

ESSAYS IN INTERNATIONAL FINANCE

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MONETARY INTEGRATION

W. M. CORDEN



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

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PREFACE

This essay is based on my Frank Graham Memorial Lecture given in April 1971. It was a pleasure to deliver a lecture in memory of a distinguished economist who had specialized in international economics most of his life (and who, like so many leaders in that field, was a Canadian). While his main work was in the area of real, rather than monetary, international trade theory, he was certainly interested in the issues discussed in this essay, and it is intriguing to reflect what his advice would have been to the Europeans on the question of monetary integration. He was the author of *Essay in International Finance No. 2*, published in 1943, entitled *Fundamentals of International Monetary Policy*. In this essay he criticized the Keynes and White plans because

... their authors favor fixity of exchange rates in neglect of domestic monetary policies and, conscious of the disruptive effects to be expected in this situation, present measures of half-hearted coercion of such states as are recalcitrant in their adhesion to some undefined national monetary policy which, it is fondly hoped, will more or less miraculously emerge as the "norm" (p. 21).

He listed a choice of five possible policies, with his own preference for a commodity standard. One of the alternatives he listed was monetary integration, and this he rejected. Of course he meant *international* monetary integration, not integration embracing only part of the industrialized world. He described this alternative as "enforced stabilization of both price levels and exchange rates through the imposition, on all countries, of the requisite monetary policy, with some central bank for central banks as the ultimate governing authority." On this he made some very quotable remarks:

The struggle for control of such a bank would be fierce and would be solved, if at all, only by giving the lion's share to the lion or, not improbably, to the eagle. The chances are strong that the system would be sabotaged by the action of some powerful country, or countries, reluctant to follow the general policy of the controlling authority or in disagreement with the methods by which it sought to make its policy effective. This is not, perhaps, a matter for regret since Freedom must always look with a skeptical eye on an international organization which would bind all to a single monetary scheme laid down by some omnipotent, but fallible, authority (p. 22).

The lecture on which this essay is based was written while I was Visiting Professor in the Department of Economics of the University of Minnesota. In the revision of the lecture I have greatly benefited from comments by William Branson, Charles Freedman, Peter Kenen, Anne Krueger, Peter Oppenheimer, and Lex Reitsma.



Monetary Integration

What are the gains and losses to potential partner countries when they form a monetary union? Furthermore, what do we really mean by a "monetary union"? Can the elements of monetary integration be decomposed, so that we can analyze the effects of each of the elements separately? Is there some inevitable connection between a customs union and a monetary union, so that countries that have formed a customs union ought naturally to go on to form a monetary union? And, finally, must monetary integration also mean fiscal integration?

These fundamental questions are currently of practical importance, since monetary integration is in the air in Europe. The Werner Report of October 1970 to the Council of Ministers of the European Economic Community recommended "the realization by stages of economic and monetary union in the Community" and set out some quite detailed proposals, concluding that "economic and monetary union is an objective realizable in the course of the present decade." While this report generated a good deal of opposition and skepticism, its basic aim was endorsed in February 1971 by the EEC Council of Ministers. The Council agreed on a program for the first three-year stage of a plan to achieve full economic and monetary union by the end of the present decade.

The proposals for the first stage were rather modest, and there was no definite commitment to move on to the next stages. Events since May 1971 have interrupted moves to monetary integration—and ought to have brought home some of the difficulties. By the end of 1971 little had been achieved. Nevertheless, the exchange-rate realignments that have recently been agreed upon might ease once more the moves to integration. Furthermore, there is sufficient motive power behind the continuous pressure toward "completing" European integration—leading perhaps to political integration—that one should take the Werner report's radical proposals and the EEC's general endorsement of them quite seriously. A revival of the movement toward monetary integration is certainly possible.

The approach in this essay is as follows. In the first seven sections, monetary integration is discussed on the assumption that capital movements among the countries forming the union can be ignored. In section 1 the concept of exchange-rate union is explained, the crucial distinction being made between a pseudo and a complete exchange-rate union. Section 2 discusses the costs of an exchange-rate union, namely, enforced departure from internal balance, and sections 3 and 4 pursue special

aspects of this theme. Section 5 considers a possible gain from an exchange-rate union, namely, an increase in domestic price stability (but shows that, in fact, an exchange-rate union might also reduce stability). Sections 6 and 7 consider the effects of trade integration (section 7 concerns the EEC's agricultural policy) on the gains and losses from an exchange-rate union.

Capital movements are introduced in sections 8, 9, and 10. Section 8 discusses the gains and losses from capital-market integration (which is assumed to be one component of monetary integration, exchange-rate union being the other), section 9 discusses how exchange-rate union may affect capital movements and so yield possible gains additional to those discussed in section 5, and section 10 asks whether capital mobility can solve the internal balance problem created by exchange-rate union and so modify or eliminate the costs it imposes. Finally, section 11 is concerned with the relationship between monetary integration and fiscal integration.

1. What Do We Mean by Monetary Integration?

"Monetary integration" has two essential components. The first component is what might be called an *exchange-rate union*, that is, an area within which exchange rates bear a permanently fixed relationship to each other even though the rates may—in unison—vary relative to nonunion currencies. The second component is *convertibility*—the permanent absence of all exchange controls, whether for current or capital transactions, within the area.

Convertibility for transactions directly connected with trade must really go with a customs union to make the latter meaningful; it will be assumed here that such convertibility exists. (The relationship between trade integration and monetary integration will be discussed further in section 6.) Convertibility for capital transactions, including interest and dividend payments, is the principal element in what might be called *capital-market integration*—the establishment of a unified capital market with no geographic restrictions of any kind on capital movements (or the rewards to capital) within the area. Essentially, then, monetary integration can be regarded as consisting of an exchange-rate union combined with capital-market integration.

While these two components are of course related, it is useful to analyze them separately. It is possible to have groups of countries that maintain fixed exchange rates relative to each other over long periods and yet do not allow complete freedom of private capital movements among them. This, indeed, has been the case in Europe, and many examples could be cited. It is also possible to have complete freedom

of capital movements combined with a fluctuating exchange rate: the obvious example is the United States-Canada relationship.

The pseudo-exchange-rate union. Let us now look at the concept of exchange-rate union in more detail. A distinction can be made between a pseudo-exchange-rate union and a complete exchange-rate union. One can conceive of an arrangement where the member countries agree—no doubt solemnly—to maintain fixed exchange-rate relationships within the union but there is no explicit integration of economic policy, no common pool of foreign-exchange reserves, and no single central bank. This is a pseudo-exchange-rate union.

The members of the union might determine that, for accounting purposes, one of their currencies is to be the reference currency. Alternatively, they might establish a new accounting currency for the purpose (the *Europa?*). Then each of the other partners agrees to keep its exchange rate fixed relative to this reference currency. Each country has its own foreign-exchange reserves and conducts its own monetary and fiscal policies. If it finds that it is running out of reserves, then—to make good its solemn promise—it must engage in a monetary or fiscal contraction sufficient to restore the reserve position. Every six months or so, or perhaps much more frequently, the finance ministers or central-bank governors meet and consider whether they wish to change the parity of the reference currency. If it changes, then all the other currencies must, of course, move with it.

One can see a number of difficulties straight away. First, with each finance minister or governor mandated to fight for that common exchange rate most appropriate to his own country's balance-of-payments situation, agreement will certainly be difficult to reach, bargaining will be hard, and the system will be subject to continuous strain.

Second, each session will be accompanied by speculation about its outcome and hence speculative capital movements into or out of the union. For this and the previous reason, one suspects that if a system of this kind were set up—or if countries drifted into such a system—in practice the line of least resistance would be to keep the exchange rate of the reference currency fixed permanently. In other words, an exchange-rate union would be achieved by a system of completely fixed exchange rates relative to all currencies. This, in fact, has been the line of thinking of advocates of European monetary integration. They have wanted their countries to avoid exchange-rate alterations relative to each other but, since the countries have not so far set up adequate machinery for a proper monetary union, they have tried—albeit unsuccessfully—to avoid all exchange-rate changes, even ones where they would all move together relative to the dollar.

Third, this system does not allow for the possibility of the reference currency floating relative to outside currencies, or even fluctuating within a band. Suppose that the reference currency does float. It will do so in response to conditions in its own market. For example, an expansion of the money supply in the reference country will cause the reference currency to depreciate. Similarly, a shift in foreign demand toward the reference country's exports will cause its currency to appreciate. The pseudo-union system requires the monetary authorities in the partner countries to vary *their* exchange rates so as to maintain constant parities relative to the reference currency. They will have to buy and sell dollars (the outside currency) so as to sustain or bring about the necessary exchange-rate alterations. If world demand for their exports falls, they will not be able to devalue but will lose reserves, and eventually they will have to restrict domestic expenditure. It has to be remembered here that in this pseudo-system there is no common pool of reserves. Each country has its own reserves (though the reference country itself, if its currency is truly floating, may need few or no reserves). The market rate of the reference currency that will emerge (and that will determine the exchange rate for the whole union) will not take any direct account of conditions in the markets for the other union currencies. The monetary authorities of the reference country will, in fact, be able to determine the exchange rate for the whole union.

Fourth, such a system does not assure the permanence of the relationships between currencies that is implied in the concept of monetary integration. This is the crucial point, and for this reason we must describe such an arrangement as only a *pseudo*-exchange-rate union. There is always the possibility that the finance ministers will not agree, that one of the countries finally will choose not to deflate to the extent required to maintain its rate at the required parity, or that a surplus country will choose neither to build up its reserves nor to inflate as required and so will allow its rate to rise above the solemnly agreed-upon level.

It follows that true monetary integration must involve more than a pseudo-exchange-rate union. At the minimum, one might imagine some automatic arrangement whereby surplus countries help to maintain the parities of deficit countries up to a certain limit of funds provided, giving the deficit countries time to adjust. Surplus countries might operate directly in the market for the deficit countries' foreign exchange, or, alternatively, they might make loans or grants to the deficit countries' central banks.

This is not unlike what was proposed in the EEC decisions of Feb-

ruary 1971. There was to be medium-term financial aid for members with balance-of-payments difficulties. The credits that would be provided would not be automatic and would have limits. Ceilings were set to the funds that members might be called on to contribute. In addition, the central banks were to intervene in the markets in a concerted way to keep within a narrow range the fluctuations around par values of the EEC currencies relative to each other. Much attention has been given to this latter proposal, which was worked out in some detail by the committee of Governors of the Central Banks. It meant that the various rates would move up and down together somewhat in relation to the dollar. It involved certain technical complications, but since the range of fluctuations would be small, its only really important effect, if implemented, would be that the central banks would acquire the habit of cooperating.

