

Why European monetary union?

Kirrane, Chris

April 1990

Online at https://mpra.ub.uni-muenchen.de/93417/ MPRA Paper No. 93417, posted 24 Apr 2019 14:57 UTC

Why European monetary union?

Chris Kirrane

Abstract

European monetary integration is on the agenda. In April 1989, the Dublin European Council announced its agreement on the European Monetary Union by January 1993, the date of the planned completion of the large internal European market. While the heads of state and government encourage monetary integration for essentially political reasons, economists examine the costs and benefits. This paper attempts to answer two fundamental questions that an economist would like to ask about European monetary integration: What are the reasons for moving towards monetary integration? What are the concrete measures?

Before first two questions, it is necessary to first clarify a prerequisite, that of final destination. The first section therefore examines in detail the meaning of the monetary union by insisting on the distinction between the 'irrevocably fixed' exchange rate and a common currency: it is therefore important to always clarify what is meant by 'monetary union'. It will also be shown that the quality of the overall monetary policy is as important for the union as the fixing of the exchange rate. The second section of monetary union with an anti-inflationary monetary policy should also bring substantial economic gains, even if they are not always measurable. In the third section, the concrete measures of monetary union proposed by the Delors Report (EC, 1989) will be examined.

It is generally accepted that monetary integration must be a monetary union. The meaning of this concept is not always clear. According to the Delors report, a monetary union is a combination of two elements: full liberalisation of capital movements and complete integration of financial and banking markets; the abolition of fluctuation margins between currencies and irrevocable locking of exchange rates.

The Werner Plan (EC, 1970) explicitly states that national currencies would then be perfectly substitutable, which would be tantamount to the creation of a common currency. A similar point of view is apparently underlying in the Delors' report. The proposal is to demonstrate, on the contrary, that an irrevocably fixed exchange rate system is not equivalent to a full monetary union, as the national currencies, the different units of account and therefore the transaction costs to switch from one currency to another will remain.

Transaction costs are the main obstacles preventing national currencies from being perfect substitutes even if the exchange rates are irrevocably locked. For a person doing his shopping in Germany, Italian lire are not perfectly substitutable and there is a transaction cost in exchanging lire to deutschmarks. This cost varies with the amount of the transactions but it is never negligible - up to 2 to 3% for the currency exchange - even if the exchange rates are very stable.

For these reasons, it seems unlikely that the fixing (even if it is assumed irrevocable) exchange rates in Europe would make made national currencies perfectly substitutable. Does it matter? Certainly, because of this imperfect substitutability, there are two important consequences on the political and economic levels.

First, that national currencies are substitutes, the demand for the national currency can remain stable. There is no compelling economic reason for the creation of a common monetary institution. As long as there is agreement on the dominant central bank, the system can be like the present with one dominant central bank to decide the direction of monetary policy (if it is the Bundesbank, it will probably be to maintain price stability) and the central banks of other countries adapt to it. The direction of the central bank will then be transmitted throughout the system by the exchange markets. The degree of substitutability of national currencies is one of the arguments in favour of a European central bank.

On the other hand, the benefits of monetary union cannot be transposed into an irrevocable exchange rate system. The main cost associated with monetary union - the loss of the exchange rate as an instrument of economic policy - would also manifest in a system of fixed exchange rates. This second argument concerning the economic costs and benefits of monetary union is further developed in the next section.

The benefits of fixing or even eliminating the exchange rate depend on controlling inflation. Although inflation rates are also difficult to measure in the monetary union, it would seem that even small ratios to the devaluation of price stability have costs as high as the potential gains associated with a common currency. It is therefore argued that a monetary union is not desirable as an area of 'monetary stability', in the sense of the stability of the purchasing power of money. It follows that the institutional measures discussed in the fourth section are intended not only to lock parities but also to ensure stability price.

The creation of a common currency would have us, according to experience, at least five advantages:

• The elimination of transaction costs: The most obvious reason for the introduction of a common currency currencies. Only the single currency can costs eliminate transaction completely. The savings realised on these costs come from the existence of the purchase-sale margin and foreign exchange commissions. A range of 2 to 5% or more for currencies is currently common.

