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International Co-operation
in Macro-economic Policies

J.E. Meade
Cambridge University

Internal Paper



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My purpose is to discuss the relationship between domestic macro-economic policies designed to maintain "full employment" without a runaway inflation and international financial institutions and policies designed to facilitate these domestic objectives, with the special purpose of discussing the problems which arise for a limited group of co-operating countries such as the EEC.

For some quarter of a century after World War Two we accepted, at least in the United Kingdom, what I may call the philosophy of Orthodox Keynesianism. It was regarded as a function of government to devise its financial policies - fiscal, monetary, and foreign exchange rate policies - so as to maintain total money expenditures on, and thus the demand for, the products of labour at whatever level was necessary to maintain "full employment". The effect of the public recognition of this governmental obligation to maintain full employment together with the building of a humane welfare state, designed to mitigate the hardships due to unemployment and other causes of poverty, was destined ultimately to lead to the threat of a runaway explosive inflation, so long as money wage rates continued to be set by a process of Free Collective Bargaining or of what I prefer to call Uncontrolled Monopoly Bargaining. The Welfare State made people less frightened of unemployment; the government obligation to expand money expenditures so as to maintain full employment made overambitious wage claims by monopolistic unions more insistent, since the fear of adverse effects on jobs was reduced; employers were more willing to grant wage increases since they expected in general that money expenditures would be expanded sufficiently to cover increased costs; this meant that they did not hesitate to raise selling prices to cover costs; and the consequent increase in the cost of living led to further increases in wage claims with the threat of a vicious spiral of runaway inflation so long as real demands were in excess of real productivity.

There were rumblings of this throughout the 1950s-60s with an increasing realisation that the logic of what I call Orthodox Keynesianism required an incomes policy, that is to say, state intervention to control the money wage rate. In fact the logic of Orthodox Keynesianism is that

a centrally controlled money price of labour instead of, for example, a centrally controlled money price of gold is needed to form the monetary anchor for the economy.

The final explosion came with the rise in the OPEC price of imported oil in the early 1970s. Any failure to accept the fall in the real standard of living represented by this rise in the price of an important imported component in the cost of living was bound to cause an explosive inflation. Wages rose to offset the effect on the cost of living of the increased price of imported oil; this raised costs and prices still further so that wages rose still further which caused a further rise in costs and prices and thus a threat of explosive inflation so long as the inevitable fall in real income was not accepted.

The logic of Orthodox Keynesianism is to use the panoply of financial policies - fiscal, monetary, foreign exchange rate - to maintain real output and employment and to use the money wage rate to control the inflation of money prices and incomes. I do not believe that this can be made to work without excessive governmental intervention in the affairs of business at the micro level.

I turn therefore to the advocacy of New Keynesianism, by which I mean the use of the whole panoply of Keynesian Demand Management financial policies for the control of money expenditures' but with the objective, not of maintaining real output and employment, but of maintaining the total money expenditures on the products of labour (i.e. the money GDP or the money national income) on a steady moderate growth path, thus avoiding by Keynesian measures total monetary inflations or deflations. This would control inflation; but in order to be compatible with full employment it would need to be combined with a radical reform of wage-fixing arrangements so that rates of pay were fixed so as to maintain real employment and output.

This, it may be observed, is to use the wage rate (price of labour) at the micro level in the natural market way to increase in any sector the demand for labour where there is an excess supply and vice versa. I am not suggesting that this is an easy reform in modern conditions.

It involves dealing somehow or other at the micro level with the monopolistic powers of companies, trade unions, and other bodies so as to ensure that, where unemployed resources exist, an increase in demand leads to an increase in output and employment rather than to an increase in prices and incomes for the sole benefit of the existing owners and workers.

To tackle this problem certainly requires a major change in institutions and attitudes whereby much less emphasis is put on wage settlements as the means of affecting the levels and the distribution of real incomes, while much more emphasis is put on other measures (fiscal, social security etc.) as the appropriate means for obtaining a socially acceptable distribution of real income. All this constitutes in my opinion much the most difficult part of our problem politically and its solution depends very much in each country upon the particular institutions, customs, historical background, and political possibilities of that country. Its solution is essential for the future welfare of our type of society; but I am not going to discuss it today.