The complete exchange-rate union. All this does not assure the permanence of exchange-rate relationships and, in fact, does not overcome any of the problems I have mentioned. So let us suppose, rather, a much more radical step, namely the complete pooling of the foreign-exchange reserves of the union countries. A union central bank might be established to be responsible for managing the common fund. Now we are coming much closer to a common currency and a complete exchange-rate union. The union central bank would operate in the market to maintain permanently the exchange-rate relationships among the various union currencies and, at the same time, it would allow the rate of the reference currency to fluctuate, or to alter intermittently, relative to the dollar. For example, if the foreign-exchange (dollar) reserves in the common pool were running down, the bank would allow the reference currency, and with it all the partner currencies, to depreciate. Technically, a proper exchange-rate union could now be achieved.

The common reserve fund, like the EEC's arrangement for medium-term financial aid, would have the incidental by-product of economizing on foreign-exchange reserves, since all the countries would not tend to be in deficit and surplus at the same time, and surplus countries would automatically be helping deficit countries. This indicates one of the motivations for monetary integration in Europe. It would be possible to economize on dollars—in the fashionable European language, to “reduce the role of the dollar” or “reduce Europe's dependence on the dollar.” But this is a minor aspect of monetary integration.

A common foreign-exchange pool makes an exchange-rate union possible technically. But, in the absence of further measures, it does not make it practical. If each country conducted its own monetary policy, and

hence could engage in as much domestic credit creation as it wished, surplus countries would be financing deficit countries without any incentives for the deficit countries to restore equilibrium. If one country ran a large deficit, the common exchange rate would depreciate, but this might put other countries into surplus. If wage rates were rising in the member countries at different rates, while productivity growth did not differ in such a way as to offset the effects on relative prices, those countries with the smaller inflation of wage rates would be permanently financing other countries. In the European context, one usually thinks of Germany financing France.

One could now proceed in either of two ways. The first method is *integration through talk*—a special case of a pseudo-union. One could allow each country to retain the machinery of currency and credit creation, but introduce “economic policy coordination.” The finance ministers of the member countries would meet regularly and discuss each other’s policies. They would make recommendations and perhaps give instructions to each other about economic policies. One country should deflate somewhat, another should inflate, and so on. This might be described as “multilateral surveillance” activity (in the language of the Organization for Economic Cooperation and Development). This type of procedure appeared to be envisaged in Europe for the first stage of monetary integration. According to the EEC Council of Ministers’ resolution of February 1971, the Council is to hold three meetings a year to examine the economic situation in the Community and to adopt guidelines for short-term economic policy for the Community and for each member to achieve harmonious economic development. The problem is, again, how to bring about agreement, and then how to enforce the agreement. In fact, the difficulties are much the same as in the case I mentioned earlier of the meetings of finance ministers and central bank governors to fix the reference exchange rate.

The alternative is to go the whole way. A Community central bank is established which not only holds the common foreign-exchange reserves but also has the sole right to create money in the union. If an exchange-rate union is to be truly permanent and effective, this seems to be inevitable, as indeed is recognized in the Werner report. One can, of course, imagine the Community central bank taking over the role of the individual central banks gradually. But the end result is a *complete exchange-rate union*—literally *monetary* integration. It means that the government of any one of the partner countries can no longer run a deficit that is financed by its own central bank. Either the Community central bank must finance it or the government must go on the open market.

In Europe there has been some debate as to whether "monetary" integration should precede or follow upon "economic" integration. By "monetary" integration is really meant what I have called a pseudo-exchange-rate union, while by "economic" integration is meant, at the lowest level, "economic policy coordination" or "multilateral surveillance" and, at the highest level, a common central bank and possibly also some kind of fiscal integration.

One view is that if a *pseudo-exchange-rate* union were set up first, tensions would develop that would then lead to "economic" integration—and hence to a *complete* exchange-rate union—the tensions being the pressures from surplus countries on deficit countries. The other view is that "economic" integration (which is usually ill-defined in practice) should come first; the exchange-rate union could then follow without tensions, and surplus countries would not find themselves involuntarily financing deficit countries. The first view has been favored by France and the second by Germany and Holland. Since "economic" integration, if genuine, is a much bigger step than establishing a pseudo-exchange-rate union, and since the establishment of the latter will set up tensions to move to the former, the chances of both being eventually attained are greater if the pseudo-union comes first. Hence the "Europeans," who are mainly interested in keeping the pace of integration moving, favor beginning with the pseudo-union.

I have emphasized that a pseudo-exchange-rate union, where each union country is responsible for its own foreign-exchange reserves and monetary policy, is not the "real thing." Nevertheless, a pseudo-union is certainly worth analyzing carefully. It may lead to quite long periods when exchange parities within the union do remain more or less fixed relative to each other. Furthermore, it may be an inevitable, and possibly quite long, intermediate step on the way to a complete exchange-rate union. This would certainly be so in the EEC if the French point of view prevailed (as it has so often in the past). Much of the following discussion applies both to a pseudo-union (provided it is reasonably effective) and to a complete union, but at various points the distinction between the two will be made and will turn out to be significant.

Nothing has been said so far about capital-market integration. It is convenient to postpone systematic discussion of capital movements until later, since they present many complications. Right through sections 2 to 7 it should be imagined that there are no private capital movements at all. The subject is sufficiently complicated without them. It is useful to see how far one can go while supposing capital to be immobile among countries and to discover later precisely what difference it makes once we allow for capital mobility.

2. The Losses from an Exchange-Rate Union: Departure from Internal Balance

Do the various members of a group of countries gain by permanently fixing the relationships among their exchange rates? In considering this question, I shall assume at this stage not only (1) that capital is immobile among them but also (2) that labor is immobile among them and (3) that the use of tariffs, import quotas, and similar devices for balance-of-payments purposes is ruled out.

It is hardly necessary to restate the elementary case for variable, or at least occasionally varied, exchange rates. In a world of at least three countries, country A may need to depreciate and country B to appreciate relative to the outside world, if each is to maintain internal and external balance, assuming that fiscal and monetary policies in each country are used to maintain internal balance. But if A and B form an exchange-rate union, they can jointly depreciate—which would suit A—or jointly appreciate—which would suit B—but they cannot alter the exchange rate to suit both. If the exchange-rate adjustment leaves A with a deficit, it will have to deflate, hence creating unemployment; if the adjustment leaves B with a surplus, it will either have to be content with accumulating reserves or allow its wages and prices to rise.

The main theme is that if countries do not permit themselves appropriate exchange-rate adjustments (or import restrictions and similar devices), they impose on themselves losses that are essentially the losses resulting from enforced departure from internal balance.

When the problem is posed in this familiar way, one wonders why countries should ever wish to tie their hands on exchange-rate adjustments. One needs an argument *for* fixed exchange rates within a region—a fixed exchange rate *gain* that can be traded off against the clear losses to which I have just referred. But before going in search of this gain, let us look more closely at what determines the extent of the losses I have just described.

One simple approach, making use of the Phillips curve concept, is the following. (I shall say something shortly for nonbelievers in the Phillips curve.) Each country has a Phillips curve indicating rates of change of money wages that go with various levels of unemployment. Furthermore, each country has a particular rate of labor-productivity growth, depending on its rate of capital accumulation, technical progress, and various other factors. The latter yields a particular rate of change of its costs for each given rate of change of money wages and hence for each point on the Phillips curve. Thus we can conceive of a “trade-off” curve relating rates of change in costs with levels of unemployment.

In principle, for each country there is a point on this curve indicating

the optimal trade-off between unemployment and inflation. Strictly, it is *price* inflation and not just domestic *cost* inflation that is relevant for the trade-off, and price inflation also depends on the rate of change of foreign prices, but for the simple argument one can ignore this complication. The optimal point can be described as the point of *internal balance*.

If the various countries of the union had the same rate of change of costs at their internal-balance points, then, assuming initial external equilibrium and no *structural* shifts over time (to which I refer further below), there would be no need for relative exchange-rate changes over time. Hence, the establishment of an exchange-rate union would inflict no costs. Otherwise, optimal policy from this trade-off point of view calls for relative exchange-rate changes.

If the optimal policy involves different rates of cost inflation, but exchange-rate relationships are in fact fixed, it becomes necessary for countries to depart from their optimal points so as to ensure a uniform rate of change in costs. Some countries will be compelled to have more unemployment than they wish, and some, more inflation. If a complete exchange-rate union is established, with a common central bank, one cannot readily predict whether the common policy will be unemployment-biased or inflation-biased, but if it is only a matter of a pseudo-union, it seems likely that the potential deficit countries will have to depart from their optimal points rather than the potential surplus countries, so that the union will be unemployment-biased. But, broadly, one might say that the costs of enforced exchange-rate rigidity will be greater the greater the differences among the various optimal rates of change of costs.

It will be observed that three considerations are involved: countries may differ with respect to (a) the positions of their Phillips curves (that is, trade-union aggressiveness, structural considerations affecting unemployment, and so on), (b) their rates of productivity growth, and (c) the preferences or trade-offs of their governments and central banks between unemployment and inflation. A difference in any one respect can create a problem, unless the difference in another respect is offsetting. The various member countries of the EEC, actual and potential, have had very different rates of price inflation in the postwar period and clearly differ in all three respects.

A complication to this simple analysis is that there may be structural shifts in demand and supply over time, reflected possibly in terms of trade changes, which might require the countries within the union to alter their exchange-rate relationships so as to maintain external equilibrium, even when their general rates of cost inflation are identical. Hence, one must add a fourth consideration to the three listed above

when judging whether an exchange-rate union would compel countries to depart significantly from their optimal points on the inflation-unemployment trade-off curve.

This approach has been concerned with continuous or "dynamic" disequilibria, calling ideally for floating exchange rates or some kind of crawling peg. There may also, of course, be once-and-for-all ("static") changes in relative costs, owing perhaps to a burst of trade-union activity in one country, or once-and-for-all structural demand or supply shifts. These call for once-and-for-all exchange-rate adjustments.

Something more can be said about the extent of the losses when the exchange-rate instrument is forgone. The *marginal propensity to consume tradeables* is relevant.