• The elimination of cost information and the incentive to discriminate by prices: if the savings even on the direct transaction, are the maintenance of currencies. Consumers, who are accustomed to pricing in their own national currency, can compare prices expressed in different currencies, even if the exchange rate is fixed.

• Effective dynamic gains: The likely dynamic effects of the entry of a currency suggest the existence, as well as hypothetical, of additional gains. Economists have long recognised that the positive effects of integration market are dynamic in nature. Just recently, these effects have been measured. The models

developed to explain the nature of the factors which, in addition to exogenous technical progress, can lead to growth, are still embryonic but can, in principle, be used to evaluate the dynamic impact of the introduction of a common currency.

• A reduced need for official foreign exchange reserves. Savings on international reserves are a source of more macroeconomic of gains related to the common currency. As long as the national currencies are maintained, the monetary authorities will need foreign exchange reserves which the markets must deem sufficient to defend parity. The cost directly attributable to the holding of these reserves is likely to be low because they can be invested in interest-bearing assets; but the cost of acquiring and maintaining confidence in the commitment to maintain fixed exchange rates could be high, particularly for countries whose exchange rate has not been stable in the past.

• A stronger European presence in the international monetary system and in international financial markets: The introduction of a common currency could also give rise to other gains, of external origin this time. A single European currency could replace, at least in part, the US dollar for certain transactions. The resulting direct seigniorage gain for the European Central Bank would be small: at most perhaps ECU 30 billion in all, equivalent to efficiency gains of ECU 2.4 billion. However, substantial amounts could result from a massive substitution of the European currency against the dollar in international portfolios. Such transfers could, however, be only an uncertain benefit, as they may have adverse effects on the exchange rate of the European currency against the dollar, causing the US currency to fall below its US dollar long-term level.

What must be done to achieve a monetary union? First, those that countries still suffering from major imbalances must implement monetary restraint policies if they want to participate in a monetary union whose objective is to price stability. Finally, the measures that follow the approach proposed in the Delors Plan.

Several Member States are currently not even able to participate in the EMS exchange rate mechanism. And among those who participate in it, some might find it very difficult to join a monetary union whose objective would be price stability. The main reason is that inflation and inflation expectations are still high in these countries. One cannot hope to immediately reduce one or the other to zero or close to zero, as economic agents will take time to adjust to a stable price environment. Moreover, they would have good reason to adjust their expectations and behaviour gradually only if the imbalances underlying inflation had not disappeared. The existence of large public debt and deficits being one of the main reasons for governments to pursue inflationary monetary policy, the disinflationary effort would have much to gain from a convergence of fiscal policy. The extent of disinflation required varies, of course, from one country to another; the concrete steps to be taken too. Nevertheless, these changes in national policies constitute 'concrete measures' as important as the institutional recommendations of the Delors Report.

So far, it has been argued that a monetary union with a currency would common generate significant net economic gains. For some, the natural corollary of this proposal is that it is not necessary to take new institutional measures: if indeed the unification of the currencies is really profitable, the markets

will converge spontaneously towards the single currency. The only legal measure to be taken would therefore be to lift the obligation to use exclusively the national currency; it would not be necessary to fix exchange rates or coordinate national policies.

The economic logic underlying this proposal is extremely simple: since competition is generally the best market structure, it should be applied to the choice of currencies. Economic agents will adopt the best currency - probably the one with the highest purchasing power stability. This could be called the competing approach of currencies.

Although such an approach is based on a certain logic, it implies that the current monetary constitutions of the vast majority of countries are defective because they give governments the monopoly of issuing money. Proponents of this approach argue that the mismatch between the theoretical optimum and reality is of a purely political nature in that governments want to reserve for themselves a source of substantial gains: seignorage. However, even from a strictly economic point of view, one could argue that there are important economies of scale in the process of selecting a currency. The benefits of adopting a common currency are indirect manifestations of these potential economies of scale and the estimates of orders of magnitude discussed above indicate that these savings can be substantial. Free competition is not, in general, the optimal market structure in the presence of external economies of scale and it is therefore possible to defend, on purely economic grounds, the government monopoly over the currency and institutional measures aimed at monetary union.

