Macroeconomic Policy During the Transition to Monetary Union

Revised

by

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All Comments Welcome

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Abstract

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The transition to European monetary union (EMU) may start in 1999. The transition phase, as outlined in the European Commission green paper on the practical arrangements for the introduction of the single currency, will however, be spread out over a period of up to 3 years and 6 months. During this period participanting Member State exchange rates will be irrevocably fixed and monetary policy will be implemented by the European Central Bank. Conversely, fiscal policy will be guided by the Maastricht convergence criteria but implemented at the Member State level. This paper evaluates the possible problems in formulating macroeconomic policy as participating Member States proceed to adopt a single currency, and considers policy coordination and objectives, seigniorage, cohesion and dynamic economic and political considerations during the transition period.

"EMU represents the Europeans' yearning to move from the hurly-burly of making love on the chaise-longue, to the deep peace and comfort of the marriage bed"

> Mervyn King commenting on the transition from the ERM to the single currency made at an IMF Seminar on EMU and the International Monetary System, March 17-18, 1997.

I.   Introduction

The title of this paper is deliberately chosen. In August 1995, the CEPR circulated a discussion paper by the well known Dutch economist Willem Buiter, called "Macroeconomic Policy During a Transition to Monetary Union" (Buiter (1995)), with the title chosen because of the uncertainty concerning the EMU project as a whole and the possible adoption of a single currency in the European Union (EU) by member states outside of the framework that was embodied in the Maastricht Treaty (Commission of the European Communities (1992)). This paper is complementary to the Buiter paper but also includes other more recent issues that have surfaced in relation to the looming deadlines for stage three of EMU, as well as political economy concerns.

The reality has dawned that the third stage of EMU will, under the Maastricht Treaty, take place in 1999, as long as sufficient Member States meet the convergence criteria, however interpreted, to allow EMU to proceed. As of writing, there is considerable uncertainty as to which Member States will be permitted to proceed to the third stage of EMU, given the rapidly changing political landscape in the EU. In many instances, businesses and financial institutions in Member States are not sure whether they will participate in the "first wave" of Member States to proceed to EMU, so are not adequately prepared for EMU. Once the full list of participating member states is decided upon by the European Council, which will occur when 1997 macroeconomic data becomes available (likely by the end of April, 1998), the following 18 months will no doubt see frenetic preparatory activities in the EU, as the deadline of January 1, 1999 approaches.

Outside the EU, and particularly in the US and Canada, governments and businesses are beginning to explore the implications of EMU for their multinational companies, trade flows and exchange rate and monetary policies. All now acknowledge that if EMU is successful, in that all EU member states without an abrogation proceed to adopt the euro in a relatively short period of time, say five years, then there could be major implications for the world economy. In short, international monetary cooperation would move to a bi-polar framework, and the dollar could be challenged as the world's "vehicle" or "numeraire" currency.

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Events in the EU in recent months, such as the election of a new Labour government in the UK, the return of a socialist Prime Minister in France, and the bitter exchanges between the Bundesbank and the German Finance Ministry, to name but a few, have dramatically altered the political landscape with regards to EMU. The election of a new Labour government in the UK (in early May, 1997) has increased the possibility that the UK may with to abrogate its derogation, and join EMU, perhaps in a second wave of Member States (see Financial Times (1997b)). The socialist gains in the French election (held in early June, 1997), now makes it unlikely that France will be able to satisfy the fiscal convergence criteria in 1997, which casts some doubt on France's ability to enter into EMU in the first wave (see Financial Times (1997c)). The resolution of the argument between the Bundesbank and the German government concerning the revaluation of German gold reserves (see Financial Times (1997a)), also leaves some concerns over whether Germany will be able to meet the fiscal convergence criteria in 1997. Added to this potent mix is the reluctance on the part of France to sign the Growth and Stability Pact (which was negotiated in Dublin in December 1996 - see European Commission (1996)), which specifies the nature of fiscal policy coordination after 1999 for participating Member States, due to be signed in Amsterdam (see Financial Times (1997d)). All these developments in combination clearly place some serious doubts as to whether EMU can go ahead in the manner specified in the Maastricht Treaty and the Growth and Stability Pact.

Given that the current difficulties in the EU are circumnavigated, and EMU begins in 1999, there are still significant problems and difficulties that could arise during the transition to full monetary union. Also, it is widely acknowledged that EMU is pivotal in the EU's efforts to deepen economic and political integration, so some analysis of the economic issues is hopefully of some use. This paper roughly follows the original plan of the Buiter paper, and also, like the Buiter paper, makes propositions wherever relevant, but whereas Buiter's propositions were almost all strictly relating to internal aspects of EMU, I have also attempted to widen the analysis to cover internal and external economic and political economy aspects of EMU.

The paper is arranged as follows: in section II, a review of the microeconomic considerations for EMU is presented, in section III the seigniorage, inflation and public finance issues are analysed, and in section IV, a review and analysis of the optimal currency area literature is provided. In section V, the elimination of the exchange rate as a policy instrument is discussed and section VI looks at the introduction of the euro at the start of

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1999 in relation to the high degree of capital mobility that exists in the EU. Section VII concludes.

II.   Microeconomic Considerations

Microeconomic efficiency arguments for a single currency revolve around the "efficiency gains" that would accompany a single currency. Dowd and Greenaway (1993) cover most of the arguments concerning the "network externalities" of the single currency, so these will not be re-hashed here. Allen (1993) uses an economic model to show how network externalities may operate during the transition to monetary union. Of course, switching currencies in the transition will be costly, as companies will effectively use two sets of accounting mechanisms as euros and national currencies will be used as legal tender during the transition. These real costs of moving to the euro have to be offset against the eventual elimination of costs inherent in using exchange rates (in terms of the bid-offer spread) plus the in-house real costs of dealing in different currencies. Essentially, the one-off real costs incurred by companies during the transition have to be set against the elimination of exchange rate conversion costs during the transition, plus the continuing gains from operating with a single currency from July 1, 2002 onwards.

This is the argument presented by Buiter, but he omits to consider several other microeconomic effects of the single currency. First, he omits to consider the pass-through of lower costs for companies operating in the single market EMU zone to consumers[1]. If companies benefit from cost savings, some of these savings may be passed on to consumers, or will show up in increased profits for shareholders. Either way, there is likely to be some "pass-through" which will benefit consumers or shareholders.