Imagine that a country is initially in internal balance (the optimal point on the trade-off curve) with an external deficit. If the exchange-rate instrument were available, the appropriate policy would consist of devaluation to achieve external balance, combined with some expenditure reduction to maintain internal balance. When the exchange-rate instrument is ruled out, it is necessary for expenditure to be reduced more than in the optimal case, and excess unemployment will result. This excess unemployment, valued in some way, possibly by the loss of output it represents, is the *cost* of forgoing the exchange-rate instrument. The extent of this loss depends, among other things, on the marginal propensity to import and to consume goods that would otherwise be exported, or, more broadly, on the marginal propensity to consume tradeables relative to nontradeables.

Let us focus on imports here. The higher the marginal propensity to import, the less the expenditure reduction required to eliminate any given initial external deficit. Furthermore, the higher the marginal propensity to import, the less a given expenditure reduction will affect demand for domestically produced goods. Hence, for both reasons, the higher the marginal propensity to import, the less domestic unemployment will result from a policy of forgoing the exchange-rate instrument and relying on expenditure adjustment alone. Of course, as long as the marginal propensity to consume domestic goods is greater than zero, there will be *some* cost from exchange-rate fixing. Similarly, a country that is in surplus, and that is forced to rely on expenditure adjustment as the only instrument of policy, can increase expenditure to eliminate its surplus with little effect on demand for domestic goods, and hence little inflationary pressure, if its marginal propensity to import is high.

Recent wage movements in many countries throw some doubt on the idea of a reasonably systematic or stable relationship between unemployment and the rate of change of money wages. Hence, disbelief in the

Phillips curve might be justified. One could take the view that the rate of change of money wages depends on many things, the level of unemployment or excess demand for labor possibly having some influence sometimes. Our analysis can then be very simple and unsophisticated, provided we make one assumption. This is that money wages are not adjusted in response to changes in the cost of living (and hence in the exchange rate) to the extent of maintaining some given, or pre-existing, level of *real* wages. This case will be discussed in the next section.

On this assumption, one can simply argue that at any point in time there is a given level of money wages in each country, however determined, as well as a given level of labor productivity, and hence there must be one particular set of exchange rates which, in combination with the appropriate fiscal and monetary policies in various countries, will maintain external balance and full employment in each country. Over time, money wages and productivity may change, and so a new set of exchange rates will be required. As before, the extent of the losses from forgoing exchange-rate adjustment, and hence using expenditure adjustment instead, will depend, among other things, on the marginal propensity to consume tradeables.

3. Wage Flexibility and the Feasibility of a Currency Area

The assumption of the classic argument for devaluation is that money wages, and perhaps also other factor prices in money terms, are rigid downward. But it is not assumed that they are rigid in *real* terms. Indeed, for a devaluation to be effective, real wages must be flexible, the role of devaluation being to bring about the necessary fall in real wages and other factor prices. These two assumptions—inflexibility downward of money wages and flexibility of real wages—have been maintained implicitly in the preceding discussion. If either of these two assumptions did not hold, then exchange-rate adjustment would be either unnecessary (if money wages were flexible) or useless (if real wages were inflexible).

Let us consider these two matters further. First of all, if money wages were flexible downward and if no social disutility attached to flexibility upward or downward of prices and hence of wages, then it would not be necessary to alter exchange rates. There would then be no costs imposed by fixing exchange-rate relationships in an exchange-rate union. But, clearly, money wages are generally not flexible downward and disutility attaches (especially in Germany) to price and wage flexibility upward. When prices are generally rising abroad, downward flexibility does not necessarily mean that money wages must fall abso-

lutely, but that it must be possible, without undesired unemployment, to prevent their rising above a desired rate. Thus the assumption of the orthodox approach that money-wage flexibility is likely to be inadequate in one direction (downward) and undesirable in another (upward) seems to present no difficulties.

Next, let us look at the question of real-wage flexibility. One can introduce here the concept of a *feasible currency area*. It is possible to argue that in certain circumstances a devaluation will be followed so quickly by an adjustment of wages and other factor prices designed to maintain their real values that the effects of the devaluation will be quickly negated. In that case, one might just as well keep the exchange rate fixed. The recent experiences of Britain and France do not bear this out, though it might well be true if Scotland devalued relative to England. Nevertheless, let me develop this argument a little further.

The assumption of the orthodox approach is that a devaluation can successfully lower real wages. The process is as follows. With money wages given at any point in time, and the prices of domestic goods given, a devaluation raises the prices of traded goods, hence the cost of living, and hence lowers real wages. In an economy with a steady growth in labor productivity and in money wages, the role of devaluation may not be to lower real wages absolutely but rather to prevent the rise in real wages that would otherwise take place.

It is implicit in this analysis that unions do not seek to maintain real wages by forcing a rise in money wages to compensate for the rise in the domestic prices of traded goods. Money illusion, or contracts in terms of domestic money, for institutional reasons or convenience, are assumed. Hence, money illusion, or labor contracts in domestic money, are a prerequisite for the efficacy of exchange-rate adjustment.

If the real wage were truly inflexible, then devaluation could not reduce it. The initial effects of a devaluation would be negated by a compensating rise in money wages. If the initial situation is one of full employment, a balance-of-payments improvement could be attained only at the cost of unemployment.

McKinnon (1963) has pointed out that the more open an economy, the less likely it is that there will be money illusion or that workers will agree to contracting their pay in domestic-money terms. An open economy is one in which a high proportion of domestic expenditure consists of traded goods (exportables and importables). If 80 per cent of consumer expenditure were devoted to traded goods—the prices of which would rise with devaluation—it is unlikely that any trade-unionist would really believe his wages were unaffected by devaluation;

in fact, wage bargains would not be struck in terms of domestic currency alone. The exchange rate would become irrelevant.

It is sometimes argued that unemployment in depressed regions could be eliminated if these regions became separate countries with their own variable exchange rates. But this argument assumes that the workers in these regions would agree to be paid in their own domestic money irrespective of the exchange rate, so that it would be possible to reduce their real wages. If Scotland had never been joined to England, one could well conceive of Scotsmen accepting wage settlements fixed in their own currency irrespective of prospective exchange-rate changes. But this is less likely if Scotland, after more than two hundred years of union, were newly turned into a separate country.

When a customs union is formed, the partner countries become more fully integrated and the prices of one partner's goods become a more important element in the cost of living of the other partners' inhabitants; hence, the devaluation by one partner in relation to another is more likely to lead to a compensating rise in money wages. If real wages were rigid downward, a floating rate would simply lead to an exchange-rate-cost-of-living-wages spiral. Hence, if an economy is very open—like a French department or Scotland—one might just as well fix its exchange rate in relation to its main trading partners.

Indeed, one could go further. A very small open economy is not really a feasible currency area, since there would be no significance in its having its own exchange rate. Its own currency would have no liquidity value, and the population would choose to strike wage bargains and accumulate liquid wealth in terms of foreign currency. The question of an *optimal* currency area—that is, whether an area *should* have its own exchange rate—then hardly arises. There will certainly be no costs from fixing the exchange rate of a currency that is, in any case, not used.

In practice, the line between a feasible and an infeasible currency area is not so clearly drawn, and we shall have to come back to this matter. For the moment, it should be assumed that the countries in question are all feasible currency areas, even though they may not be optimal ones. In the case of the EEC, it seems to me that all the present members (except Luxembourg) and prospective members (except Eire) are feasible currency areas that can certainly affect their real wages, at least for a limited period, by operating each a separate exchange rate.

4. Labor-Market Integration

Let me postpone a little longer the discussion of the gains from monetary integration and consider two other aspects of the costs, con-

cerned with the labor market. The first is what I call (for want of a better term) trade-union integration, and the second is labor mobility. In considering the first of these I shall continue to assume that labor is *not* mobile among the member countries of the exchange-rate union.

Trade-union integration. Wages for particular occupations may tend to get equalized throughout the integrated area, and even if full equalization in the static sense does not get established, rates of change of wages may tend to come closer together. This is likely to happen, first, because the fixing of exchange rates makes intercountry wage comparisons easier and, second, as a by-product of other aspects of economic integration—the increased political and social contact, the setting up of unionwide economic institutions and private corporations, and so on. It may be, though it need not be, the result of explicit trade-union integration.

This effect may increase or decrease the costs of an exchange-rate union. On the one hand, if wages in a low-productivity area are pushed up to the levels prevailing in high-productivity areas then—unless productivity changes appropriately—unemployment will result. We have here one of the main reasons for depressed areas. It is not only that a low-productivity region cannot reduce its real wage through devaluation once it joins an exchange-rate union; its real wage is actually likely to increase. Similarly, trade-unions in a country with a relatively low rate of productivity growth may insist on rates of increase in money wages similar to those in countries with higher productivity growth rates, hence inviting disequilibria that can be remedied only by deflation-induced unemployment.

On the other hand, the primary source of payments disequilibria in the absence of trade-union integration might be differences between countries in rates of change in money wages resulting from differences in trade-union aggressiveness. Trade-union integration might reduce these differences and so reduce the need for exchange-rate adjustment. Hence (bearing in mind the arguments of the previous paragraph) it does not seem obvious whether on balance trade-union integration would increase or moderate the losses from the establishment of an exchange-rate union.

This analysis could be related to the earlier discussion of why the optimal rates of change of costs may differ between countries: (a) the positions of the Phillips curves may differ (because of differences in trade-union aggressiveness, etc.), (b) productivity growth rates may differ, and (c) government trade-offs between unemployment and inflation may differ. If integration makes the countries more alike in all three respects, they will find it easier to dispense with exchange-rate

changes, but if it only makes them more alike with respect to (a), it may make it easier or harder, depending on the given differences in the other two respects.

Labor mobility. So far I have assumed that labor is immobile among countries. This is certainly a more realistic assumption than high mobility; mobility even among regions of a country is often low. But let us remove the assumption now.

With high labor mobility within the exchange-rate union, balance-of-payments adjustments can take place with little or no unemployment, other than transitional. Consider the simplest case of a pseudo-union. Suppose that country A acquires a deficit and country B a surplus. Country A deflates to maintain its foreign-exchange reserves. Initially this creates unemployment, so labor migrates from A to B. The expanded labor force in B makes it possible to expand aggregate demand, as required to eliminate the balance-of-payments surplus, while at the same time not creating inflation. Alternatively, we could have imagined a complete exchange-rate union, with a single central bank, where the normal interregional adjustment process would create unemployment in some regions and excess demand in others. The central point is that mobility of labor makes it less necessary to adjust real wages upward or downward in response to changing demand and supply conditions, and hence less necessary to use exchange-rate alterations as an instrument of real-wage adjustment.