What I am going to discuss are certain aspects of the other limb of New Keynesianism, namely the use of financial policies in each country for the demand management purpose of maintaining the total money national income of GDP (i.e. the total of money expenditures on the country's products) on a steady, moderate, planned growth path. This has, of course, an important feedback upon the wage-fixing problem. If it is known that the total money national income is going to rise by 5% and no more, then any individual claim for a rise of more than 5% in pay must mean that someone else must get less - either a cut in profit margins, or a less than 5% rise for some other group, or an increase in unemployment. Thus the public realisation of the true possibilities in the economy should be increased; and this should help with the reform of wage-setting procedures. In this respect to take the rate of increase in the money national income as the basic objective of counter-inflationary financial policy is much more sensible than to take a given rate of growth in some monetary aggregate. M_0, M_1, M_2 , etc. to the man or woman in the street in the United Kingdom sounds like a reference to a series of motor ways, whereas the total money income available for distribution is a much more

meaningful idea. Moreover, any particular M may, as experience has shown, vary without a corresponding change in expenditures, as people change their preferences for one type of financial asset rather than another; and it is after all the total of money expenditures which one intends to control indirectly by controlling M. Why not then put resources into improving the statistics of the money GDP and watch that directly rather than movements in M?

The same sort of objection may be raised against trying to control the PSBR or, as I will call it, the budget balance as an indirect means of counter inflation control. It is the total expenditure on goods and services rather than the public sector borrowing which is the ultimate objective for control of monetary inflation and deflation.

This is not to argue that the budget balance should be disregarded. It is in itself of great importance quite apart from the control of monetary inflation or deflation. A large budget deficit, properly corrected for inflation accounting and after adjustment for true productive capital expenditures, means that the state is mopping up private savings and using them to finance current public consumption. The size of the real current budget balance is thus a matter for legitimate concern in so far as it affects the long-run rate of growth in the economy through its effect upon the proportion of the national income which is saved and devoted to capital development rather than to current consumption. This is a long-run structural concern which is quite different from any short-run concern about the control of inflation. A structural maladjustment of the budget balance and investment ratio can well persist in macro-economic equilibrium conditions in which there is full employment and no threat of inflation or deflation.

In a closed economy we would then have two major forms of financial policy, namely monetary policy displaying itself in the form of variations in rates of interest, and budgetary policy displaying itself in the form of variations in government spending programmes or in rates of tax. Against these two instruments we have to set two objectives of macro-economic policy, namely the maintenance of the money GDP on a steady 5% p.a. growth path and the maintenance of the budget balance at a level

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which gives the desired structural balance between domestic investment and domestic consumption.

In a closed economy the general strategy for the use of these two weapons for the attainment of these two targets is clear and familiar. A constraint on the GDP can be achieved by a more restrictive budgetary policy and by tighter monetary policy; if, however, that results in too low a relation of investment to consumption, the balance can be put right by an increase in tax rates (which will largely restrict consumption) combined with a reduction in interest rates (which will largely stimulate investment).

Thus one can think of the problem in the way in which a control engineer would think of it. One needs a model of the dynamic, lagged, interrelationships between the main aggregate variables in the economy (consumption, investment, wage rates, prices, earnings, profits, output, employment, tax rates, interest rates, etc. etc.) including equations which explain the formation of expectations about movements in these variables. One then asks a control engineer to apply his or her mysterious and magic powers to tell one what rules about the setting of rates of tax and rates of interest in the light of past and current events are most likely to keep the GDP on its planned path together with an acceptable budget balance.

Designed in this way one is not a priori linking one weapon to one target (e.g. tax rate to control GDP and interest rate to control the budget balance and investment ratio); one is designing the best possible package of tax rate and interest rate to obtain the most desirable package of GDP level and investment ratio. The best rules may turn out to put most stress on the GDP objective in determining the tax rate and on the investment ratio in determining the interest rate. Indeed, that will be the result if the tax rate has a rather more general effect on all forms of expenditure whether on consumption or investment, while the interest rate affects mainly investment.

But there is another very important reason why this allocation of weapons to targets may be desirable. It is very important to be able to nip in the bud deviations of the money national income from its steady growth path because monetary booms or slumps are apt to feed on themselves in a vicious circle due to multiplier effects, accelerator effects, and price-expectation effects.

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On the other hand an imbalance between investment and consumption in an otherwise stable economy constitutes a structural growth problem which can be tackled in a more leisurely fashion. It is, therefore, important to use a quickly acting regulator to control the GDP and to regulate the less quickly acting instruments to the control of the investment ratio. The interest rate does probably work mainly on investment expenditures and does that slowly and with considerable lag since it involves revising investment plans. On the other hand it should in my opinion be possible to devise some forms of tax regulator which could be varied fairly frequently and promptly and which would have a prompt effect upon expenditures. This consideration would strengthen the case for relying primarily on fiscal policy for the control of the GDP.