Monetary union would be possible without major official intervention if the markets were to adopt a parallel currency, the ecu, which would gradually oust other currencies until, in fact, they become the common currency. Nor would this approach require the fixing of exchange rates. On the contrary, thanks to the increasing use of parallel money, a single currency could emerge without any need for convergence of national policies. The Delors report did not retain the parallel money approach and it does not represent a viable alternative since it seems unlikely that markets use a parallel currency if the transaction costs are high. This market approach could, at best, substitute for the second phase of the Delors report because, even if it succeeded in establishing a common currency, the need for a common monetary institution to manage that currency would always be felt.

The UK Government's proposal (HM Treasury, 1989) is a variation of the competition approach between national currencies. This document proposes that only the first phase of the Delors Report be implemented. At the end of this first stage, competition between currencies would become effective, as the liberalisation of capital markets and the single market for financial services would result in a diversification of the supply of services and financial instruments. However, it does not seem that this proposal means monetary union in its usual form of a single currency. As argued in the previous section, it seems unlikely that in the low inflation environment and reduced exchange rate variability that the first stage of the Delors Plan is expected to achieve, national currencies will be crowded out by a single parallel currency or by the strongest currency of the EC. It is therefore unlikely that competition between currencies will move towards monetary union.

In addition, the argument that only competition between monetary policies can ensure price stability, exaggerates the effective influence of competition between currencies and neglects the difficulties of anchoring prices and expectations in the environment created by the first phase of unification. Private markets do not always adopt the currency with the most stable purchasing power. The US dollar, for example, has not lost its place as the first international currency despite the fact that in the last twenty years it has lost more of its purchasing power than the mark - and, more recently, more than the yen. The reason is again the existence of economies of scale in the use of a currency. The stability of purchasing power is only one of the determinants of the success of a currency. The most fundamental conceptual problem with the this approach is that it aims to make currencies more and more substitutability between currencies would certainly constitute a progress towards monetary union.

The European Council had asked the Delors Committee to 'study and propose concrete measures for (monetary) union'.

Step 1: reinforce voluntary coordination

The first step raised few objections when the Delors report was presented to the Madrid European Council in June 1989. It started on 1 July - the deadline set by the Delors report - but no date was chosen for its completion. However, it was agreed that the Intergovernmental Conference be convened to determine the next steps should foresee its implementation before 1993. What are the main innovations of this first step and are they able to fulfill the objectives set?

The new features, whose impact on policy coordination as practiced in the current EMS is uncertain, are apparently three in number: (i) new coordination procedures within the Committee of Governors of central banks and the ECOFIN Council; (ii) participation in the EMS of all currencies; (iii) testing of some of the procedures being negotiated for later stages of EMU.

The first point was in principle clarified by the decision ECOFIN Council to replace the 1964 Decision, which defines the terms reference of the Committee of Central Bank Governors, and the Decision 1974 on Economic Convergence with new decisions defining the form and content of coordination efforts by central banks and the ECOFIN Council. The new decisions, which draw heavily on the Delors Report (§ 51 and 52), are difficult to assess since everything depends on the way in which the two European bodies make use of their mandate: the powers conferred by the Decisions of 1964 and 1974 were never fully utilised. Taken literally, the task of the Board of Governors would be to develop a more visible public image and strengthen its analytical capacity and the structure of its subcommittees, which would allow it to have an *ex ante* approach to monetary coordination, instead of the simple *ex-post* analysis it practices today. This would be a significant change; it remains to be seen whether the Governors will really want to express themselves more candidly in their reports to the European Council and Parliament, or in the collective opinions they are supposed to express on national economic policies. Discussions in the Delors Committee seem to suggest that in reality the chances of progressing voluntarily - without institutional change - towards genuine *ex-ante* coordination are probably very slim.