It follows that the more mobile labor is within the union, the less the costs of an exchange-rate union. As is well-known, Mundell (1961), the pioneer of the "theory of optimum currency areas," focused on this consideration: he argued that the optimum currency area is the area of factor mobility.

It should not be overlooked here that it is desirable not only to avoid unemployment but also to avoid excessive movement of labor out of the country. Failure to alter the real wage, and so eventually forcing all the unemployed out of the country, inflicts social and economic costs of movement on the marginal workers to the benefit of those workers who remain in employment. If the real wage had been lowered somewhat by means of devaluation there would still have been some out-movement of labor, but it would have been less in quantity and subject to less pressure. The costs of the necessary adjustment would have been shared among the work force instead of being borne wholly by a marginal minority.

Furthermore, the maintenance of real-wage differentials within the exchange-rate union—with some countries maintaining higher real wages than others even though labor is mobile among them—represents a

monopolistic distortion, at least when it is explained by differences in trade-union strength. It may, of course, be explained by, and justified by, differences in working conditions, nonpecuniary preferences of the work force, and so on, in which case it is not a "distortion." This type of distortion, which has been much analyzed by international-trade theorists in connection with the theory of protection, inflicts a resource-allocation cost.

The general point then is that labor mobility is an inadequate substitute for exchange-rate flexibility, though it certainly reduces the costs, possibly substantially so, of exchange-rate inflexibility, and even yields gains of its own.

How important is labor mobility in Europe? The mobility of the native-born inhabitants of northwestern Europe is probably now quite low. There would have to be very large wage differentials and substantial unemployment in emigrating areas for native labor to move on a significant scale among Britain, France, and Germany, for example. I am not referring to the movement of British people to various English-speaking countries, and one must note the movement of labor from southern Italy to many countries around the world, including fellow EEC members, since in this case there have indeed been large wage differentials and substantial unemployment in the emigrating area. Nevertheless, an assumption of low factor mobility among countries seems in general more realistic.

The large movement of temporary workers from outside the Community—from Greece, Turkey, Spain, and Yugoslavia, principally—possibly requires one to qualify these views somewhat. If variations in net migration from outside absorb changes in labor demand, then the "internal balance" problem within the Community is reduced through being exported, and the cost of fixing exchange rates is reduced. Indirectly, there may be considerable labor mobility among the EEC countries through the marginal *Gastarbeiter* (foreign worker). The country that deflates takes in fewer new migrants and sends some home, while the country that expands demand takes in more, possibly the same people that might otherwise have gone to the deflating country. But here one must take into account the diversity of labor, and bear in mind that immigrants supply the marginal labor force only in the unskilled sector.

5. The Gains from an Exchange-Rate Union:

How Exchange-Rate Alterations Affect Price Stability

At last we can introduce Hamlet: the possible *gains* from monetary integration, to be set against the losses that I have discussed in such detail. The possible gains may be political; these will not be discussed

here (though so-called "noneconomic motives" have been dominant in the move to European monetary integration). The gains may have to do with capital movements; the discussion of these will be postponed until section 9. The gain may be in making fiscal integration possible; this is discussed in section 11. Finally, I come to gains concerned with trade and price stability.

The McKinnon argument: openness and the case for fixed rates. A rather precise argument in favor of fixed exchange rates, essentially owed to McKinnon (1963), will now be developed at length; its severe limitations will be pointed out subsequently.

Assume that a particular country's average level of money wages, and presumably other factor prices, is fixed (or rises at some given, predictable rate). Hence, the average price level of its domestic goods is fixed. When the exchange rate is fixed, *and if there is similar price stability abroad*, there is then complete over-all price stability. But if, on the other hand, the exchange rate is alterable, and its movement is not predictable, then the prices of traded goods will be variable and uncertain.

It is crucially assumed here that the exchange rate varies because of structural demand and supply shifts (or variations in autonomous capital movements) and not because of changes in the general level of costs at home or abroad. This is a most important assumption on which the subsequent argument hinges. I shall remove it in due course.

The exchange-rate variations have two distinct adverse effects. First, the general level of prices is no longer stable; hence there is some uncertainty about the real value of money in the future, and the utility of money as a store of value is reduced. Second, with foreign-trade prices more variable than domestic prices, a bias against foreign trade results. The flexible rate imposes an uncertainty surcharge upon trade that has the same sort of trade-inhibiting effect as international transport costs. This consideration is much in the minds of critics of flexible exchange rates. If the country concerned is a potential deficit country, the costs of these two effects must be set against the costs of deflation in the form of the loss of output necessitated if the exchange rate is fixed.

Next, consider a surplus country, and assume realistically that in the absence of adequate exchange-rate adjustment it will allow its domestic costs and prices to rise. Then the analysis is very simple. The value of money is in any case not stable; with a fixed exchange rate domestic prices change, and with a variable exchange rate foreign prices change. In the first case, money maintains its value in terms of foreign goods, and in the second case, in terms of domestic goods. One method favors trade in one type of good, the other in the other type of good.

The crucial consideration, as McKinnon has pointed out, is the *degree of openness* of the economy. An economy is defined as very open when the proportion of traded goods (importables and exportables) in its aggregate production and consumption is very high. An open economy will also have a high marginal propensity to import and to consume exportables. As we are concerned only with fixing exchange parities within a limited group of countries forming the union, the main consideration is how open each economy is relative to the partner countries.

In the case of the deficit country, openness strengthens the case for a fixed rate, for two reasons. First, since the marginal propensity to import is high, the loss from a deflation required to restore balance-of-payments equilibrium with a fixed exchange rate is less. (This point was made in section 2 in the discussion of the *costs* of fixing exchange rates.) Second, the more important trade is to a country, the greater the potential gain from price certainty in international trade, and hence from an assurance of fixed rates.

Thus, the more open an economy relative to its partners, the stronger the case for a fixed rate relative to them. A French department is a much more open economy than is France as a whole; hence, it may be best for the department to have a fixed exchange rate relative to all other departments but for France as a whole to have a variable exchange rate relative to the outside world.

In the case of the surplus country, one must assume that if the exchange rate is fixed domestic prices will increase to restore external equilibrium. The choice is then between the fixed-exchange-rate case of instability of the prices of domestic goods combined with stability of the prices of traded goods, as against the variable-exchange-rate case of stability of the prices of domestic goods combined with instability of the prices of traded goods. Price instability imposes costs and reduces the liquidity value of money. Whether the costs are greater with a fixed or a flexible exchange rate depends, then, on the relative importance of traded and nontraded goods, that is, the openness of the economy.

All this is rather abstract. Its value is that it appears to give us the logic for having *some* areas within which exchange rates should be fixed.

The insulation role of exchange-rate variations. The reader may already have detected the crucial weakness in the preceding argument. It assumes that there is price stability abroad and that exchange-rate variations are caused by demand and supply shifts of a *micro* nature. In fact, strictly interpreted, it requires one to assume that the demand and supply shifts originate at home rather than abroad. But suppose that foreign costs and prices as a whole are fluctuating, while domestic factor costs are stable. In other words, disturbances originate abroad and are of a

macro nature. Appropriate exchange-rate variations can then insulate the domestic economy from foreign instability and so increase the liquidity value of domestic money. If the exchange-rate variations exactly offset the foreign price changes, they *reduce* the risks in foreign trade. The whole analysis is reversed. Exchange-rate variations fulfill an insulation role. Presumably, the more open the economy, the greater are the gains from exchange-rate variability.

We might imagine an economy such as Germany's, which manages to maintain stability of its own factor costs but is faced with rising prices abroad. If it keeps its exchange rate constant, then—unless it is to have a growing balance-of-payments surplus—it will have to give up price stability. Even with its own factor costs constant, prices of traded goods will rise in its own markets; in any case, it will have to allow its own factor costs to increase for the sake of external equilibrium. This is the “imported inflation” of which Germans so frequently complain. The more open the economy, the more it will suffer from a given rate of inflation abroad. Exchange-rate appreciation could completely insulate the German economy from this effect. There will be some rate of appreciation that will exactly offset the rise in foreign prices and so succeed in stabilizing the German price level.

This insulation role of exchange-rate variations—designed to protect the liquidity value of money in a country that is willing to maintain more stable factor costs than its trading partners—suggests a conclusion diametrically opposite to the McKinnon argument advanced above. Clearly, one's opinion as to the desirability of a fixed exchange rate for the sake of price stability must depend completely on what one expects the causes of exchange-rate variations to be. If the disturbances are structural or micro in nature, and originate at home, the McKinnon argument applies. Fixed rates stabilize the prices of traded goods, but at the cost of inflation for a surplus country or lower output for a deficit country. The more open the economy, the more important are stable prices for traded goods and hence the stronger is the case for fixed rates. On the other hand, if the disturbances are macro in nature and originate abroad—that is, the general price level fluctuates abroad while at home it is relatively more stable—flexible rates insulate the economy, and the more open the economy, the more important is this insulation. Hence, if one believes that the latter type of disturbance is likely to be important, one cannot regard the McKinnon argument as providing a general case for fixed rates in the case of very open economies. Indeed, in some circumstances the general case may be for flexible rates.

It is usual to compare the exchange-rate union with a regime of pegged rates that are occasionally and traumatically altered. The ad-

justable-peg system certainly introduces great uncertainties into international trade. Furthermore, even when exchange-rate adjustment offsets foreign price changes on the average over a period of years, it may increase price instability because it offsets foreign price changes in a jerky fashion. Hence, in the case of macro-disturbances originating abroad, the case for fixed rates may well be restored when this jerkiness is taken into account. But one is really comparing two second-best situations. If the comparison is made with a genuine floating-rates regime or a regime where a pegged rate is frequently adjusted, then it is difficult to argue a priori that fixing rates will reduce trade risks or stabilize price levels.

The feasibility of a currency area once more. Having said all this in favor of flexible exchange rates, one feels nevertheless that there must be something more definite in the argument—so intuitively appealing—that the more open an economy, the more desirable it is to have fixed exchange rates. Otherwise, why should not every French department have its own exchange rate?