Second, he omits to mention the change in trade patterns with countries outside the EU and EMU zone. Consider a country that has been exporting to an EMU zone member state. If EMU leads to lower costs for companies selling to companies in other EMU zone member states, then the company exporting from outside the EMU will now be at a cost disadvantage (as they will still have the foreign exchange costs of converting into euros or national currency), given that the unlikely scenario that the importer willingly bears the currency risk is ruled

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[1] There are also potential gains to made if member states that are not in the first wave to adopt the euro decide to denominate their accounts and trade in euros. This is likely to be the case for those member states that expect to be in the second wave, or those countries outside the EU (in Central and Eastern Europe, for example) that decide to adopt the euro as a trade invoicing currency.

out. This will effectively lead to a higher effective rate of protection, and will cause a diversion of exports from the EU. Whether companies outside the EU will be made worse off depends on several factors. First, if foreign companies squeeze profits in order to maintain market share, then there will be no trade pattern effects. Second, if the foreign company cannot compete with the EU EMU bloc competitors, if it can sell the product that would have been sold to the EU member state company elsewhere, at the same price, then world welfare will not have changed (ignoring questions of variety and noting that trade patterns will change). But if a higher volume of goods is offered in other countries, then price will fall in this market (unless the price elasticity of demand is perfectly inelastic), so even if the company manages to sell its product, there will be a fall in welfare for companies outside the EU, as revenues will have fallen.

Hence, although welfare for the EMU bloc of the EU will likely be higher, because of the net discounted costs savings to companies and consumers, this has to be weighed against the loss of welfare to companies outside the EMU bloc. Hence, it is not at all certain whether EMU will lead to a higher level of global welfare, and depending on such factors as the configuration of member states that initially join the first wave of EMU, whether agglomeration effects occur for non-EMU bloc EU member states (see Martin and Ottaviano (1995)), and trade invoicing practices, welfare for the EU as a whole could either fall or rise.

Clearly, as long as EMU is successful (in the sense that all EU member states eventually join EMU), then the net welfare effect for the EU will be positive in the longer term.

Proposition 1

If EMU is successful (in that all EU member states join EMU), then there will be net welfare gains from EMU (assuming a reasonable discount rate), but it is uncertain whether global welfare will rise or fall with EMU (assuming away any exchange rate effects on trade), because of effects on trade flows and markets outside of the EU.

Dowd and Greenaway (1993) note that a move to a single currency should, for maximum efficiency gains, be a move towards the adoption of an existing currency, as then the switchover costs will be eliminated for at least

one currency. Buiter suggests that this points to the Deutschemark as the new common numeraire, because it is the most widely used existing currency. No economist (in their right mind) would disagree with this proposition, except perhaps that for political acceptability, the name would have to be changed to euro, but other than that, all currencies would just be replaced by the renamed German currency. I therefore amend Buiter's proposition to:

Proposition 2

If the EU (or a subset thereof) moves to a common currency, efficiency considerations suggest that the most widely used existing currency be used as the new common numeraire (that is, the Deutschemark). For political acceptability, the name of the new European currency should be the euro, but the Deutschemark would be exchanged for the euro one for one as of January 1, 1999.

Of course, this begs another question: what would happen to the composite currency of the ECU after January 1, 1999? Well, the answer would be very straightforward. As each ECU will automatically become a euro on January 1, 1999, under proposition 2, the ECU/DM rate would automatically be calculated and all ECU contracts would automatically be converted into the equivalent number of DM and therefore euros. Of course, this proposition is not entirely relevant to the current situation, but it does point out that the current method of achieving EMU does not take the least cost route.

III.   Seigniorage, Inflation and Public Finance

In Buiter's paper, the distinction is drawn in a dynamic setting between seigniorage and the inflation tax, and then a simple model of optimal seigniorage is presented. The Friedman rule for the optimum quantity of money (that the nominal rate of interest should be zero and satiation should be applied to real money balances), Buiter shows, would be modified if labour income were taxed as a return on human capital rather than as a tax on a return on an input (as human capital is augmentable whereas the return on an input is process-driven). In other words, the optimal level of seigniorage becomes non-zero when these factors are taken into consideration. But, as recognised elsewhere, seigniorage is hardly an issue given that the convergence criteria ensure that inflation is

extremely low in the EMU bloc on entering stage three, so such income will be negligible compared with other sources. Further, the selection of which member states will proceed to the third stage will likely be made partially on the basis of consistency in economic policy over a period of time (so, for instance, it is unlikely that Germany would agree to Italy being admitted in 1999), and so it is also unlikely to be an issue during the transition to full monetary union

The broader issue of dealing with the effects of an "all-encompassing" anticipated inflation tax (all encompassing, as Buiter points out, in the sense that it includes the Olivera-Tanzi effect through which a higher rate of inflation erodes tax payments made in arrears, and any other minor effects on government finances) versus an unanticipated inflation tax, obviously cannot be dealt with using the same framework. But by definition, an anticipated burst of inflation is impossible under the currently-defined transition to monetary union, as information flows will ensure that all economic agents will know about such developments and would substitute with inflation-proof assets: this would not be the case, however, with an unanticipated burst of inflation. One of the main beneficial impacts of a burst of unanticipated inflation would be a "capital levy" on nominally denominated fixed interest rate debt. An unanticipated inflation tax can either be levied *de jure* (through a default on public debt interest payments) or *de facto* (through an unexpected burst of inflation or an unanticipated devaluation). Clearly, the *de jure* route would be politically unacceptable in the EU context, and would immediately disqualify a member state for early consideration for EMU, as the consequences of public debt default is one of the most worrisome aspect of the whole EMU project for the Germans. So this leaves the *de facto* route as the only alternative for countries like Greece, Italy and Belgium, if they are to even come close to achieving the Maastricht convergence criteria. These Maastricht fiscal convergence criteria[2] are of two types: first the absolute criteria that state certain levels for budget deficits and public debt, and second the so-called "dynamic let-outs", which allow the European Commission to recommend to the Council that a member state has been converging towards the actual criteria at a satisfactory pace - if the Council agrees then the member state is deemed to have satisfied the criteria itself[3]. Of

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[2] The fiscal policy criteria are absolute rather than relative criteria: the budget deficit criteria states that the budget deficit should represent less than 3 percent of GDP and the public debt criteria states that gross government debt should not exceed 60 percent of GDP.