The Delors Committee conducted a short survey of European central banks about the possibilities of moving forward without modifying the Treaty. Summarised, the results show that smaller participants would have no problem submitting the proposed policy formulation and decisions to *ex-ante* co-ordination within the Board of Governors: small countries have lost all illusion of monetary autonomy. On the other hand, several of the larger countries did not envisage the possibility of significant progress without major changes in their national monetary legislation and in the Treaty. The reasons for this are twofold: in some countries, the responsibility for national monetary policy is shared between the central bank and the political authorities, the latter being reluctant to delegate their powers to a poorly defined mechanism of bank coordination; in others, the decision-making process of the central bank is so elaborate that it seems difficult to delegate, even through its president, any competence to a European body. The first of the two situations corresponds more or less to the case of France and probably *a fortiori* of the United Kingdom when the pound sterling has joined the union; the second, in the case of Federal Germany. From both of these points of view, it seems necessary to elaborate something better defined than mere voluntary co-operation before genuine change can occur.

Once the intergovernmental conference is convened and detailed proposals on the future steps towards EMU made - proposals to be incorporated into a redrafted Treaty -, there could be a feedback on the first step: the countries least inclined to consider an immediate review of the Treaty may be more concerned with proving that voluntary co-ordination modeled on the mandatory procedures proposed for subsequent steps can work as well as a reworked system. The prospects for institutional change, which until now have been absent in the EMS as long as the institutions were not threatened, would then be conceivable. Obviously, it is not possible to oppose such an implementation, at the first stage, of the ideas proposed for the next phase of complete and compulsory coordination. If this were to be the case, this would contradict the prediction made above, namely that the first two characteristics of the first step - increased symmetry of the system and greater risk of instability in the event of new members joining - unlikely to improve the quality of the system and, in the absence of institutional change, even threaten its stability.

However, the first hypothesis is that we must be prepared for the eventuality where the first stage proves to be unstable. This first phase should therefore be as short as possible, that is, it should not exceed the time required for the negotiation and ratification of a revision of the Treaty. As to whether there will be a subsequent evolution, it depends on concrete proposals for the next step. Before the irrevocable fixing of rates, the Delors report proposes an intermediate step.

Step 2: 'soft' union and emergence of a central bank

Why an intermediate step between the close but voluntary cooperation of the first phase and the irrevocable locking of exchange rates, followed by the introduction of a common currency, is it desirable or even necessary? Could we not simply extend this first step until all participants consider it possible to adopt this ultimate measure?

It seems unlikely that three of the elements necessary for the transition to irrevocably fixed rates and a European System of Central Banks (ESCB), the collective management body for policy monetary, emerge

without such an intermediate step. These elements are (i) consensus on the formulation of ultimate objectives, (ii) a common analytical framework for determining intermediate objectives and procedures for monetary policy, and (iii) sufficient common experience. These three elements are part of a learning process without which the last phase could hardly be implemented. The opinion expressed in the Delors report: an intermediate step, even a brief one, is indispensable. In particular, the learning of a real common decision-making is desirable before the total centralisation of the monetary authority in the last phase. In a way, things would be simpler if one could do without this intermediate step, since the division of responsibilities between the national central banks and the nascent ESCB is complex. It is therefore essential for the cohesion of the system that the allocation of powers be unambiguous.

The Delors Committee would not give details of this intermediate phase 'because this [transition] will depend on the degree of coordination reached during the previous step, the contents of the Treaty and on the decisions the new institutions' (EC, 1989, §57). As preparations for the intergovernmental conference accelerate, there is an urgent need to clarify how the interim stage can provide a framework for the learning process.

To the extent that exchange rates are effectively stabilised and the likelihood of a change is deemed low, national monetary policies will, in practice, be increasingly constrained. Stabilising exchange rates requires therefore the development of a framework for cooperation and coordination of national monetary policies. The higher the degree of fixity of exchange rate and the more mobile the capital, the closer the coordination must be and the general orientation of the policies of the members decided jointly.

Implementing a common policy, however, requires a certain consensus on the objectives - final and intermediate - on the formulation of monetary policy and the use of its instruments; but it cannot be said that such a consensus exists today, at least in an explicit way.