The answer rests on two points made earlier, both of which have been stressed by McKinnon. First, the more open an economy, the higher is the marginal propensity to consume tradeables and therefore the lower are the costs from deflation and hence the costs of having an exchange-rate union. This, as I have underlined, does not tell us that there are any *gains* from an exchange-rate union, however open the economy, but rather that openness reduces the losses. The gains will have to be sought elsewhere.

Second, the more open an economy, the less feasible an independent exchange-rate policy becomes, because it would not be possible to sustain money illusion or contracting in domestic-money terms. It must be stressed that a currency area could certainly be feasible and yet not optimal.

Let us suppose that the currency area is clearly not feasible. If the government of the area nevertheless seeks to have, and enforce the use of, its own currency, there will be difficulties, and the tendency will be for the currency not to be used but for some outside (“key”) currency to be used instead. One might then ask whether any purpose would be served in fixing the domestic currency’s exchange rate permanently to the key currency and so ensuring some use for the former. There will be a gain in seignorage and no doubt also in prestige. If the country joins the larger (“key”) country in a complete exchange-rate union, so that a common central bank is established, it will also obtain some say in over-all monetary policy.

It follows that it is preferable for an infeasible currency area to par-

ticipate in a monetary union explicitly, rather than find its own currency demonetized against its will. If it fails to form an explicit union it loses seignorage, prestige, and influence over the rate of inflation or deflation operating within its boundaries. This gain to a small, very open economy from joining a monetary union is quite distinct from the possible (and rather doubtful) price-stability gain discussed earlier.

It may be that separate currency areas become gradually less feasible because openness among areas is increasing over time. More use will then be made of a foreign currency, or at least of funds denominated in a foreign currency, such as Euro-dollars. At some stage, it will then pay to ratify informal monetary integration by explicit integration. But I hasten to repeat that, in my view, the present and prospective members of the EEC (Luxembourg and Eire excluded) are clearly feasible currency areas, even though they may not all be optimal ones.

6. Are Trade Integration and Monetary Integration Related?

The "Europeans" in Europe are aiming for a complete economic union—which, in turn, is seen as a stepping-stone to political union—so that the move toward monetary integration is clearly part of the same process as the establishment of trade integration. The aim is to "complete" the economic union. More narrowly, both forms of integration contribute to removing any bias against intra-union trade relative to trade internal to countries. Hence, again, it seems natural to complete the process of removing this bias by supplementing the customs union with monetary union.

The "Europeans" see the approach to complete union as a series of hurdles to be overcome, so that when the customs-union hurdle is left behind, they get ready for the monetary-union hurdle. But, from an economic point of view, the issue can be posed rather differently. Does the establishment of a customs union strengthen or weaken the case for the establishment of an exchange-rate union?

There are, in fact, two opposing considerations in the answer. On the one hand, trade integration increases the openness of the partner countries relative to each other and so *possibly* strengthens the case for having fixed exchange rates among them, or at least reduces the strength of the argument against fixed exchange rates. This seems to me the only sound economic case for the view that monetary integration should naturally follow upon trade integration. It follows from the earlier analysis in this essay.

Yet there is another side to the coin. I am here, for the moment, concerned with a pseudo-exchange-rate union where countries attempt to maintain fixed exchange-rate relationships but are still each responsible

for their own balance-of-payments situations. The argument to follow does not apply to a complete exchange-rate union.

In the case of a pseudo-union, a country that is in deficit and is not part of a customs union can impose tariffs, import quotas, or exchange controls as alternatives to devaluation. But the formation of a customs union rules out the use of an independent tariff or import-quota policy for balance-of-payments (or any other) reasons.

Imposing tariffs on imports from partner countries would be contrary to the principle of free trade within the union, and imposing special tariffs on imports into the deficit country from outside countries in addition to the common external tariff of the customs union would be contrary to the principle of a common external tariff. If such special tariffs on imports from outside countries into the deficit country were nevertheless imposed, the customs union being thus converted into a free-trade area, customs barriers would have to be reimposed within the union to avoid "deflection" of trade—that is, to avoid imports from outside countries evading the special tariffs by coming into the deficit country via its partner countries. Even if it were possible for the deficit country to restrict imports from outside without causing trade deflection, it might still be undesirable to do so if a large part of the country's trade was with its union partners: very high tariffs or severe quota restriction would be needed—and hence high trade distortion would result—in order to bring about the whole of the necessary balance-of-payments improvement.

It follows that if a customs union has been established, the use of tariffs or quotas by individual union countries to deal with their balance-of-payments difficulties is impossible, undesirable, or very costly. There is then *more* need to vary the exchange rate. If a country then goes on to commit itself to a fixed exchange rate, it appears to make the attainment of simultaneous internal and external balance quite impossible. Having tied one of its hands, it then goes on to tie its other hand. Of course, the customs-union ropes may not really be very tight. If a country finds itself in a deficit, unable to vary the exchange rate, and forced to choose between deflation and breaking the rules of the customs union by imposing special tariffs, quotas, or exchange controls, it may choose the latter.

We have thus an argument *against* superimposing a pseudo-exchange-rate union upon a customs union. Either the exchange-rate union would increase the likelihood of unemployment or it would destroy the customs union in the process of avoiding the unemployment.

In comparing the effects on an area with fixed exchange-rate relation-

ships of a customs union and no customs union, we can thus summarize as follows:

a. If, even without a customs union, no use is made of tariffs, quotas, and so on for balance-of-payments purposes and, instead, deflation alone is used to eliminate a deficit, then the net costs of remedying the deficit are reduced when the customs union is established, since the economy of each country has become more open.

b. If, on the other hand, in the absence of a customs union, some use is made of tariffs or import quotas to eliminate a deficit, then the costs of not being able to use the exchange rate because of the establishment of the exchange-rate union are increased by the existence of the customs union, since the trade-restricting devices cannot be used either. As the number of instruments available to a country is reduced, the utility of the remaining instruments increases.

European countries have used both deflation and trade-restricting devices to deal with deficits in the past, so that both considerations apply. The existence of a customs union reduces the costs of given deflation, but increases the extent of deflation that is likely to be necessary. In my view, in the European case the latter consideration is far more important, so that the existence of a customs union appears to weaken the case for an exchange-rate union, if by the latter we mean a *pseudo*-union, where countries retain responsibility for their own monetary policies and balance-of-payments deficits.

In the case of a *complete* exchange-rate union, the question of separate balance-of-payments deficits does not arise. Instead, the problem expresses itself in the form of regional unemployment. If the different regions (that is, member countries of the union) were free to impose trade restrictions, they could avoid this unemployment.

In practice, areas of monetary integration—that is, areas that have formed complete exchange-rate unions—rarely, if ever, allow trade restrictions within the integrated area. Rather, they use subsidies of various kinds to counter regional unemployment. As international trade theorists have pointed out in recent years, subsidies are in general preferable to trade restrictions for such purposes, so that this tendency is to be welcomed. It follows that the establishment of a customs union is no barrier to the direct establishment of a complete exchange-rate union, associated with the operation of regional policies, where subsidies do the job the tariffs and quotas could alternatively have done. There is an argument against first establishing the customs union only if the process toward a complete exchange-rate union is likely to involve a long intermediate stage of pseudo-union during which adequate regional

policies are not put into effect. This, of course, is likely in the European case.

7. The Common Agricultural Policy and Monetary Integration

So far I have said nothing about the Common Agricultural Policy. The French devaluation and German appreciation of 1969 created some upsets for this painfully negotiated structure, and these have yielded one impetus for the moves to monetary integration.

To insulate domestic agricultural prices from fluctuating world prices, the EEC imposes "variable levies," namely, tariffs that are continuously varied so as to maintain agreed-upon domestic "target" prices. These levies are supplemented by export subsidies. The target prices are initially fixed in terms of a unit of account, the dollar, but when exchange rates are fixed, the prices are in fact fixed in terms of all the currencies.

If it is an aim to stabilize the domestic money prices of agricultural goods as part of a policy of agricultural income stabilization, as it is in the EEC, then exchange-rate alterations present a genuine dilemma. The target price in terms of the unit of account might be increased, in which case the domestic price in the country that has appreciated could stay constant, or alternatively it might be decreased, so that the domestic price in the depreciating country would be stabilized. But it is not possible to keep the target prices in terms of domestic currencies in both countries constant and yet maintain common unit-of-account target prices and so common variable levies. This problem does not arise in an ordinary customs union, where the common external tariff *rates* are constant, while internal prices can vary; in the EEC's agricultural policy the tariff rates are varied, while the aim is to keep the *prices* constant.

Since it is the aim of an exchange-rate alteration to alter the domestic prices of traded goods so as to induce the necessary changes in resource allocations and real wages, it does not seem unreasonable that domestic agricultural prices do change. A common agricultural market—that is, an agricultural customs union—is certainly compatible with varying exchange rates. But a varying exchange rate is not compatible with internal-price or money-income stability brought about by a price-support system.

If income stability is to be achieved for the agricultural sector in each country separately, then each sector must be insulated not just from the rest of the economy, but also, when exchange rates alter, from the agricultural sectors in the partner countries—and this is incompatible with the idea of a common market. Hence the 1971 exchange-rate alterations have in fact broken up the agricultural common market, though perhaps only temporarily. In order to maintain domestic agricul-

tural prices in the face of their exchange-rate appreciation, Germany and the Benelux countries have imposed taxes on agricultural imports from other EEC countries, and all the Community countries are now permitted to take appropriate insulating measures, whether in the form of import taxes or subsidies.

It must be stressed that there is an illusory element in the idea that the domestic *money* prices of agricultural products should be kept constant or that "targets" be established in terms of such money prices. If the general level of French domestic costs and prices rises in relation to that of Germany, constant money prices of agricultural products in France and Germany mean that in *real* terms these prices have fallen more in France than in Germany. A French devaluation or German appreciation may then do no more than restore the real relationships.

Of course, this argument does not apply if the source of the balance-of-payments disequilibrium is a structural shift in demand rather than differences in the rates at which domestic costs are increasing. Furthermore, if the exchange-rate adjustments are jerky rather than continuous, then the real price relationships will also fluctuate in a jerky way, German farmers' real incomes rising gradually relative to those of French farmers and then falling suddenly when the Deutschmark is appreciated. At that point, German farmers are certainly suffering a real income loss both absolutely and relative to the French.