[3] Ireland, Denmark and Finland, for instance, have been deemed by the Council to satisfy the public debt criteria.

course, the ERM Maastricht criteria would seem to dictate that a devaluation would be out of the question, as member states should maintain their currencies within the ERM fluctuation limits[4], but given the August 1993 decision to widen the limits to +/-15 percent from the narrow +/-2.25 percent limits (with the exception of the Dutch guilder, which still uses the narrow margins), a mini-depreciation would almost certainly leave most currencies within their prescribed fluctuation margins. The Maastricht inflation criteria or the Growth and Stability Pact conditions (assuming that the inflationary burst was caused by government spending) would also appear to rule out an unexpected burst of inflation, unless the member state happened to have a very low level of inflation initially, but in fact an unexpected burst of inflation could, in theory, provoke a fall in the public debt criteria, allowing the member state to satisfy both the inflation and public debt criteria simultaneously, so may appeal to a country like Belgium.

Clearly, though, the smaller is the Member State concerned, the higher the expected level of inflation in a Member State, and the larger the level of public debt to GDP ratio, then the greater is the economic impact of the loss of seigniorage income when moving to a monetary union. The smaller the country, the less the impact that its price level has on the new monetary union price level; the higher the expected level of inflation in the country, the more dependent the country will be on seigniorage income, given the link between seigniorage and interest burden forgone; and the higher the level of public debt, the greater the effect (in real dollar terms) a given inflationary burst has on real levels of public debt. These assertions can only be made, however, given certain (sensible) assumptions about the division of the seigniorage income between EMU participants in the post-stage three environment. The internal aspect of seigniorage therefore leads to the following proposition:

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[4] The ERM Maastricht convergence states that member states should maintain their currencies within the "normal" fluctuation margins of the ERM for two years before entering EMU, without devaluation.

Proposition 3

If seigniorage income is divided by the ECB on the basis of share of money supply to total money supply, then the governments of smaller, more traditionally inflation-prone, highly public sector indebted Member States will experience a reduction in welfare. Conversely, larger, more traditionally low inflation, low public sector indebted Member State governments will experience an increase in welfare from EMU.

As Buiter states, though, there is little to worry about as far as domestic seigniorage is concerned as the amounts of revenue raised through such means are extremely small. There is, however, an international aspect to the seigniorage associated with member state currency issuance versus a single EU currency, as private agents, firms and governments abroad also hold currency which presumably would not be willingly held *ceteris paribus*, by domestic agents, firms and governments. The larger the "network externality" associated with the single currency (particularly over the Deutschemark), the larger the international seigniorage that might be gained from the single currency for individual member states. Thus member state currencies that were largely held by domestic agents could have significant seigniorage income gains (depending on how the ECB decides to divide total seigniorage income between the member states), while Germany could lose or gain seigniorage income, depending on the enthusiasm of foreigners for the new single currency and the up-take of the single currency for trade invoicing purposes. Annex A shows the usage of the major "triad" currencies for trade invoicing purposes in the three major trading blocs. This suggests the following proposition:

Proposition 4

If seigniorage income is divided by the ECB on the basis of share of money supply to total money supply, the smaller the international "network externality" enjoyed by a Member State's currency, the larger the potential international seigniorage income to be gained from EMU. For a Member State whose currency already enjoyed significant international "network externalities", the direction of change is ambiguous.

The Canadian example gives some insight into how the absence of nationally differentiated unanticipated inflation tax levies on the national debt might operate in the context of the EU. Canadian provinces are not under the same strictures as are participatory member states in EMU in the EU, and yet, of their own accord, most have decided to limit public expenditures and adopt plans to reduce budget deficits and public debt levels (or at least real debt levels). The Canadian federal government, in fact, has been so successful at cutting public expenditures and closing tax loopholes, that it has exceeded its own plans to balance the budget and should run a sufficiently large budget surplus next year to start paying down some debt[5]. As with EMU, though, seigniorage is only created at the federal level, so that debt monetisation can only be used by the federal government, and not by the provincial governments[6]. So, in the EU context, it is really not important whether member state governments run deficits or surpluses, as far as debt monetisation and seigniorage revenue is concerned, but rather it is important that there is no responsibility or obligation on the part of European supranational institutions to bail out irresponsible Member State governments. In fact, this is something that is little appreciated in the literature, as if the European supranational institutions are unable to issue debt (as is specified under Maastricht), the EU budget is legislated to break even, and the ECB independently decides the amounts of Member State debt that it wishes to hold, then in the planned EMU, there is no direct connection between seigniorage, debt monetisation and unanticipated inflation from monetary policy sources. There may, of course, be indirect effects.

Lastly, there are penalties that will be imposed under the Growth and Stability Pact, such that member states will have financial penalties imposed upon them if they exceed the Maastricht fiscal convergence criteria after entering EMU, unless the circumstances are exceptional (such as a recessionary environment). As I have argued elsewhere (see Crowley (1996)), these penalties are completely unnecessary, and represent an unjustified imposition from an unelected supranational body, when there is no underlying economic rationale for such

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[5] In fact, the federal government's strategy was apparently collusive, as it was aimed at allowing the Bank of Canada to lower inflation so as to bring the interest costs of servicing the existing debt down, given that inflation targets were jointly set with the Department of Finance.

[6] The Bank of Canada does have line items in its Balance sheet for holdings of provincial debt, but these items are always zero, and would only be used in a crisis situation.

penalties[7]. Member state governments should be judged in terms of their deservedness to join EMU, not on the basis of their continuing to be members of EMU. Clearly, the justification for such penalties must be political, and hopefully the offending sections in the Growth and Stability Pact were permitted only in order to allay German fears (as reported in the press), and to gain tacit agreement that the Germans will proceed with EMU - if not, it is pure folly.