This conclusion is greatly reinforced when one turns to the consideration of an open economy on the assumption that there is a basic freedom of trade and of capital movements between it and the rest of the world. We have now three instruments of financial policy - fiscal, monetary, and foreign exchange rate policies - to attain three objectives - control of GDP, of investment ratio, and of the balance of payments. A natural first reaction is to suggest that there should be a freely floating exchange rate regime in which case the foreign exchange rate would automatically serve as the instrument to equate supply to demand in the foreign exchange market and thus keep the balance of payments in balance. In one sense that is more or less what I am going to suggest, but subject to some very important provisos.

The situation is fundamentally complicated by the fact that the international flow of capital funds constitutes a very important element in the balance of payments and that it is very sensitive to changes in interest rates. One cannot simply ignore this relationship in designing interest rates policies; and this consideration strongly reinforces the argument for controlling the GDP primarily by tax policy which does not have the same sensitive effect upon the flow of capital funds in the balance of payments.

Incidentally before I discuss the policy implications of the sensitivity of international capital funds to national interest rates, it is worth noting that these effects are very difficult to introduce effectively in one's calculation of the dynamic effects of different policy strategies. The effects of a change in interest yields in one country on financial flows in the balance of payments must take into account the following four elements: (i) the once-for-all substantial flows of capital across the exchanges as both domestic and foreign holders of wealth adjust their portfolio distributions from countries with lower to countries with higher rates of yield; (ii) the subsequent continuous flow of new domestic and foreign savings in a higher ratio than previously into the countries with the higher yields; (iii) the change in the continuous flow of dividend and interest payments across the exchanges in respect of unchanged foreign asset holdings on which the yield has changed; and (iv) the change in the continuous flow of dividend and interest payments across the exchanges due to changes in the distribution of portfolio holdings.

In addition to this complexity of once-for-all and of continuing effects, there is the general difficulty of modelling stock-flow relationships in the capital market. In a recent book on demand management [1] I and two colleagues have tried out the effects in the United Kingdom of a New Keynesian Policy which consisted in using the money wage rate to maintain employment against the background of financial policies designed to keep the money GDP on a steady growth path. But as a result of the difficulty in modelling money capital flows we have not in that book tried out the policy rules for monetary and foreign exchange rate policies, which I am going to recommend today.

What we have done is simply to assume (i) that the real rate of interest in the UK was kept constant and (ii) that the rate of foreign exchange was varied in a manner designed to keep the balance of trade on a rather arbitrarily selected path. On this basis we have carried out exercises to see to what extent a fiscal policy designed to keep the GDP on a planned growth path together with wage adjustments designed to promote employment could have successfully maintained a high and stable level of employment without a runaway inflation in the UK in the period

1972-85. In brief we have not considered the possibility of using monetary policy and variations in interest rates as a means of influencing domestic investment or the international flow of capital funds. We hope, however, that in spite of this our analysis of problems involved in the use of fiscal policy and wage-rate adjustments as instruments for domestic stabilisation is not without some value.

To return from this digression, we can, I think, confidently assume that international capital flows are very sensitive to changes in national rates of yield and that at least for a time, while portfolio adjustments are being made, a reduction in interest rates in one country will result in a substantial outflow of funds which will put a heavy pressure on that country's foreign exchange rate. Consider then a country - B for Britain - which lets its currency Sterling freely float so as to look after its balance of payments, which uses variations in its tax rate successfully to keep its GDP on target, and which keeps its interest rates low (and its tax rate therefore correspondingly high) so as to maintain a high desired investment ratio. Suppose the outside world to be made up of country A - A for America with a Dollar currency (please excuse my Anglo-Saxon example) - which keeps its GDP on a reasonable path but with a very low tax rate and a very high rate of interest. Very low rates of interest in B combined with very high rates in A will cause a heavy flow of capital funds from B to A; with a floating exchange rate Sterling will depreciate and the Dollar appreciate until speculators think that Sterling is so undervalued that it is bound to start appreciating at a rate which will offset the higher interest yield on Dollar securities. If there were a 6% difference in interest rates which was expected to last for 5 years, Sterling would have to depreciate by some 30% below its expected equilibrium level. The problem is complicated and intensified by the time lags in the adjustment of imports and exports to changes in their prices - the perverse effects of the well known J-curve. A 30% depreciation of Sterling may at first worsen country B's balance of trade as the price of its imports rise, thus intensifying the immediate strain on the foreign exchange rate. Such overshooting of its exchange rates could play havoc with country B's domestic policies for full employment and price stability.