If exchange-rate rigidity within the EEC were introduced solely to ease the path of this Common Agricultural Policy, the agricultural tail would be wagging the European dog. One hopes that agricultural protectionism in Europe will gradually fade out as agriculture becomes more efficient and as labor transfers out of agriculture continue, and that the target-price system, supported by variable tariffs and export subsidies, will be replaced by more direct subsidies aimed at encouraging readjustment and efficiency, and perhaps at directly subsidizing low-income farmers.

8. The Gains and Losses from Capital-Market Integration

Exchange-rate union is one leg of monetary integration; convertibility is the other. Here we are concerned with convertibility for capital transactions and, more generally, with capital-market integration. Let us then consider the implications of the complete freeing of capital movements within the area. Capital mobility may be fostered by the harmonization of legislation affecting investments, by ending any legal discrimination against foreign securities or against the export of domestic securities, and so on. The claims of the union's single central bank may become readily marketable within the union. Direct and portfolio investment

within the union may be fostered if company law and relevant tax laws are harmonized.

There is already a good deal of international capital mobility, mainly through the Euro-dollar market and the operation of multinational corporations. But many restrictions remain within Europe, and even within the present EEC. Britons cannot now easily invest in Europe, whether for the short or the long term. When Britain joins the EEC, the restraints on capital outflow will no doubt be lifted in time.

There are two questions: (1) Is this mobility to be welcomed? (2) Does capital mobility affect the gains and losses from exchange-rate union? It should be borne in mind that the two questions are not quite distinct, since, if there is an exchange-rate union, the answer to the second question affects the answer to the first. I begin with the first question. Sections 9 and 10 deal with the second question.

One can apply international trade theory here. Trade in securities is essentially no different from trade in ordinary commodities. There are gains to be derived from trade in securities—that is, from international capital movements—that are essentially the gains from an improved international allocation of resources resulting from a tendency for returns to various kinds of capital to come closer together in different countries. The same argument applies in the case of capital that is linked to specialized knowledge and trading connections in a direct-investment package. The gains-from-trade argument is completely applicable. Does a country gain from trade integration with certain (but not all) other countries? Usually one says that, assuming no domestic distortions and disregarding both terms-of-trade effects with the outside world and internal income-distribution effects, it all depends on whether trade creation outweighs trade diversion.

It seems plausible that the gain from trade creation—that is, creation of trade in securities—would dominate trade diversion when capital mobility within Europe increases, just as one generally accepts that the EEC industrial customs union has caused mainly trade creation rather than trade diversion. But there may be some diversion of actual or potential British capital exports from Commonwealth countries, and one can conceive of other trade-diversion effects. Trade diversion hinges on some restrictions or handicaps remaining on the outflow of capital from the EEC as a whole. Some of the diversion of capital exports away from Commonwealth countries would represent only an ending of an existing bias in favor of these exports; it would be *rediversion*. Diversion of funds from the Euro-dollar market toward a money market denominated in a European currency would mean true trade diversion only

if it led to less funds being available for investment outside the EEC; one has to remember here that Europeans are not only lenders but also borrowers on the Euro-dollar market.

Income distribution and "domestic distortion" effects may be important. Suppose that the freeing of capital movements causes British investors to invest in Europe rather than at home because the marginal productivity of capital is relatively low in Britain, perhaps owing to the inefficiency of British management or to the strike-proneness of workers. If wages in Britain were flexible, this would then lead to a fall in wages relative to what their levels would have been in the absence of the capital outflow, in fact a redistribution from wages to profits. In addition, assuming the usual arrangements to avoid double taxation, there would be a tax loss for Britain and a tax gain for the country to which the capital had moved—a redistributive effect within the union. But there could still be a net potential gain to Britain: wage earners *could* be compensated out of the higher profits and be at least as well off as before. Given the tax system, there would indeed be some element of compensation, and it is theoretically conceivable that, allowing for redistribution, wage earners would actually be better off finally.

If money and real wages were not flexible downward (so that we return to an internal balance problem), then there would be a "domestic distortion." The capital outflow might cause unemployment. It must be remembered that the exchange rate cannot be used to reduce real wages below what they would be otherwise. There would then not only be a fall in labor's total real income, but also a fall in national income: the increase in profits might not be sufficient to provide complete compensation for the unemployed.

Some people have this sort of process in mind when they say that when Britain joins the EEC she will become a depressed area. It would result from capital mobility combined with a fixed exchange rate. Of course, excessive unemployment is also possible in the absence of capital mobility, if Britain's competitiveness continues to deteriorate owing to a combination of low relative productivity growth and high relative increase in money wages. Capital mobility may be an additional cause of unemployment. In Britain's case, it seems to me at least as likely that there would be some inflow of capital from the United States, using Britain as a production base from which to export goods to Europe. But this would be a product of trade, not monetary, integration. Furthermore, Britain has in the postwar period managed to sustain something like full employment with a rate of domestic investment low relative to other European countries (though not low relative to earlier periods

in her history), so some net outflow of capital to Europe is unlikely to have dramatic effects. Of course, it may hold back the rate of increase in real wages.

9. The Effects of an Exchange-Rate Union on Capital Movements

There are two ways in which the establishment of an exchange-rate union can have favorable effects *through* effects on capital movements. These are the *gains* to which I referred at the beginning of section 5. For reasons to be given below, great significance should not be attributed to either of them.

The reduction of destabilizing speculation. The first favorable effect is that the complete and permanent fixing of exchange rates within the union—provided it is believed to be complete and permanent and provided it is combined with the assurance of permanent convertibility—will put an end to destabilizing short-term speculative capital movements among the union countries. In the absence of automatic recycling procedures by central banks, these have been the curse of the postwar international monetary system and have led to dislocating and panicky short-term adjustment measures, as well as to an unhealthy atmosphere of continual monetary crises.

Destabilizing capital movements are the sour fruits of insecurely fixed exchange rates—of the adjustable-peg system. The Canadian experience, as well as well-known theoretical arguments, suggest that short-term capital movements in a floating-rate system are, on the whole, likely to be stabilizing. The more reluctant a country is to adjust its exchange rate, the more destabilizing speculation is likely to be provoked. A rate that is frequently adjusted, or even a crawling peg, may give rise to very few destabilizing capital movements.

It is of course arguable that the adjustable-peg system does not provoke destabilizing capital movements but rather excessive capital movements. The capital movements are perhaps not destabilizing because they reflect anticipations that disequilibrium rates are going to be revised. But the point remains that these capital movements create crisis situations and may lead to excessive and sometimes unjustified exchange-rate adjustments.

Three conclusions follow. The first is that there is a gain from complete exchange-rate union on this score only if the comparison is made with the adjustable-peg system, not when it is made with a truly, or highly, flexible rate; hence there is a gain only when the comparison is being made with a second-best alternative.

Second, unless the union introduces a floating rate relative to outside currencies, there remains the possibility of destabilizing capital move-

ments in and out of the integrated area; indeed, if the process of attaining monetary integration leads the union members to favor general exchange-rate rigidity, destabilizing speculation may well increase. On the other hand, the union may have less need for altering its common exchange rate relative to the outside world than individual members would have had, since, to some extent, their deficits and surpluses may cancel out.

Third—and this may be most important—the process of getting to a complete exchange-rate union may entail a long period of pseudo-union—of an attempt to maintain fixed rates without absolute assurance that they can be maintained, through a failure to set up the institutions of complete union (a system of “monetary” integration without “economic” integration, in the current European language). I discussed this earlier. Such a regime is an invitation to increased destabilizing capital movements.

An increase in capital mobility. A second possible gain from establishing an exchange-rate union can come about through an increase in the mobility of long-term capital, because the reduction of exchange risks would make capital more responsive to interest-rate differentials. While this very familiar argument is essentially valid, it is subject to enough doubts and qualifications that in present circumstances it would hardly sustain a case for exchange-rate union.

In the first place, a floating rate does not discourage mobility of capital, provided it is associated with the assurance of permanent convertibility. The Canadian experience bears this out. Short-term capital movements stabilize the rate, and this in turn encourages long-term capital movements. Traders can reduce their risks through a forward exchange market, which will develop if convertibility is assured and the market is large enough.

Second, there have been very extensive international capital movements in recent years in spite of the uncomfortable adjustable-peg system and in spite of many remaining restrictions on capital movements. If it is really desired to increase capital mobility, the first, obvious step would seem to be the removal of existing restrictions and inhibitions, at least to flows within the extended EEC area.

The third point is very important and is akin to one already made with respect to trade integration. Fixing exchange-rate relationships through a pseudo-exchange-rate union may create balance-of-payments stresses that lead to the imposition or intensification of restrictions on current- or capital-account transactions. It was pointed out earlier that, in an effort to maintain a pseudo-exchange-rate union, trade integration may suffer; similarly, convertibility for capital transactions may lose out.

Indeed, the motive for many present-day restrictions on capital movements is a balance-of-payments one, induced by the attempt to sustain existing exchange rates. It follows that the movement toward one aspect of monetary integration (the exchange-rate union) may well set back the movement to the other (capital-market integration).

**10. The Effects of Capital Mobility on the Losses
from Exchange-Rate Union:
Can Capital Mobility Solve the Internal Balance Problem?**

I now come to a very important issue: Can capital movements overcome the central problem posed by an exchange-rate union? I shall discuss this matter first from the standpoint of a pseudo-exchange-rate union, where each country is responsible for its foreign-exchange reserves. We can suppose that the union countries have fixed exchange rates not only in relation to each other but also to the outside world. Later I will discuss the case of the complete exchange-rate union.

The "monetary-fiscal policy mix" approach. The central problem presented by a fixed exchange rate is familiar. The level of aggregate demand required to maintain internal balance may not be the same as that required for external balance. If the instrument of demand management is tied to the external-balance target, there is no instrument left to attain internal balance.

Various writers have suggested that once one allows for capital mobility there is a solution to this problem that eliminates the "costs" of having a fixed rate. Fiscal policy should be used to attain internal balance and monetary policy to attain external balance. One has again two instruments for the two targets. There must be an appropriate "monetary-fiscal policy mix."

The argument runs as follows. A country that would have a current-account deficit at full employment can always cover this by capital inflow induced by a sufficiently high interest rate. The higher the interest rate required, the lower will be domestic private investment, and hence the greater must be the fiscal expansion to maintain the level of aggregate demand needed for internal balance. Fiscal expansion can take the form of greater public expenditure or of reduced taxes that increase private consumption or perhaps stimulate private investment through tax allowances. Since discriminatory tax policy can be used to offset the adverse effects of a high interest rate on private investment domestically, it is still possible to manipulate the consumption-investment mix independently of the external situation.