IV.   Optimal Currency Areas with Keynesian Nominal Rigidities

Most European economists do not subscribe to the thesis that money is neutral in both the short and the long run: this is one notable difference between North American and European economic orthodoxy. As Buiter states (and as is well known), the long-run non-neutrality of money requires at least one of two phenomena to be present: either the long-run Phillips curve is non-vertical or there is hysteresis in the natural rate of unemployment. The former is rarely used in economic modelling, and the latter is empirically unsubstantiated, so Buiter assumes that monetary non-neutralities are strictly confined to the short run. In that case, exchange rate flexibility only has short run beneficial effects. For completeness I restate his proposition on nominal exchange rates:

Proposition 5

Nominal exchange rate flexibility permits international relative price and cost adjustments that are warranted by fundamental real developments and real shocks (adjustments that will eventually occur regardless of the nature of the nominal exchange rate regime) to be achieved more quickly and with smaller transitional or adjustment costs.

Buiter then goes on to propose that nominal exchange rate flexibility is bad in terms of its inducement of financial and other nominal shocks, which may result in temporary changes in international relative prices and costs. But this proposition is somewhat "ad-hoc" and anecdotal, and does not appear to be backed up with any empirical

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[7] The federal government of Canada, for instance, would never tell a province that its economic policies are inappropriate for the country as a whole - regional conditions are clearly understood to influence the nature of provincial economic policymaking. In Australia, however, fiscal policies are coordinated between the states, but decisions are cooperative, and there is no coercion.

evidence (or at least a model to theoretically illustrate the effects), so it will not be considered here.

There is evidence, however, that limiting exchange rate flexibility by using an adjustable-peg exchange rate system can reduce interest rate volatility (see Crowley (1996)), which also suggests the converse, that interest rate volatility, and therefore non-fundamental financial market volatility, may enter the system through fully flexible exchange rates (particularly in the context of a relatively open economy). This view, combined with the view espoused by many economists that financial markets are inefficient, leads to the conclusion that exchange rate volatility may (apart from its other potential effects) give rise to exchange rate misalignment, which can clearly have serious consequences, if persistent. This misalignment argument for completing the EMU as a complementary cementing of the single market is outlined in Eichengreen and Ghironi (1995). Economists have still not tackled the issue of whether exchange rate volatility has any relationship with misalignment - clearly the relationship between the two is not linear, as fixed rates can still be misaligned, but there may be some underlying non-linear relationship. Modifying the proposition presented by Buiter to consider the combination of the two effects:

Proposition 6

Exchange rate volatility can lead to increased interest rate volatility, which suggests that additional financial market volatility effects exist with exchange rate flexibility, creating extrinsic noise and non-fundamental volatility transmission into the real side of the economy. Exchange rate flexibility may breed excess volatility and possibly persistent currency misalignment.

The optimal currency area literature originates from work done by Mundell (1961), and has been the recent subject of much of the economics literature dealing with the economic arguments that would determine the number of member states entering the third stage of EMU; the argument is that if a certain number of member states collectively experience aggregate demand and/or supply shocks that are correlated, then these countries would best be suited to forming a monetary union. Much of this literature has used dubious empirical methodology to separate out demand and supply shocks, but with the gratifying results that the so-called Deutschemark bloc of

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member states can be characterised as an optimum currency area (examples are Eichengreen (1990), Bayoumi and Eichengreen (1993), von Hagen and Hammond (1995)). The economic logic behind the optimality of currency areas is that if shocks that hit countries, either from internal or external sources, hit all regions of a country relatively simultaneously and equally in magnitude, then economic policy will be relatively effective at mitigating these shocks. Hence, if shocks are "symmetric" across a set of regions, then this implies that this set of regions can be classified as an optimum currency area, whereas if shocks are "asymmetric" then this will not be the case.

Buiter makes the case that it is not enough to look at correlations between shocks, and then discount a monetary union because a set of countries experiences asymmetric shocks - by presenting a very simple open economy macroeconomic model, he shows that asymmetric shocks need not be a problem if they originate in the financial economy (LM shocks in a Poole-type analysis) rather than in the real economy (IS shocks), so long as there is a high degree of capital mobility. So only real demand shocks need be of concern. Real demand shocks, though, because of a single market, are much more likely to be transmitted through to neighbouring single currency area participants. The reason is that with countries that are highly integrated through trade, then an asymmetric shock in one country will likely affect trade flows to and from other countries. Interesting examples are German reunification and the pattern of Canadian business cycles in relation to US cycles. Thus, in these examples, an asymmetric shock will have symmetric effects. Hence, if most of the regional economies are extremely open (as are the European Union member states and the United States), then asymmetric shocks are not likely to be of major concern on the demand side of the economy. It is also interesting to note that as most Canadian provinces trade much more heavily with the contiguous region in the United States than with neighbouring provinces (see McCallum (1993)), then this implies that Canada is probably a much less viable single currency area than either the United States or the European Union. This may explain the development of the strong federalist tendency in Canada, as a means of mitigating any adverse economic shocks and to bind the country politically, so as to offset any asymmetric regional economic developments. In terms of the discussion of optimum currency areas presented above, the only types of shocks that appear to be of concern are asymmetric supply shocks.

But there are further concerns with shocks. In a monetary union with constraints on both supranational

and Member State fiscal policy (as defined in the Growth and Stability Pact), asymmetric shocks can be accommodated by self-liquidating Member State transfers, but assuming that the ECB does not pursue an exchange rate policy of depreciation, then supply-side symmetric shocks (such as an innovation productivity shock or an oil price shock) are also of concern. The Growth and Stability Pact defines circumstances as exceptional only if real GDP in a Member State falls on an annual basis by at least 2 percent. But growth need not fall by at least 2 percent for a significant increase in unemployment to occur (as has recently been noted in Germany), so symmetric shocks may also have significant welfare effects on participating Member States, with little or no recourse to offsetting actions. Clearly, the Growth and Stability Pact is not a well-thought means to guarantee ongoing economic and, by extension, political stability in participating Member States, as was its original intention.