For this reason so long as there are free international capital movements it is not possible for country B to design its monetary policy and set its interest rates in such a way as to attain a desired domestic investment ratio regardless of monetary policies in the rest of the world, even though it allows free movements in its foreign exchange rate. But this does not mean that it has no control over its investment ratio provided that it is indifferent between investment at home and investment abroad.

Suppose country B by a successful New Keynesian combination of fiscal control and wage-setting institutions to be enjoying full employment without excessive inflation, but that because of high interest rates abroad it is doing so with undesirably high interest rates at home, matched by an undesirably low tax rate and an undesirably high budget deficit needed to offset the domestic deflationary effects of high interest rates. Country B wishes to maintain its GDP on its present growth path but with a higher tax rate and thus lower consumption expenditures, matched somehow or another by higher expenditures on capital development at home and abroad. It lowers its interest rate moderately; this gives some stimulus to domestic investment; it also causes some moderate depreciation of Sterling; after the perverse J-curve has worked itself out and the Sterling exchange rate has settled down to a new equilibrium level which balances supplies and demands in the foreign exchange market, there will result an increase in country B's balance of trade on a scale which matches the outflow of capital funds caused by the reduction in the interest rate, so that there is a coresponding increase in its investment of real resources abroad, i.e. in its foreign investment; the rise in expenditures on its home products due to the increase in its domestic investment and to the increase in its foreign investment (i.e. in the excess of its exports over imports) means that it must now raise its tax rates and reduce its budget deficit in order to prevent an undesirable inflation of its money GDP. The ratio of total investment to consumption will have been raised principally by a change in the exchange rate rather than by a change in the rate of interest and thus by an increase in foreign investment rather than in domestic investment, if domestic investment is not very sensitive to the rate of interest while international capital flows are very sensitive to the rate of interest

and the balance of trade is ultimately sensitive to changes in the real rate of foreign exchange.

In the light of this analysis of the basic interrelationships let me enumerate some proposed rules of conduct for country B.

Rule (1) It relies primarily upon fiscal policy, in the form of an annual budgetary review backed by some tax regulators which can be used in between the annual budget changes, to maintain its money GDP on a steady growth path.

Rule (2) Against the background of this steady growth of the total money demand for the products of labour, it achieves a basic reform of its wage-fixing institutions in order to promote real output and employment.

Rule (3) It allows its foreign exchange rate freely to float without intervention other than that which I will describe under Rule (9) below.

Rule (4) It chooses and announces a central target exchange rate between Sterling and Dollars at $\frac{bW_b}{aW_a}$ where W_b is the value in Sterling of an hours' work in country B and W_a is the value in Dollars of an hours' work in country A and a and b are shift parameters of which I will speak under Rule (8).

Rule (5) The central target exchange rate is announced weekly after revision in the light of movements in W_a and W_b . Thus there is, so far as differences in inflation rates are concerned, no element of cumulative disequilibrium ending inevitably with a catalysmic change in a rigid adjustable peg such as delights the heart of the speculator, but rather a steady weekly crawling peg offsetting the inflationary divergences of national policies.

Rule (6) The authorities in country B announce a zone or band around this central target exchange rate with upper and lower limits of $\pm x\%$ from the central rate. At the one extreme, as proposed

by Professor Williamson [27], one might have a soft zone with variations of $\pm 10\%$ about the central rate, which would mean merely that the authorities hoped to keep the exchange rate within this wide zone. At the other extreme one might have a hard band and with variations of $\pm 2\%$ which meant that the authorities in fact undertook to keep the rate within these narrow limits. The choice is, of course, of basic importance; but I do not intend to discuss it today beyond saying that my personal inclination would be to start with a rather soft zone with wide variations and to harden and narrow it up perhaps as experience might suggest.

Rule (7) The authorities would use monetary policy with its effect on interest rates and so on capital flows in the balance of payments to keep the foreign exchange rate within the stated zone or band.

