularly that of the labour market. Public sector debt in the EU is lower than that in Japan but higher than that in the USA. Gross national saving is considerably higher in Japan in comparison to that of the EU and USA with the EU performance better than that of the USA. A common characteristic shared by the three economic blocs is that they are not overly exposed to adverse trade developments, with their trade balances, either positive or negative, being a small proportion of overall GDP. Only Japan of the three blocs achieved an average current account surplus during the period of the 1990s. These three blocs are, however, major exporters, with the EU, excluding intra EU trade, being the world's main exporter with a 19% share of world exports compared to a 16% share for the USA and a 12% share for Japan in 1996 (OECD).

If backed by a credible monetary policy there is the prospect that the euro will eventually play a more important role than its constituent European currencies do today. The clear mandate of the European Central Bank (ECB) to achieve price stability will contribute considerably to this development. Such a policy priority will enhance the attractiveness of the euro as a reserve currency for central banks, and financial markets will be more willing to conduct transactions in the new currency. Both of these changes will occur mainly at the expense of the US dollar. The

extent of initial use of the euro as a reserve currency will depend upon its perceived strength and stability after its launch. EU officials have predicted that the euro's anti-inflationary credentials and the existence of large and liquid euro denominated markets will make it attractive. While the US dollar may continue to be the first choice, European currencies will continue to gain ground. As indicated in Table 7, 71.1% of central banks' reserves consisted of US dollars in 1983 compared with 61.5% by 1996. The share taken by European currencies increased from 15.8% to 20.1% over the same period. The euro will improve further upon these figures should price stability improvements be anticipated. On the other hand admitting countries that do not satisfy the EMU convergence criteria, and the likelihood that "softer" economies will join at the currency's launch, could result in the emergence of a 'soft' euro. This would make it less attractive compared to the US dollar and the yen. But there is major disagreement over how quickly such developments are likely to occur, and indeed over whether the euro will ultimately usurp the dollar as the primary reserve currency.

The attractiveness of the euro as an international currency will also depend on the development of domestic financial markets. The advent of EMU will initiate significant structural change in financial markets not least because of the elimination of exchange rate risk between the participating countries. The extension of the single market to financial services will also have the effect of breaking down national barriers and setting in motion competitive forces that should greatly improve the efficiency of financial markets. How efficient they become as a result of this process will have a bearing on the international demand for euros.

The extent of currency instability arising from a portfolio shift by central banks and investors into euros would depend upon both the size and speed with which it takes place. A sudden surge in demand for the euro would cause it to appreciate

rapidly, and temporarily, above its long run equilibrium level. Such an overshooting of the currency would result in a loss of international competitiveness and a deterioration of the EU's current account deficits, a reduction in real interest rates and a consequential depreciation of the currency. In addition, policy decisions within Europe could further exacerbate the volatility of the euro. For example, EMU governments, having given up the right to an independent monetary policy, may resort to an expansionary fiscal policy¹¹ despite the existence of the "stability and growth pact" designed to avoid this. However the European Central Bank, concerned with establishing its own credibility in terms of implementing an anti inflation policy, is likely to implement a tight monetary policy. Such a combination of policies is likely to lead to an impact upon the euro similar to that upon the US dollar in the early 1980s under the Reagan administration. The euro would as a consequence appreciate strongly as international investors switched into euro denominated assets contributing further to global exchange rate volatility. Currency instability arising from these potential developments could be mitigated by appropriate action by central banks should they be the major initiators of a reshuffling of asset portfolios. Such action would involve a more gradual adjustment of reserves. However it is likely that temporarily, at least, exchange rate volatility will increase. This could become permanent arising from the fact that because trade among EMU members will be transacted in a common currency, hence international trade will become smaller, European policy makers may pay less attention to exchange rates than they now do. This could result in greater instability.

¹¹ The pressure to do so may be particularly intense should unemployment be rising.

Table 6
Economic Indicators: EU, United States and Japan

	Population Million, 1995	GDP ^a 1991 PPP Rates (US\$ Billion)	GDP at Current Prices and Current Exchange Rate, 1996 (US\$ Billion)	Average Real GDP Growth Rate 1990-96 (%)	Average Inflation Rate (GDP Deflator) 1990-96 (%)
USA	263.1	7,576	7,263.2	2.0	2.7
Japan	125.3	2,583	4,597.2	1.7	0.8
EU	371.0	7,438	8,586.7	1.8	3.6
	Ave. Unemploy- ment Rate 1990-96 (%)	Ave. Public ^b Sector Debt 1990-96 (%)	Average Gross National Saving 1990-94 (% of GDP)	Trade Balance 1990-94 (% of GDP)	Current A/C Balance 1990-96 (% of GDP)
US	6.3	61.4	15.4	-1.6	-1.5
Japan	2.6	71.4	33.4	2.5	2.2
EU	10.2	68.4	19.3	-0.9 ^c	-0.1

a 1996 projected.

b General government gross financial liabilities as a percent of nominal GDP.

c Excluding Intra EU Trade

Source: OECD Economic Outlook, June 1997.

Table 7
The International significance of major currencies

Share of total currency holdings (% of total)

US dollar	1983	1996
European currencies	71.1	61.5
Yen	15.8	20.1
	4.9	7.4
Currency use in international trade (% of world exports)		
US dollar	1980	1992
Deutschemark	56.4	47.6
<i>European currencies</i> *	13.6	15.5
Yen	31.0	31.0
	2.1	4.8
Share of outstanding international bonds** (% of total)		
US dollar	1983	1996
European currencies***	60.9	42.6
Yen	16.2	28.6
	7.2	10.9

* German mark, French Franc, Italian lira, British pound, and the Dutch guilder.