Besides, leaving aside some of the more technical aspects of optimum currency areas, if this economic methodology were to be applied globally, it would imply that countries such as the United States and Canada should not be single currency areas, and by extension, viable economic units. This is because research on the correlation of demand and supply disturbances in North America (see Bayoumi and Eichengreen (1994)) has shown that there are regional blocs within the continent that experience similar shocks, but as a whole, neither the United States nor Canada can be characterised as optimum currency areas. Clearly, while such research is interesting from the point of view of identifying which countries might have most to lose by joining a monetary union (if for instance, a country experiences different types of shocks from the rest of the countries in the bloc), its use is limited. The decision to form a monetary union is therefore much more based in the political sphere, as Dyson (1994) notes, and economics can only really highlight problems and act as a legitimator, or otherwise, of political policy initiatives. This leads to the following proposition:

Proposition 7

The decision to form a monetary union is essentially political in nature. In economic terms, the greater the degree of trade between members of the currency union and the higher the correlation of supply shocks between the members, the more successful the union is likely to be and the looser the political union required in order to be able to take mitigating actions to offset adverse regional supply shocks. The Growth and Stability Pact is no guarantee of economic and political stability during stage three.

V.   The Loss of the Exchange Rate Instrument and Other Concerns

What is required to make up for the loss of exchange rate flexibility in a single currency area? Many economists have argued that fiscal transfers are necessary to offset regional asymmetric shocks (see Sala-i-Martin and Sachs (1992), Courchene (1993), Bayoumi and Masson (1994) and Crowley (1996)), so propose in the EU context that the EU budget be allowed to grow in order that supranational institutions can supervise some redistribution of income between member states. Other economists argue that labour mobility is also a major factor, not only in the ability of the labour force to relocate, but also in terms of overcoming the psychological cultural and linguistic barriers between regions or member states (see Blanchard and Katz (1992)). Buiter neatly distinguishes between fiscal redistribution to offset transitory disturbances and permanent redistribution through the Federal budget: the former is effectively compensation for the loss of the exchange rate instrument (and therefore is related to the optimum currency area issue), whereas the latter is clearly desirable on economic convergence grounds.

Although Buiter mentions that greater international and interregional redistribution may be necessary to render the political system viable, he does not elucidate on the connection between adoption of a single currency and the scenario-dependent political ramifications which stem from the possible economic effects. First, a single currency area is likely to increase trade between the constituent parts of the area, effectively requiring that the members act together on external trade issues (such as in relation to the WTO): this requires a much greater degree of coordination and likely requires a supranational body to collect data, monitor developments and deal with other

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such concerns[8]. Second, the single currency requires a monetary authority to control issuance and to implement monetary policy: hence the formation of a supranational institution to undertake these tasks, the ECB in Frankfurt. The ECB will delegate responsibility to the constituent ESCB (former Member State national central) banks, but if monetary policy is implemented following the principle of subsidiarity, this means that the operations of the ESCB cannot be arranged in the same way as the US Federal Reserve - and further, the ECB will not act like the Bundesbank in Germany in the sense that it will not have the German Ministry of Finance as a political counterbalance within the state structure. Third, the once-and-for-all loss[9] of the exchange rate instrument implies the transfer of exchange rate policy from wherever it resided at the national level, to the supranational level: while there is little in the Maastricht Treaty which specifies the onus of responsibility for exchange rate policy between the ESCB and the Council[10], it is clear that the ECB will be in charge of foreign exchange market intervention. The transferral of three significant areas of policy will likely lead to further consolidation of powers at the supranational level for three reasons:

i)   EMU represents one important step in the process of European integration: if successfully completed, it provides an incentive for further initiatives;

ii)   the necessity for an institution to monitor and operate pan-EU fiscal policy has not been evident in the past, but EMU could lead to agglomeration effects (Martin and Ottaviano (1995)) which may halt progress towards economic convergence for those Member States remaining outside the single currency bloc (particularly as some of these States are likely to be the poorer southern European member states); and

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[8] The ECB will collect and monitor balance of payments data for the euro area as a whole: see EMI (1997) for more details.

[9] I have not seen any discussion in the literature about leaving EMU, for example if a member state decides that arrangements are not desirable or suitable, or if it transpires that EMU is not economically advantageous for a member state..

[10] The onus of responsibility is likely to be the same as that of the Bundesbank in relation to the German Finance Ministry: the EU Council will therefore decide overall policy but the ESCB will implement it. The general principles guiding the selection of the operational framework of the ECB are described in EMI (1997): the principle to be adopted with regard to foreign exchange intervention is that it can occur in the ESCB at a centralised level or a decentralised level.

iii)   a single currency within a single market will likely lead to greater pressure to harmonise other

economic policy levers (and in particular fiscal policy levers), such as income and corporate tax

rates as well as VAT rates, otherwise some member states will tend to lose economic activity

from participating in EMU (- good examples here are Sweden and Finland).

The latter point is particularly important, as in most single currency areas, a certain amount of

harmonisation has occurred, otherwise there would be massive out- or in-migration (- consider what would happen

in the US if a state decided to impose a Canadian-style 15 percent sales tax, or consider the recently harmonised

sales tax (HST) in Canada, which outlaws cross-province trade flows for tax avoidance purposes). In the EU, If

competition does not emerge between different public jurisdictions to harmonise fiscal policy measures[11], perhaps

because of the existence of limitations for fiscal policy manoeuverability inherent in the Growth and Stability Pact,

then this (through the link imposed by the pact between monetary and fiscal policy) will trigger penalties on

Member States that are found to be in violation of the post-stage three fiscal guidelines. Clearly the "penalty"

approach to harmonising fiscal policy might not prove to be successful, depending on other factors such as the

growth effects of EMU, agglomeration effects, and the intensity of any asymmetric shocks that occur within the

single currency zone after 1999. Effectively, the only alternatives to penalising member states is to harmonise at

the supranational level or to scrap the Growth and Stability Pact. As recent events demonstrate, the latter action is

likely to be seen as regressive, so the harmonising option appears to be the most likely outcome.

But what about the nationalist attitudes towards the EU's accumulation of more powers that appears to be

of concern to several Member States? Though there is significant resistance to the EU's acquisition of further

competencies at present, if EMU is successful, resistance to such developments would be lowered. Indeed, EMU

might be viewed as the "path of least resistance" in terms of beginning the transfer of economic policy competency

to the supranational level.