Rule (8) In the weekly revision of the central target exchange rate consideration would be given to making moderate small changes in the shift parameters a and b. A rise in w_b represents a rise in the price of labour; a rise in b may be thought of as a fall in the "quality" of labour, so that bw_b measures the price of a unit of a given amount of "labour efficiency". A rise in b/a might, therefore, be appropriate if the productivity of labour were rising less rapidly in country A than in country B. This is not, however, certain. If productivity is rising more quickly in A than in B, selling prices will presumably be rising less rapidly in relation to wage rates in A than they are in B. The substitution of A's products for B's products in world markets would then tend to put a pressure on B's balance of trade. But at the same time if successful full employment policies are carried out in A and B, total real income and thus the total demand for imports will be rising more rapidly in A than in B which will put a pressure on A's balance of trade. It is not at all certain whether the substitution effect which is adverse to B's balance of trade will be the stronger. It is for this reason that I have chosen to relate the central target exchange rates

to money wages rather than to money wage costs or to the money price per unit of tradeable output, though there are no doubt arguments in favour of the latter procedures.

In any case there is another and more basic criterion on which adjustments of the shift parameters \underline{a} and \underline{b} must be judged; and if this criterion is observed, any maladjustments due to the choice of money wage rates as the index of monetary inflation will automatically be ultimately corrected. Suppose country A to be running an undesirably high budget deficit and low investment ratio. On the basis of my previous analysis it needs to depreciate its real exchange in order to promote a surplus on its balance of trade and thus its foreign investment. It needs a movement in the terms of trade against its products to expand their sales; and this requires its labour to be regarded as "cheaper" relative to country A's labour; and this can be achieved by a rise in the ratio $\underline{b}/\underline{a}$. Changes in these shift parameters ultimately affect the real terms of trade and are thus the means for achieving a gradual structural adjustment of the budget balance and investment ratio.

Rule (9) The basic foreign exchange regime would thus be freely floating exchange rates influenced by monetary policy designed to achieve appropriate adjustments in interest rates and so in capital flows. But because of the perverse effects of the downward slope of the notorious J-curve the immediate, but temporary effects of a rise in $\underline{b}/\underline{a}$ might be to reduce instead of to increase the country's balance of trade. In order to prevent the perverse rise in interest rates which might then otherwise be needed to attract foreign funds so as to keep the exchange rate within its zone or band, there would be a clear case for temporary support of the foreign exchange rate by the use of official foreign exchange reserves to tide over the period until the depreciation had its effect in increasing the balance of trade. The freely floating exchange regime should properly be modified by interventions needed to offset the temporary perverse effects of the J-curve. This is not an argument for official intervention to smooth out exchange rate variations which are permanently needed

to preserve equilibrium in view of changed conditions. It is not an argument in favour of "leaning against the wind"; it is an argument in favour of preventing temporary perverse overshooting of needed exchange rate change.

So much for the rules of action for one small country acting alone. I turn now to the other extreme and ask what the rules would look like if all the free-enterprise countries of the world joined together in a community to attempt to apply these principles jointly.

I start with a short statement of what I believe are the main desiderata of such international co-operation. I do not put much, if any, weight on harmonising the rates of inflation of money prices, money costs, and money incomes in the various countries. If the crawling peg principle of weekly changes in the W's and similar components of central target exchange rates is adopted, there is little or no cost in divergences in actual inflation rates; and the extra degree of freedom for national governments may make it easier for them to maintain a high and stable level of real output and employment.

Maintenance of such a high level of real economic activity by methods which do not beggar my neighbour is what really matters. This is strikingly illustrated by one of the main exercises which my colleagues and I carried out in our book on demand management [17]. We asked what would happen if during the period 1972-85 the United Kingdom had by the use of fiscal policy and wage-setting reforms maintained full employment on the lines which I have discussed above for country B in spite of the great world recession with its inevitable reduction in the real demand for United Kingdom products. The answer is that employment might have been maintained but only at the expense of a large strain on foreign exchange reserves and of a corresponding huge increase in the national debt as relaxed fiscal policy was needed to maintain economic activity while the foreign demand for United Kingdom products was severely depressed, until after the end of the perverse J-curve period when a reduction in the United Kingdom real exchange rate had managed to restore her balance of trade in spite of the maintenance of her real demand for imports when the world's real demand for her exports had fallen.

In view of these desiderata the rules for our Community of Nations might be as follows.

Rules (1) and (2) Each country would be free to design its own fiscal policy and wage setting arrangements so as to achieve by these domestic measures a high and stable level of employment and real output. Personally I would advise them to do it by New Keynesian rather than Orthodox Keynesian means; and no doubt discussion and exchange of information on these methods would be helpful. But what really matters is the achievement of full employment by these innocuous domestic measures.