For each of the central banks, the main objective will be, during the second phase, to ensure a credible maintenance of stable exchange rates *vis-à-vis* other currencies. *Ex ante* co-ordination of domestic credit growth objectives should facilitate this task; in practice, banks may occasionally deviate from the stated objective to ensure short-term stability of exchange rates.

The common formulation of the final and intermediate objectives of monetary policy would, in itself, constitute an important step towards *ex ante* coordination. The participating central banks intensify their exchange of information on how they formulate monetary policy, using a common analytical framework in their preparatory work and developing all common intervention strategies and common general guidelines to increase domestic credit, instead of merely reviewing past developments. Even if these new common guidelines were not binding, coordination could become narrower, in preparation for the next stage; in principle, this process starts in the first phase.

However, it is unlikely that a common monetary policy will emerge from mere discussion, without giving the ESCB real decision-making powers, at least as regards certain important instruments of monetary policy.

It is obvious to share the monetary authority between a central body - the ESCB Board and the Executive Board - and the national central banks. Operational efficiency requires that there is never the slightest doubt, either in the financial markets or in the minds of the national political authorities, about the respective responsibility of each of the organisations in a particular decision.

In the second phase, any viable centralisation of instruments or expertise within the ESCB will certainly have to concern three types of monetary policy decisions:

- the adjustment of short-term interest rate differentials;
- intervention policy with respect to third currencies;
- Short-term interest rate differentials

The modulation of short-term interest rate spreads is the main management tool of the current EMS; it is also the one which will be the first concerned by a progressive centralisation of responsibilities. Its handling has in the past been the subject of extensive coordination and occasional joint or at least bilateral decision-making. But the gradual transfer of responsibilities for the management of interest rate differentials, from national bodies to a community body - the Governing Council in the first phase and then the ESCB Council from the second stage - this will not suffice to ensure that the average level of interest rates in member countries will be appropriate, even though there should be less escalation in interest rates and tensions than in the current system. In order to be able to better control the average level of interest rates, the ESCB should be able to have an instrument to influence domestic sources of money creation. Such an instrument would be the power to impose reserve requirements on domestic monetary creation and gradually develop a market for a European reserve asset with a specific interest rate.

• Intervention policy vis-à-vis third currencies

Interventions on the foreign exchange markets of third currencies constitute a second instrument for which joint management could be envisaged. In principle, a common intervention policy could be implemented by agreeing on common guidelines and leaving national central banks to carry out interventions in a decentralised manner. On the other hand, it is probably important to explicitly demonstrate the ability of member countries to work together on third currencies in a way that strengthens the cohesion of the EMS. In the absence of an ESCB presence on the main foreign exchange markets, it will be difficult for the ESCB to intervene at source to prevent external financial shocks from having an impact on the stability of the EMS. Therefore, a 'some pooling of reserves' (EC 1989, § 57), as well as made available to the ESCB significant reserves in EMS currencies is desirable in the second phase.

In the absence of an adequate operational structure, a common intervention policy could be implemented by one of the participating central banks. As long as exchange rate flexibility persists and the ESCB is not operational, a national central bank could play the role of executing the decisions of the ESCB. It would not be a strict enforcement agent, such as the Federal Reserve Bank of New York, as there would be some discretion in the interpretation of the guidance provided by the ESCB Executive Board. The candidate nominated for this post would be the Bundesbank, which already carries out most of the interventions *vis-à-vis* the third currencies of the member countries of the exchange rate mechanism of the current EMS. The Bundesbank can also be trusted to interpret the ESCB's recommendations in a manner consistent with price stability. This in itself would already help to ensure that the ESCB will practice a strict anti-inflationary policy. As the irrevocable fixing of exchange rates approaches and the residual national competence in monetary policy becomes more circumscribed, this room for manoeuvere will be reduced until the ESCB has developed its own capacity to intervene in currency markets or the relevant department of the Bundesbank is incorporated into the ESCB.