Although the preceding paragraphs addressed circumstances in which arguments might arise for more

centralised institution building in the EU, none of these arguments relates directly to the loss of the exchange rate

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[11] Competition between different public jurisdictions should occur to attract mobile labour, according to the Tiebout model (Tiebout (1956)) in public finance.

instrument as a cause for increased concentration of competencies at the supranational level - if the exchange rate is involved at all, it is in the form of a catalyst, through circumstance or political momentum, which leads to further pan-EU policy initiatives. This prompts another proposition:

Proposition 8

EMU, if successful, will prompt further initiatives to centralise economic policy at the supranational level in the EU (perhaps accompanied by a move to a more federalist structure), as the difficulties of operating and coordinating a centralised (ECB Council determined) monetary policy and a decentralised (Member State determined) fiscal policy become apparent.

VI.   The Introduction of the Euro and Capital Mobility

There is now a significant body of literature that reviews the Maastricht convergence criteria, and looks at the economic rationale for applying such convergence criteria during the EMU process (see Buiter, Corsetti and Roubini (1993), Eichengreen (1993), Crowley and Rowley (1996) and Hughes Hallett and McAdam (1996)). While the official view is that economic convergence is necessary before monetary union can occur (this "economist" view originated from the current head of the EMI, Lamfalussy (1989) and is largely also the view of the Bundesbank, perhaps for political reasons), many economists (including both Buiter and this one) dissent from the official view. The arguments for and against will not be rehashed here, but for the sake of completeness, I modify and restate the relevant Buiter proposition:

Proposition 9

Real convergence or divergence is irrelevant to making the decision to proceed to monetary union, or for whether there is a continuation of a monetary union in Europe.[12]

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[12] The proof relies on assuming the contrary: as Newfoundland has been on a divergent economic path from the rest of Canada, does this mean that Newfoundland would benefit from using its own currency? The answer is clearly negative.

Having dispensed with the issue of real convergence and divergence, it might appear that the Maastricht convergence criteria are superfluous to requirement, and are therefore irrelevant. But this would be mistaken, as the nature of the transition defined in Maastricht determines that the convergence criteria might have a role to play.

In May 1995, the Commission introduced a Green paper (European Commission (1995)) to specify the method of introduction of the euro into the financial and real markets. With some minor modifications, the European Council decided to adopt the three-phase reference scenario at its December 1996 summit in Dublin, Ireland. The details of the phases are tabulated in Annex B.

Phase B of the process is particularly crucial. During this period participating intra-EU member state exchange rates will effectively disappear, to be replaced by conversion rates. One particular concern of the EU relates to the acceptance of the plan by the financial markets and their reaction as the 1999 deadline approaches for the beginning of phase B (see Crowley (1996b)), particularly after the debacle that surrounded the ERM crises of 1992 and 1993. The Green paper acknowledges[13] that exchange rate pressures might arise during the process if:-

i)   markets test the credibility of the decision to move to stage three of EMU; and/or if

ii)   disturbances in exchange rates of non-participating currencies originating from expectations of a lower level of commitment to the Treaty convergence criteria; and/or if

iii)   there were uncertainties concerning the irrevocably fixed conversion rates in phase A, which could push exchange rates away from levels justified on the basis of fundamentals; and/or if

iv)   there were unexpected demand or supply shocks in participating member states.

The first reason (markets testing the credibility of the decision) no doubt underlined the adoption of the Growth and Stability Pact. The second reason (i.e. disturbances in non-participating country currencies) for exchange rate instability belies the fact that after the speculative attacks of September 1992, both the UK pound and the Italian lira left the ERM and allowed their currencies to float, which caused rapid and significant depreciation, giving rise to additional strains on the membership of the remaining members of the ERM and accusations of "competitive

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[13] Paragraph 72.

devaluations". This has prompted the plans for a revised ERMII, once stage 3/phase B begins (see Commission of the European Communities (1996)), although agreement has been reached that participation will be voluntary, and the details of the ERMII have yet to be formally agreed in the treaty to be signed in Amsterdam.

The third reason (that of speculation regarding the conversion rates) is a real danger, given that the date for the announcement of the conversion rates will be made on January 1, 1999. The decision to fix the rates, as implied by the Green paper, should be made according to fundamentals (however this might be determined), and not necessarily on the basis of market rates at the end of 1998. There are already suggestions that the "irrevocably" fixed conversion rates should be announced simultaneously with the decision on which Member States will participate, but that does not necessarily remove the uncertainty.

The fourth reason (unexpected shocks in participating member states) is also a real danger, given that there are frequent general elections in Europe, in addition to the unexpected events that even the best laid plan can ever control for.

The Green paper, however, does not directly recognise the possibility of a speculative attack on the fixed conversion rates during phase B, as it is assumed that the foreign exchange markets on intra-EU cross rates will disappear. This view maybe naive, for three reasons. Whether the foreign exchange markets disappear in participating member states is not as important as the Green paper suggests. The biggest foreign exchange centre in Europe (and in fact the world) is based in London, UK, a member state that is unlikely to participate in the first wave of EMU, and is skeptical about the entire project. Even if the London foreign exchange market is legally bound by EU legislation, New York and Tokyo are not. Further, European exchange rate derivative markets will still be operational, and again the largest derivative exchanges are based outside of the likely participating Member States. It is also now well documented that foreign exchange speculators often operate in the derivative markets (see Soros (1995), for example). Even if national currency rates are no longer quoted in Europe, there is no reason why an informal "grey" market might not take root and actively trade elsewhere. Lastly, there is nothing in the transition process that refers to how variable rate interest rates will be determined (para 77 of the Green paper does mention convergence in interest rates) - if interest rate differentials with the euro are not, in the view of the markets, negligible, then capital flight might be an unfortunate consequence.

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Despite the fact that legal tender legislation[14] would be in place to "ensure that euros and national currencies of participating countries are perfect substitutes in the legal sense, i.e. national currencies would be different denominations of the euro with changes between denominations being made according to irrevocably fixed conversion rates and not exchange rates"[15], euro-currency markets operate outside of these legal jurisdictions. If euro-currency markets are largely outside of the EU's control - again London, UK, and New York, USA, are major centres for euro-currency transactions, then there is also the possibility that until national currencies are replaced by the euro (i.e. in phase C), trading in participating member state deposits will continue, which would, *inter alia*, affect exchange rates. In other words, the "irrevocably" fixed nature of exchange rates during phase B is the linchpin to the whole process.