This approach seems to suggest that a country can establish any level of real wages and other factor incomes it likes and can sustain this in-

definitely by borrowing from abroad. (By "borrowing from abroad" I do not refer to capital inflow to finance domestic investment that yields a rate of return no less than the cost of the foreign capital, but rather to capital inflow that finances consumption, public or private, or investment that could not be financed in the normal way.) While a growing economy can of course borrow *something* abroad every year, there are nevertheless three weaknesses in the approach.

First, if the amount the country needs to borrow grows at a more rapid rate than the rate of growth of international financial resources in total, so that the country will need to absorb an increasing proportion of the world's savings, it will force up the rate of interest against itself.

Second, and quite distinct from the first point, the more is borrowed the less credit-worthy the country becomes, and so the higher the interest rate it will have to pay. If the rate of interest exceeds the rate of growth, the more is borrowed the greater the debt burden in the future, and so the more still must be borrowed . . . and so on. It is this expectation that causes the decline in credit-worthiness.

Finally, even if the approach is feasible in the long run, it may not be optimal. Assuming that eventually real wages, or at least consumption expenditures out of real wages, will have to fall to stop excessive accumulation of foreign debt, there is a time-preference issue. Is it really desired to sustain consumption now at the cost of consumption later to the extent required by the existing exchange rate?

Hence, in the medium and long run, the monetary-fiscal policy-mix approach is in no sense an answer to the classic internal-external balance problem. Exchange-rate flexibility or some other "switching" device is still needed.

The short run may be another matter. In the short run, capital movements are very responsive to interest rates. The short run is dominated by a portfolio readjustment, so that most of the flow effect is usually temporary. Hence a temporary current-account deficit might justifiably be covered by inflow of private capital. Assuming that fiscal policy can maintain internal balance, the short-run issue is simply a matter of balancing the costs of short-term private capital against the costs of a central bank holding adequate amounts of its own foreign-exchange reserves.

The real problem in the short run is the inflexibility of fiscal policy. In many, if not most, countries, the institutional and political situation is such that fiscal policy is incapable of maintaining short-run internal balance. Only monetary policy is flexible. But when there is high capital mobility, monetary policy cannot regulate internal balance either. Internal interest rates are more or less determined, or at least greatly in-

fluenced, by world market rates. Domestic credit creation designed to bring down the interest rate, hence to stimulate domestic investment, and so to increase aggregate demand leads to capital outflow instead. Given the inflexibility of fiscal policy, in the short run second-best policy seems to require capital controls to make monetary policy effective for internal balance, foreign-exchange reserves absorbing external effects. The best policy would be to increase the flexibility of fiscal policy.

This approach accepts the fixed exchange rate as a constraint. Once we abandon this constraint, we may conclude that the best short-term policy is to combine a floating exchange rate with flexible monetary policy, since frequent juggling of tax rates and public expenditure may not really be best. Monetary policy will then come into its own again as a regulator of internal balance. It achieves this indirectly: monetary policy induces capital movements; capital movements induce changes in the exchange rate; changes in the exchange rate induce switches in demand as between domestic goods and foreign goods.

Induced and autonomous capital movements. We have been concerned so far with capital movements deliberately stimulated by interest-rate policy or (if the interest rate is completely given from outside), more generally, by monetary policy. Since these are capital movements stimulated by policies directed at the balance of payments, we can call them *accommodating* capital movements. In addition, variations in *induced* and in *autonomous* capital movements can modify or intensify balance-of-payments disequilibria. Here I am mainly concerned with capital movements induced either by autonomous demand or supply changes that have also affected the current account, such as a decline in export demand, or by policy or automatic reactions to a current-account disequilibrium, such as deflation to eliminate a deficit.

If demand for a country's (or a region's) exports falls, the inducement to invest in its export industries is likely to decline; capital inflow falls and the current-account deficit is supplemented by a deterioration in the capital account. On the other hand, the fall in export incomes may lead to less savings, and so to less capital outflow or more need for inflow. Hence it is not certain whether, on balance, capital mobility would intensify or modify the balance-of-payments effects of changes in export-demand conditions. One must be similarly agnostic about the effects of capital mobility when a country is compelled to deflate to eliminate a payments deficit (or incomes fall within a region for the same reason). Both the inducement to invest and the volume of domestic savings are likely to fall, so that the net effect on the capital account may go either way. Hence, the need for deflation (that is, the cost of

having a fixed exchange rate) may be greater or less than in the absence of capital movements.

If it were possible to manipulate accommodating capital movements so as to offset any imbalances in the autonomous and induced balance of payments on current and capital account, there would be no problem. One would not have to worry whether induced capital movements modify or worsen problems created by the current account. The argument above has been that the manipulation of accommodating capital movements may be possible in the short run, but that in the long run it is probably not possible or, even if possible, not desirable.

Capital mobility in the complete exchange-rate union. Let us now suppose that a *complete* exchange-rate union is established, combined with complete freedom of capital movements within the union; hence, there is complete monetary integration. The question then is whether, in this sort of thoroughly integrated area, the fact of high capital mobility, especially of short-term funds, overcomes the central problem of monetary integration—the problem of regional unemployment in the presence of wage rigidities.

Ingram (1959 and 1962) has stressed the easy way in which adjustment takes place within the United States, or as between the United States and Puerto Rico, because of short-term capital mobility. If the demand for a region's exports drops, then in the short run the local banks may sustain their customers' incomes with loans and in turn borrow short-term on the open market or through interbank transfers. Firms that are branches of national firms can borrow from their parents (as multinational firms now borrow across borders). There are plenty of readily marketable claims, some of them securities issued by the central bank. Conceivably, the regional government could engage in fiscal expansion in order to maintain local employment, financing its deficit on the national capital market.

But, for reasons discussed earlier, all this cannot last. Banks, governments, or branches of firms cannot borrow indefinitely, other than to finance productive investment. Capital mobility cannot in the long run, or even in the medium run, sustain a level of real wages that is too high for external balance (normally defined, to allow for autonomous long-term capital movements) while at the same time maintaining full employment. Eventually, the region's income must fall, so that its imports fall and external balance is restored. But if real wages are rigid, external balance is restored at the cost of a fall in employment and output.

The argument that capital mobility within a complete exchange-rate

union eases the process of adjustment is therefore as much a short-term argument as the argument that appropriate manipulation of the monetary-fiscal policy mix will solve the fixed-exchange-rate problem in the case of a country with its own monetary system, that is, a pseudo-exchange-rate union. The short term, of course, is very important. Many deficits and potential deficits are essentially short-term, and the provision of short-term finance for longer-term deficits allows time for, and hence may reduce the costs of, adjustment.

Thus one might conclude that the increased capital mobility which is likely in a monetary union—first because the fixing of exchange rates within the union may stimulate mobility and second because of explicit measures designed to foster mobility and remove restrictions—will somewhat ease the “central problem” of the exchange-rate union. But it will not solve it.

11. Fiscal Integration

I come finally to fiscal integration. Is this required by monetary integration? Furthermore, can it solve the central problem of monetary integration? And—to reverse the question—does fiscal integration require monetary integration, so that (if fiscal integration is a target of policy) we have a new argument in favor of monetary integration?

Harmonization and fiscal integration. First, it is necessary to distinguish fiscal harmonization from fiscal integration. The simplest step is harmonization of tax and expenditure *systems*. Thus the EEC countries are all moving to the value-added-tax system of indirect taxation. Harmonization of systems can foster trade and factor mobility; complicated systems differing among countries can be obstacles to trade and factor movements. A further step is harmonization of *rates* of particular taxes, and perhaps also of certain social security allowances and other items of expenditure. Rate harmonization does not necessarily mean absolute equality of rates among countries; rather, it means that there is a centrally determined or mutually agreed-upon structure of rates.

If all items of revenue and expenditure in the budgets were harmonized in this way, then all national budgetary freedom would be lost. Countries would end up with deficits and surpluses that they had not individually chosen, and in fact they would be just administrative agents of a central fiscal authority that had chosen the various rates. This is the extreme case and can be described as *complete fiscal integration*. The transfer of direct responsibility for some taxes and items of expenditure would be purely an administrative matter. The central fiscal authority would logically have to cover the national budgetary deficits or receive surpluses that resulted from its policies. Such fiscal integration would

imply, among other things, automatic redistribution of income across borders within the fiscal community.

It is clearly not necessary to harmonize everything. To avoid distortion of the flow of capital, monetary integration requires the harmonization of taxes likely to affect capital movements, notably corporation taxes and taxes on interest and dividends. The United States has corporate-profits taxes at low rates levied by states, indicating that complete equalization may not be necessary. If labor is not very mobile, it is not necessary to harmonize income tax rates, though great divergence may well provoke some movements of labor.

In the case of income tax, another motive may apply. Fully integrated countries generally have identical income tax rates throughout the country, or at least avoid marked divergences among provinces, because of the principle of horizontal equity. When men are thought of not as Germans or Italians but as Europeans, then, presumably, they should be taxed only as Europeans. Surprisingly, the Werner report did not go as far as this! Of course, in the United States a uniform income tax does not apply either, since the federal income tax is now supplemented by state income taxes of varying rates in many states.

Most attention has been focused so far on the harmonization of those commodity taxes that are collected on a destination basis, notably the value-added tax. The motive here is to avoid fiscal frontiers within the union, to fit in with the aims of the customs union. This subject has been widely discussed, and we can bypass it here.

Free-market financing versus controlled financing: how much freedom for national budgetary authorities? Let us assume that the various governments will continue to have their own budgets and that harmonization has not gone so far as to deprive them of all freedom. Hence we rule out complete fiscal integration. The Werner report writes, in describing the "Final Objective": "The Community budget will undoubtedly be more important at the beginning of the final stage than it is today, but its economic significance will still be weak compared with that of the national budgets, the harmonized management of which will be an essential feature of cohesion in the union."