** Includes gross public and private offerings of eurobond issues and foreign bond issues.

*** German mark, French Franc, British pound and ECU.

Source: IMF, European Commission, Bank for International Settlements, OECD Secretariat.

It has been suggested that one way to minimise exchange rate instability is for a more formal system of currency cooperation between the world's major economies. However for Europe there would be uncertainty over who should cooperate. At its start EMU 'will not include all EU members. The relationship between the 'ins' and the 'outs' will affect the potential for broader coordination as well as currency stability within Europe. In addition the technicalities of policy cooperation will not be easy. The European Central Bank will control monetary policy, EMU's finance ministers will have a say on exchange rate policy, and fiscal policy will, within limits, stay in the hands of individual European governments. Policy coordination, at least initially, would be far from straightforward. That alone may make the international monetary system less stable.

Once EMU is established, however, the growth in the euro's role as an international currency is, on balance, likely to be more gradual. Market participants will want to wait until actual monetary and fiscal policies are in place and the stability of the euro is firmly established. Furthermore, inertia will likely work in favour of a continuation of the dominant role of the dollar for some time. On the other hand there are factors which suggest that the US dollar's position is still likely to remain dominant. This arises partly from the dollar's international attraction due to the size, depth and liquidity of the US's capital markets. The US's market for domestic securities, for example, is twice as large as the combined markets of the EU economies. Despite rapidly increasing financial integration in Europe the US's supremacy is unlikely to be realistically challenged. However some economists¹² anticipate that between 30% and 40% of global financial assets will end up denominated in euros, between 40% and 50% in US dollars, and the rest in yen and a few other currencies. This

¹² F. Bergsten, director, Institute for International Economics, Washington, at a symposium held by the International Monetary Fund.

implies a shift of between US\$500 billion and US\$1 trillion into euros, primarily out of US dollars, as investors and central banks reshuffle their portfolios.

Finally, because of its size, fiscal and monetary policies conducted in the EMU area are likely to have a significant impact on the macroeconomic environment in the rest of the world. Key transmission mechanisms from the conduct of macroeconomic and structural policies in the euro area to the rest of the world will work through exchange rate and interest rate developments.

6. SUMMARY AND CONCLUSIONS

The European Union has made significant advances towards the attainment of economic and monetary union. EMU has been set down for 1 January, 1999 at the latest for those countries that achieve the Maastricht convergence criteria, although considerable difficulties exist in terms of achieving the fiscal sustainability criteria in particular. This involves the attainment of a budget deficit of less than 3% of GDP and a public sector debt of less than 60% of GDP. The most likely outcome will be a two track EMU within the EU, where some members have satisfied the conditions for EMU while others have not. This could cause major difficulties for those members excluded from initial membership, and exacerbate existing differences between them and those countries included in EMU.

The issue of whether the EU constitutes an optimum currency area was considered as well as whether there is the need for real convergence criteria to be satisfied before EMU membership is finally decided. Optimum currency area theory would suggest that the use of real convergence criteria to decide membership has strong foundations. This theory would emphasise the need for a high degree of mobility of factors of production, a high degree of economic openness, diversification of production structures and

similarity of production structures across prospective members. With the exchange rate no longer available to play a key role in the adjustment to external shocks, greater reliance will be placed upon price and wage flexibility, mobility of production factors and fiscal instruments to reduce regional disparities. Should these adjustment mechanisms be inoperative or weak there are likely to be adverse regional differences and social and political tension arising from asymmetrical shocks which could prove too strong for the maintenance of the monetary union.

A clear picture does not emerge from recent empirical evidence as to whether the EU countries constitute an optimum currency area. However it does tend to show that real convergence is discernible in a core group of countries around Germany, including the Benelux countries, France and Austria in particular. In terms of the cyclical correlation of their economies Denmark, Spain and Italy also appear to have become closer to this core group of nations during the 1990s. On the other hand the economies of the UK, Ireland, Greece, Sweden, Finland and Portugal appear to have become less integrated with the economies of the core nations, and for some of these the correlation is actually a negative one. Hence a distinct core-periphery division appears to exist making the task of monetary union for the whole of the EU unlikely at present. Hence a two track Europe is most likely. The empirical evidence also appears to suggest that there is very low labour mobility in Europe indicative of segmented labour markets. High unemployment rates across most of the EU countries is also indicative of a lack of labour market flexibility. The existence of such deficiencies in the operation of labour markets in Europe does not bode well for the prospects of successful monetary union.

The establishment of a single currency within the EMU area will have a profound impact not only upon EU participants and non participants but also for the rest of the world. There is the

prospect of the establishment of a reserve currency, the euro, which has the potential to rival that of the US dollar. The size of the EU economy, its significant role in international trade, the ECB's commitment to price stability and the potential growth of euro financial markets suggest that the demand for the euro could be substantial. This will arise from world central banks diversifying into the new currency as well as that of private financial investors, and in the process have important implications for the volatility of world financial markets and exchange rates that cannot be ignored.

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WORKING PAPER 97-5
ISSN 1321-9774
ISBN 0 86418 504 9