So, assume for a moment that the correct (fundamental-determined) rates of conversion are chosen, but that there is a non-zero probability of EMU failure. If this were the case, then for firms (- the general public will not be using the euro until 2002) there is an incentive to delay any changeover to the euro to the end of phase B of the final stage of EMU - in other words to 2002, and to use the "hardest" domestic currency chosen as a potential EMU participant in the meantime. Why? First, if there is any possibility of EMU not succeeding, then as exchange rates are "irrevocably" fixed, there is no real incentive to change over to the euro, as the costs of doing so, in terms of drawing up new contracts, and the problems of reconciling accounts in different currencies, will dictate that leaving the changeover until the last minute, or perhaps using derivative exchange rate instruments (bought outside the EU), would be the most advantageous course of action. Second, if there is a significant probability that EMU might fail, then unless the exporters currency is the perceived hardest currency in the EU, there is, in fact, an incentive to use (or convert contracts into) the strongest currency in the EU or to use an extra-EU currency, rather than leave amounts in current currency terms. In that case, in the event of a speculative attack on the "irrevocably" fixed rates, currency losses would be eliminated and the probability of currency gains would be maximised. In other words, with a non-zero probability of EMU failure, there is an incentive to move funds to the "hardest" EMU currency, and this in itself may then create a so-called "self-fulfilling" speculative attack (see

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[14] Para 128 of the Green paper.

[15] Para 127

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Obstfeld (1986)), although because of legal constraints, the attack would have to come from outside the EU. However, with the UK likely to remain outside of EMU, at least initially, and with unrestricted international mobility of financial capital, attacking the fixed conversion rates would not pose an insurmountable problem[16].

In summary, the process for stage three of the Maastricht Treaty is flawed, in that it assumes that foreign exchange markets will not force exchange rates away from the "chosen" conversion rates (whether based on fundamentals or not), and that the foreign exchange markets will act in the belief that the process is irreversible. Therefore, foreign exchange market turbulence is a distinct possibility which needs to be properly addressed. The Commission's solution is based solely on maintaining strict adherence to the convergence criteria for entry into stage three. While this is likely an inadequate insurance policy against foreign exchange market turbulence, it is clearly better than nothing. This suggests the last proposition:

Proposition 10

The chosen plan for adopting the euro during phase B of stage 3 of Maastricht is flawed. Real economic convergence between member states, however, will help to discourage speculative attacks on the fixed conversion rates during the transition period.

Propositions 9 and 10 might appear to be mutually inconsistent at first - in fact they are not. The level of real convergence should not determine whether EMU goes ahead or not (proposition 9), but given the fact that the Commission appears to be unprepared for any speculative activity during phase B, then real convergence (both inside and between inside and outside the EMU "core") will help to minimise the risk of a speculative attack.

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[16] The only way of being entirely sure of defending a currency during a speculative attack is to have an infinite amount of foreign exchange reserves on hand.

VII. Conclusions

This paper has attempted to provide a framework for evaluating the economic issues that will face EU Member States in their endeavors to move to a single currency. The paper built on work done in this area by Buiter (1995), while providing some additional insights into the external and political economy aspects of the EMU process.

EMU may or may not start on time, but in either case with a likely small core of Member States being chosen to participate in the first wave. Although the decision to adopt a single currency will be based on economic criteria, it has been made on political grounds. The Growth and Stability Pact is misguided as an economic constraint on member states once they have proceeded to stage three of EMU, and will hopefully be discarded once EMU is successfully implemented.

Clearly, the lessons of the ERM crises of 1992 and 1993 have not been entirely absorbed by the Commission. In particular, the second phase of stage three of Maastricht, phase B, is clearly flawed, as it does not foresee the possibility of speculative foreign exchange activity during the transition, which could derail the whole of EMU. In this sense, the fiscal convergence criteria and the Growth and Stability pact may be useful in providing some assurances to the foreign exchange markets that member states are serious in their intention to proceed to EMU: still, they do not completely insulate EU member states from speculative attacks on the "irrevocably" fixed conversion rates.

Further research needs to address the economic issues surrounding the configuration between the participating member states and those remaining outside EMU during the first wave of member states, as well as the coordination of fiscal and monetary policy within the EMU bloc. Clearly there are many further political economy aspects that need to be addressed with regard to a successful implementation of EMU, not only in terms of the accumulation of economic policy competencies, but also with regard both the establishment of new supranational institutions and to the process of pan-EU decision-making into the next century.

References

Allen, P. (1993), "Transactions Use of the ECU in the Transition to EMU: A Model of Network Externalities", *Recherches Economiques de Louvain*, Vol. 59, Nos 1/2, pp155-176.

Artis, M. and Taylor, M. (1994), "The Stabilizing Effect of the ERM on Exchange Rates and Interest Rates", *IMF Staff Papers*, Vol. 41, No. 1, pp123-148.

Association for the Monetary Union of Europe (1996), *European Union: Managing the Changeover to the Single Currency*, Paris, France.

Bayoumi, T. and Eichengreen, B. (1993), "Shocking Aspects of European Monetary Unification", in Giavazzi, F. and Torres, F., *Adjustment and Growth in the European Monetary Union*, Cambridge University Press, Cambridge, UK.

Bayoumi, T. and Eichengreen, B. (1994), "One Money or Many?: Analyzing the Prospects for Monetary Unification in Various Parts of the World", *Princeton Studies in International Finance* 76, Princeton University, USA.

Bayoumi, T. and Masson, P. (1994), "Fiscal Flows in the United States and Canada: Lessons for Monetary Union in Europe", CEPR Discussion Paper 1057, CEPR, London, UK.

Blanchard, T. and Katz, L. (1992), "Regional Evolutions", *Brookings Papers on Economic Activity*, No.1

Buiter, W. (1995), "Macroeconomic Policy during a Transition to Monetary Union", CEPR Discussion Paper 1222, CEPR, London, UK.

Buiter, W. Corsetti, G. and Roubini, N. (1993), "Excessive Deficits: Sense and Nonsense in the Maastricht Treaty", *Economic Policy* 16, pp58-90.

Courchene, T. (1993), "Reflections on the Canadian Federalism: Are there Implications for the European Economic and Monetary Union?", *European Economy*, Special Issue 4, Economics of Community Public Finance, pp23-166.