Now we must make some further distinctions to highlight the ways in which the degree of fiscal integration could vary. We can distinguish *free-market financing* of national budget deficits from *controlled financing* of these deficits, the latter being a modified form of fiscal integration. Free-market financing represents maximum freedom for the individual governments. Each government is completely free to tax and spend as it wishes, subject to harmonization of particular tax rates, principally commodity taxes and taxes affecting capital. It can run any surplus or

deficit it wishes, buying and selling bonds on the open market appropriately. The sizes of the deficits it will be able and willing to run will depend on its credit-worthiness and its readiness to incur debt, so imposing a burden on its taxpayers in the future.

This degree of freedom is perfectly feasible in a monetary union, as we know from the United States. The central bank of the Community may wish to influence the over-all budgetary policies of the national governments for the sake of the better short-term management of the Community economy, but in principle national governments could be as free as are private corporations to operate on the open market. The central bank can still control the over-all level of spending in the Community through its own open-market operations. It will, of course, influence the sizes of the national deficits through determining the availability and cost of credit and the prices of its own bonds. It can, if it wishes, offer to finance directly any national deficits, but no government can assume that such financing will be unlimited.

The Werner report envisages a lesser degree of freedom for the national budgetary authorities. It says that "the margins within which the main budget aggregates must be held . . . will be decided at the Community level," a fundamental element being "the determination of variations in the volume of budgets, the size of the balance and the methods of financing deficits or utilizing any surpluses."

This is not complete fiscal integration, since countries can still choose, within certain limits, their own tax rates and expenditure patterns, but it is what I have called "controlled financing," a significant step toward fiscal integration. Controlled financing operates in the Australian federation, where the states (unlike the states in the United States) cannot raise loans without the approval of (in effect) the federal Government.

The question is whether this degree of integration or surveillance is necessary for the efficient short-term management of the economy by the Community authorities, since it is not an inevitable concomitant of monetary union. Has the absence of such integration created problems in the United States? The answer is probably that when a small number of the states comprising the Community dominate the economy (as two states do in Australia and four states would in the enlarged EEC) the financial policies of any one of these states could upset the Community capital market, so that some degree of control, or at least "integration through talk," may be essential for efficient short-term management. At the minimum, a Community capital-issues committee would be required.

A Community budget and regional policies. It follows from the preceding discussion that one can describe the degree of fiscal integration

in terms of the extent to which the national budget aggregates, or at least the over-all surpluses and deficits, are controlled or coordinated from the center. Free-market financing without even harmonization or integration "through talk" is the limiting case of zero integration. The case where all rates and expenditure policies are centrally "harmonized" even though, at least nominally, all funds go through the individual national budgets, represents the other limit of complete integration.

But the degree of fiscal integration can vary in a second way. A Community fiscal authority with its own budget may be established. It may have allocated to it its own sources of tax revenues, such as customs revenue or the value-added tax, and may have its own responsibilities for particular kinds of expenditures. The larger the size of the Community budget relative to the national budgets, the higher the degree of fiscal integration. This type of fiscal integration provides a mechanism of income redistribution within the Community.

Let us now suppose that the Community has reached a high degree of fiscal integration of this second kind, akin to that in existing nation states. The Community budget may dominate the national budgets; there is perhaps a single income-tax system operated by the Community; and various public services, as well as social security payments, are provided centrally, and thus at a common standard throughout. There are regional policies designed to help areas in distress. An important aspect of such fiscal integration is that there is redistribution among member states, possibly automatic.

One question is whether centrally determined fiscal policies, and especially regional policies, provide some kind of substitute for exchange-rate adjustment, and so reduce the costs of monetary integration. It is arguable that, aside from those that encourage labor mobility, such policies provide financing, not adjustment. They cannot achieve what exchange-rate alterations within the Community can normally be expected to do, namely, adjust real wages and other factor incomes to levels required for regional full employment and external balance. On the other hand, fiscal payments may be forms of short-term financing that allow more time for adjustment and so reduce its costs. The effects may be like those of short-term private capital movements.

Furthermore, an appropriate system of taxes and subsidies can, in theory, achieve what a devaluation or a tariff is meant to do. With given money wages it is possible permanently to increase regional employment by taxing incomes (thus reducing aftertax wages) and using the proceeds to subsidize regional investment, output, or employment, preferably the latter. Employment subsidies in depressed regions, when financed from within the region, have effects very similar to a regional

devaluation, while when financed by the central government are somewhat similar to a devaluation combined with foreign financing.

Is a Community budget possible without an exchange-rate union? Finally, is fiscal integration of the second kind—involving a substantial Community budget—possible without monetary integration? Kenen (in Mundell and Swoboda, 1969) has argued that the area of monetary integration must be equal to or greater than the area of the fiscal union. If fiscal integration were thought desirable for redistributive or political reasons and if it were just not possible without an exchange-rate union, then we would have another argument *in favor* of monetary integration, to add to our somewhat sparse collection. This could be an important point, since fiscal integration may have very desirable redistributive effects. What a depressed region loses from inability to use the exchange-rate instrument, it may more than recoup from fiscal redistribution in its favor.

The problem is a difficult one, but it does not seem to me absolutely settled that some degree of fiscal integration is incompatible with varying exchange-rate relationships within the region. This can be argued in terms of the following simple case. Suppose that the Community fiscal authority collects a proportional income tax and makes social security payments denominated in terms of a common unit of account. If in this case exchange-rate relationships alter mainly because general cost levels rise at different rates in different countries, then no real problem is presented by the failure to have an exchange-rate union. When French costs and incomes rise, the franc depreciates. With higher French incomes, French income tax collections in francs rise, but since the franc has depreciated appropriately in terms of the unit of account, income tax collections in terms of the unit of account stay constant. Social security payments denominated in the unit of account are constant, but rise in terms of francs; this is appropriate, since the purchasing power of a franc has declined. There are no *real* changes in income tax collections or social security payments.

In this example, a problem arises only if exchange rates adjust jerkily rather than smoothly; in fact, the problem is then the same as with the Common Agricultural Policy. Furthermore, if the income tax were progressive it would be necessary, in this example, to fix the rates in terms of unit-of-account incomes to preserve equity among taxpayers in different parts of the Community; this would clearly present some practical problems of tax collection.

It is possible that exchange-rate relationships alter, not because of differences in the rates at which general cost levels increase, but rather because of structural shifts in demand and supply. Suppose that demand

for French exports declines. Total money income in France is kept constant, so the franc depreciates, and hence Frenchmen end up paying less income tax in terms of the unit of account into the central coffers, and their social security receipts in terms of francs increase. The reduced income tax collections represent a redistribution in favor of Frenchmen in general, not just those who lost incomes owing to the export slump. Unless the social security receipts are spent wholly on imported goods, their real value to the recipients will have risen. It does seem in this case that a fixed exchange rate within the fiscal region would be preferable. This argument appears to support the earlier conclusion of section 5 that an exchange-rate union may be advantageous if intercountry disturbances are expected to be structural rather than macro in origin. But the general issue of whether some degree of fiscal integration is possible without an exchange-rate union seems to need further investigation.

12. Summary

The aim of this essay has been to clarify issues, not to arrive at firm policy conclusions. The main general conclusion appears to be this: One can analyze in some detail various considerations that affect the *costs* of an exchange-rate union—indeed, in some circumstances, these costs may not be high—but it is hard to find any really convincing and conclusive economic reasons *for* exchange-rate union. Perhaps the main argument in favor has been developed in section 5, but it does not appear to have stood up very well.

At the risk of oversimplification, the points that seem to be significant can be summarized as follows:

- Monetary integration has two components: exchange-rate union and capital-market integration, the latter depending above all on permanent convertibility. These two components can, in principle, be separated.
- Exchange-rate union can be pseudo or complete. If it is pseudo—that is, without common reserves and a common central bank in the union—there is no real assurance of exchange stability.
- The losses from an exchange-rate union are the losses of forcing countries to depart from the optimum points on the unemployment-inflation trade-off curve; the extent of these losses depends on many things, notably on all the considerations affecting changes in relative cost levels over time. The lower the marginal propensity to import from other members of the union, the greater the losses.
- The effectiveness of exchange-rate adjustment depends on real-wage flexibility and hence—in the presence of money-wage rigidity—on money illusion or wage contracts in money terms. The more open an

economy, the less money illusion and hence the less real-wage flexibility there is likely to be. A very small open economy is not a feasible currency area.

- Trade-union integration may increase or decrease the costs of an exchange-rate union.

- Labor mobility among union countries reduces the costs of an exchange-rate union, but it is not a perfect substitute for exchange-rate flexibility.

- It has been argued that the gains from an exchange-rate union are the gains from price stability and depend on the degree of openness of an economy, but there are some difficulties in this argument. Exchange rates also have an insulation role. There are more likely to be gains when the comparison is made with a “jerky” adjustable-peg system than when it is made with a floating-rates system.

- It may pay an infeasible currency area to join a monetary union for the sake of prestige, seignorage, and a say in the common monetary policy.

- If a customs union is established, the case for monetary integration may be strengthened or weakened: there are opposing considerations. Notably, the need for exchange-rate variations may be increased because tariffs and import restrictions are no longer available as balance-of-payments instruments.

- Jerky exchange-rate changes create a problem for the Common Agricultural Policy. There is some illusion in the idea that money prices of agricultural products must be kept constant even when relative domestic cost levels within the Community have changed.

- The gains and losses from the freeing of capital movements among a group of countries can be analyzed in the same way as the effects of a customs union are usually analyzed, using trade creation, trade diversion, domestic distortions, and similar concepts.

- A complete exchange-rate union will end destabilizing short-term capital movements within the union. If, however, the exchange rate relative to outside areas becomes more rigid, destabilizing capital movements could increase. A pseudo-union might also increase them.

- Mobility of long-term capital within the union may be increased by an exchange-rate union, unless the balance-of-payments stresses of a pseudo-union lead to restrictions on capital movements.

- Capital movements can solve the central problem of exchange-rate union (the maintenance of simultaneous internal and external balance) only in the short run. This is a very important point.

- Monetary integration does not require fiscal integration, since governments can finance budget deficits by borrowing on the Community's

capital market. But efficient short-term management may require some harmonization or control of over-all budgetary policies.

• It is an interesting question (unresolved in this paper) whether fiscal integration requires monetary integration. If it does, and assuming that fiscal integration is desirable, we may have an additional argument in favor of monetary integration.

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¹ A list of earlier publications is available from the Section, or consult the publications list in earlier essays. A few of these publications are still available at the Section.

- * 93. W. M. Corden, *Monetary Integration*. (April 1972)
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