• Required reserves

The power to impose a reserve requirement ratio on domestic monetary creation and to vary this coefficient could be a third instrument specifically earmarked for the ESCB. Increased substitutability among participating currencies, as a result of the integration of European financial markets, induces the monetary authorities to think about monetary creation in an aggregate way - for the whole area - to formulate intermediate monetary creation objectives compatible with the aggregated objective and to develop procedures to maintain the overall aggregate at the level agreed upon; Ciampi (1989) proposes an analysis of the possible options. The bottom line is that the ESCB has the power to impose a mandatory reserve ratio, uniform or differentiated across countries, either on the growth of the monetary liabilities of the national central banks, or on the credit granted by the banks to their resident sectors. These reserve requirements would be deposited with the ESCB and the supply would be controlled by the latter through the allocation assets of reserve (in official ecu) corresponding to the demand of each national central bank, to the extent that the objectives of monetary creation and increase of interior credit would be respected. Both cost considerations and the availability of reserves would encourage central banks to maintain domestic monetary creation close to the targets set. This should be done by giving the ESCB discretion over advances and withdrawal of reserves, so as to allow marginal deviations from targets. The new system could easily replace the current method of creating official ECUs with temporary swaps on the fifth of the gold and dollar reserves, together with the grant system, by the European Monetary Cooperation Fund (FECOM) of credits by the mechanism of 'very short-term facilities'.

The system would create a monetary control mechanism similar to that used by national central banks that use reserve requirements to influence money creation and credit growth in their respective banking systems. A hierarchical relationship would then be established between the ESCB and the national central banks, while leaving them room for manoeuvere in the choice of instruments for internal use.

Alternatively, one could conceive that the ESCB imposes reserve requirement ratios directly on the growth of domestic credit in the national banking systems, i.e. on the sources of national money creation. The advantage of this method lies in assigning the collective monetary instrument to an intermediate objective - the increase in domestic credit - which corresponds more closely to the fixed exchange rate system; but it may introduce a certain margin of error into the control mechanism, since

the coefficients would not apply to the balance sheet items of the central banks for which they are most directly responsible.

Another approach that allows the ESCB to have some direct influence on financial market conditions would be to impose a uniform reserve requirement ratio on deposits in commercial banks or on their growth. This variant would require all commercial banks in the Community to freeze, in the form of reserve requirements from a central monetary institution, a fraction of their deposits. Only 'federal funds', which could be denominated in ecu, could be used for these reserve requirements. The overall supply of these federal funds would be under the strict control of the ESCB, the latter being the only institution that can issue them. The task of allocating funds to different countries and banks would be left to a market of federal funds on which commercial banks would exchange the deposits with the central monetary institution, they would need to meet the reserve requirement requirements. The system would then be analogous to national reserve requirements systems but at the European level. The European reserve ratio requirement could therefore be in addition and independent of the national coefficients.

This approach would imply that the ESCB is directly involved in a market reflecting the liquidity conditions at Community level, which would be all the more desirable as the ESCB would be more concerned with the general conditions than with the conditions specific to the national markets. In order to ensure a gradual transfer of powers from national authorities to Community authorities, it may be useful to initially impose a limit on the total volume of open-market operations that the central monetary institution would be allowed to carry out at the beginning of the year. These restrictions could be gradually lifted during the second phase of unification.

This could be implemented by giving the ESCB the power to impose a reserve requirement on all EC resident deposits with commercial banks in the Community. To allow banks access to deposits with the ESCB, the latter would initially acquire the required amount of securities on the market. These securities could be denominated in ecu or national currencies provided that the proportion of the securities denominated in the various currencies corresponds to their weighting in the ecu. Once this initial amount of federal funds has been created, the ESCB would control the total volume of federal funds in the system through open-market purchases or sales. Through the terms of its open market operations, the ESCB would directly influence the liquidity of the system: if it made an open-market sale, reducing the volume of available liquidity, the commercial banks of the Community would have to restrict their deposits, since the interest rate on federal funds would increase; by limiting the volume of available federal funds would increase; by limiting the volume of available with different operating procedures of the ESCB: it could, for example, choose a target interest rate and restrict (increase) the supply of federal funds whenever the effective interest rate of the ECU or federal funds would become lower (higher) than the goal; but it could also target the volume of federal funds by leaving the interest rate to adjust supply and demand without intervening in the market.