Crowley, P. (1995), "The ERM of the EMS: Volatility, Target Zones and Prospects", Unpublished Ph.D. thesis, McGill University, Montreal, Quebec, Canada.

Crowley, P. (1996), "EMU, Maastricht and the 1996 IGC", *Contemporary Economic Policy*, Vol. XIV, No.2, pp41-55.

Crowley, P. (1996b), "The Final Stage of European Monetary Union: Economic Issues and Political Controversies", Paper presented to the European Community Studies Association - Canada, St. Catharines, Canada, June 1996.

Crowley, P. and Rowley, R. (1996), "Flaws and Omissions in the Maastricht Process for European Integration", in Paraskevopoulos, C. et al, *Economic Integration and Public Policy in the European Union*, Edward Elgar, Cheltenham, UK.

Dowd, K. and Greenaway, D. (1993), "Currency Competition, Network Externalities and Switching Costs: Towards an Alternative View of Optimum Currency Areas", *Economic Journal* 102, pp1180-1189.

Dyson, K. (1994), *Elusive Union: The Process of Economic and Monetary Union in Europe*, Longmans, Harlow, UK.

Eichengreen, B. (1990), "Is Europe and Optimum Currency Area?", CEPR Discussion Paper 478, London, UK.

Eichengreen, B. (1993), "European Monetary Unification", *Journal of Economic Literature* 31, pp1321-57.

Eichengreen, B. and Ghironi, F. (1995), "European Monetary Union: The Challenges Ahead", CEPR Discussion Paper 1217, CEPR, London, UK.

EMI (1997), *The Single Monetary Policy in Stage Three: Specification of the Operational Framework*, EMI, Frankfurt, Germany.

European Commission (1995), "One Currency for Europe", Green Paper on the Practical Arrangements for the Introduction of the Single Currency, Office for Official Publications of the European Communities, Luxembourg.

European Commission (1996a), "Conclusion of the Presidency - Dublin European Council, 13 and 14 December, 1996", SI (96) 1000, Brussels, December 14, 1996.

Financial Times (1997a), "Waigel backs down on gold", June 4, p1.

Financial Times (1997b), "Cook raises new single currency doubts", June 9, p6.

Financial Times (1997c), "France signals doubts over Emu", June 9, p1.

Financial Times (1997d), "Paris seeks Emu pact delay", June 10, p1.

von Hagen, J. and Hammond, G. (1995), "Regional Insurance Against Asymmetric Shocks: an Empirical Study for the European Community", CEPR Discussion Paper 1170, London, UK.

Hughes Hallett, A. and McAdam, P. (1996), "Four Essays and a Funeral: Budgetary Arithmetic Under the Maastricht Treaty", CEPR Discussion Paper 1505, London, UK.

Ilzkovitz, F. (1994), "Recent Developments in the International Use of Currencies: Towards a Tripolar Regime?", European Commission Document II/425/94-EN, European Commission, Brussels, Belgium.

Lamfalussy, A. (1989), "Macro-Coordination of Fiscal Policies in an Economic and Monetary Union in Europe", *Collection of Papers Submitted to the Committee for the Study of Economic and Monetary Union*, pp91-125, Office for Official Publications of the European Communities, Luxembourg.

Martin, P. and Ottaviano. G. (1995), "The Geography of Multi-Speed Europe", CEPR Discussion Paper 1292, London, UK.

McCallum, J. (1993), "National Borders Matter: Regional Trade Patterns in North America", McGill University Working Papers in Economics 12/93, Montreal, Canada.

Mundell, R. (1961), "A Theory of Optimum Currency Areas", *American Economic Review*, Vol. 51, pp657-675.

Obstfeld, M. (1986), "Rational and Self-Fulfilling Balance of Payments Crises", *American Economic Review*, Vol. 76, No. 1, pp72-81.

Sala-i-Martin, X. and Sachs, J. (1992), "Fiscal Federalism and Optimum Currency Areas: Evidence for Europe from the United States", in Canzoneri, M., Grilli, V. and Mason, P. (eds), *Establishing a Central Bank: Issues in Europe and Lessons from the United States*, Cambridge University Press, Cambridge, UK.

Soros, G. (1995), *Soros on Soros: Staying ahead of the curve*, John Wiley & Sons, New York, USA.

Tiebout, C. (1956), "A Pure Theory of Local Expenditures", *Journal of Political Economy*, Vol. 64, pp416-424.

Breakdown of World Exports by Currency Denomination and by Region
(1992)

Region	US$	DM	¥
North America, Australasia	15.0	0.3	0.3
Asia	15.5	0.6	4.2
Western Europe	6.7	13.6	0.3
OPEC	5.4	0.1	0.0
Other	4.9	0.7	0.1
TOTAL	**47.6**	**15.3**	**4.8**

Source: Ilzkovitz (1994)

Annex B

Timetable for the Final Stage of the EMU Process

Timing	Actions	Responsibility	Phase
As soon as possible in 1998	Decision on participating member states	Council	
As soon as possible after the decision on participating member states	Start production of euro banknotes; Start production of euro coins	ESCB Council and member states	A
January 1, 1999	Irrevocable fixing of conversion rates and entry into force of legislation related to the euro (legal status, continuity of contracts, rounding, etc.)	Council	A
From January 1, 1999	Definition and execution of the single monetary policy in euro; Conduct of foreign exchange operations in euro; Operation of TARGETpayment system; Issue new public debt in euro.	ESCB ESCB ESCB Member states	B
January 1, 1999 to January 1, 2002	Exchange a par value of currencies with irrevocably fixed conversion rates; Monitor changeover in the banking and finance industry; Assist the whole of the economy in an orderly changeover.	ESCB ESCB and public authorities in member states ESCB and public authorities in member states	B
January 1, 2002 at the latest	Start circulation of euro banknotes and withdrawal of national banknotes; Start circulation of the euro coins and withdrawal of national coins; Complete changeover in the public administration.	ESCB Member states Member states	C
July 1, 2002 at the latest	Cancel the legal tender status of national banknotes and coins.	Council; Member states; ESCB	C

Notes: ESCB (European System of Central Banks),
TARGET (Trans-European Automated Real-time Gross settlement Express Transfer).

Source: Association for the Monetary Union of Europe (1996)