It is likely that different procedures will need to be considered for the second and third stages of the unification process, but the mechanism itself does not need to be changed to allow for the transition to

the third phase. The subsequent evolution of the system would then be gradual and could ensure the smooth transition to the final stage without major institutional changes.

It remains to be seen how the only decision that, in the current framework of the EMS, is, in practice, today the subject of a joint decision-realignments of money parities-could be dealt with in the second phase. Would it be more appropriate to transfer this instrument to the ESCB, or should it be left, as in the current EMS, to the ECOFIN Council?

There are arguments for and against such a transfer of jurisdiction, but in order to decide in favour of either of these two bodies, the extent to which the members have fulfilled the necessary complete union. Even if this proved possible, it would be dangerous to shift responsibility for realignment decisions to the ESCB in the second phase if deep divergences in economic performance persisted. But it would be desirable to shift this responsibility if the use of realignments was only occasional and if the ESCB had the necessary monetary instruments to support fixed rates as described above. As a conclusion on this point, it could be said that the power to decide on realignments could be part of the ESCB's remit in the second phase, but that this is a transfer of competence less of a priority than the attribution other instruments of day-to-day management of an increasingly collective monetary policy.

Step 3: 'hard' union with collective authority over economic policy

This part will be brief since we have already, in our evaluation of the costs and benefits of the EMU in the first section, examined the main characteristics of the ultimate phase. Compared to the intermediate stage, the major changes are the irrevocable fixity of exchange rates, which will have to be quickly followed by the introduction of a common currency, the complete centralisation of monetary powers, entrusted to a European system of central banks, and the transition to binding procedures in fiscal policy.

The key element of the third phase is, of course, the constitution of the ESCB, which must guarantee its independence and encourage its decision-making bodies to pursue the objective of price stability. The main elements for ensuring the implementation of a stability-oriented policy are:

- the obligation to maintain price stability;
- the independence of the institution *vis-à-vis* other economic bodies and the independence of the members of the Executive Board through a long-term mandate;
- the prohibition of granting credits to the, European public or national sector.

These structural elements of the ESCB are now the subject of a broad consensus. The only remaining task is to incorporate them into the ESCB statutes to be elaborated at the upcoming meeting of the intergovernmental conference on EMU.

Bibliographical references

CIAMPI, C. A. (1989). 'An Operational Framework for an Integrated Monetary Policy in Europe, Appendix to the *Delors Report*, pp. 225-232.

COHEN, D. (1989). 'The Costs and Benefits of a European Currency', Ch. 7 in M. de Cecco and A. Giovanni eds., A European Central Bank, Italian Macroeconomic Policy Studies and CEPR, Cambridge University Press, Cambridge, pp. 195-209.

EC. (1970). Report on Economic and Monetary Union, *Werner Report*, Brussels, CEC. EC, 1989: Report on Economy and Monetary Union in the European Community, *Delors Report*, Luxembourg, BPOCE.

EMERSON, M. (1988). 'The Economics of 1993', European Economy, No. 42, March.

HM Treasury. (1989). An Evolutionary Approach to Economic and Monetary Union, London, November.

LOUIS, J.V. (1989). Towards a European System of Central Banks, Collection directed by the Institute of European Studies, Editions of the University of Brussels.

PÖHL, K.O. (1989). 'The Further Developments of the European Monetary System', Appendix to the *Delors Report*, pp. 131-135, September.

ROMER, P. (1989). 'Increasing Returns and New Developments in the Theory of Growth', NBER Working Paper No. 3098, September.

STOCKMAN, A.C. (1988). 'Sectoral and National Disturbances to Industrial Output in Seven European Countries', *Journal of Monetary Economics* 21, pp. 387-409.

WALTERS, A. (1986). Britain's Renaissance Economy, Oxford University Press, Oxford.