Rule (3) There would be a basic freely floating foreign exchange regime.

Rule (4) The member countries would co-operate in setting a consistent structure of central target exchange rates. If the currency of country A (e.g. America's Dollar) were taken for the numeraire these could be expressed as

$$\frac{bw_b}{aw_a}, \frac{cw_c}{aw_a}, \frac{dw_d}{aw_a}, \text{ etc.}$$

where b, c, d, etc. stood for the currencies of other member countries.

The same result could be achieved by expressing the rates in terms of a Community Currency Unit (CCU). Suppose one CCU to consist of A units of currency A, plus B units of currency B, plus C units of currency C etc. Then if a consistent structure of target exchange rates $\frac{bw_b}{aw_a}, \frac{cw_c}{aw_a}$, etc were observed, the

value in B's currency of one CCU would be

$$bw_b \left\{ \frac{B}{bw_b} + \frac{A}{aw_a} + \frac{C}{cw_c} + \text{etc.} \right\} = bw_b Q$$

where Q measures the total amount of "effective labour" which one CCU can command at any time throughout the community.

The central target exchange rate for country B's Sterling would be expressed as $bw_b Q$ for one CCU; and $\frac{B}{bw_b} Q$ would measure the

proportional real weight of Sterling in the composition of a CCU.

Rule (5) The Community would revise and announce weekly the central target exchange rates in view of changes in the W's.

Rule (6) The Community would announce given zones or bands for the exchange rates with a given degree of variation between the upper and lower limits.

Rule (7) The Community would co-operate continuously in national monetary policies so as to set a structure of national domestic interest rates which satisfied two conditions. First, the rates of interest relatively to each other would be adjusted so as to maintain foreign exchange rates within the agreed zones or bands. Secondly, the whole structure of rates of interest would be revised downwards if throughout the Community it was found that excessive budget deficits would otherwise be needed in order to offset the deflationary effects on the money GDP of high interest rates.

It is in this second requirement that the Community rules would differ from the single country rules. In the case of a single country which found that it was having to run an undesirably high budget deficit and low investment ratio in order to prevent a deflation of its money GDP, the rule would be that it should depreciate its real exchange rate in order to improve its balance of trade and so its foreign investment. Clearly it would not make sense to say that every country should simultaneously depreciate its real exchange rate in terms of every other currency so that every country should improve its balance of trade with every other country. What is needed in these circumstances is a simultaneous reduction in interest rates in all countries in order to stimulate domestic investment in all the countries.

Rule (8) However, if only one country or a limited number of countries were experiencing undesirably high budget deficits as a result of the use of fiscal policy to prevent a deflation of their money GDPs, then a depreciation of the real exchange rates of this group of countries in terms of the currencies of the rest of the Community is the appropriate reaction; and this requires a rise in the shift parameters of the former group on the grounds which I have discussed at length for the single-country case.

Rule (9) There remains the problem of official intervention in foreign exchange markets. The ideal arrangement would be that the national monetary authorities should abstain from all intervention, but that there should be some joint Community body which intervened when a temporary perverse movement or overshooting of exchange rates was otherwise likely to occur. The outstanding example of such a case would be where a change in structural real exchange rates had been made on the principles just described in Rule (8), in order to expand the balance of trade of one set of countries with excess budget deficits at the expense of the balance of trade of another set of countries with excess budget surpluses; the temporary perverse effect of such a change in exchange rates on balances of trade could be offset by the use of official exchange interventions to the advantage of both parties concerned.

Finally one may consider what would be the sensible rates for a group of countries which wished to form a community of this kind but which could not enlist the membership of all other free-enterprise countries. The relations between the members would be on the pattern which I have just outlined for community behaviour, but the relations between the members as a group and the outside world would have to be on the single-country pattern. The rules might be as follows.

Rules (1) The member countries would undertake to rely on fiscal policy and (2) and wage-setting as their domestic weapons for maintaining a high and stable level of real economic activity without a runaway inflation. It would be desirable though not essential that they should agree to do this on New Keynesian principles which would involve each member country in announcing a target path for the growth of its money national income or GDP.

Rule (3) The member countries would agree to rely basically on a regime of freely floating foreign exchange rates.

Rule (4) They would agree on a set of central target exchange rates for each country's currency in terms of a Community Currency Unit on the lines described under Rule (4) in the full community case. Thus the Sterling/CCU rate would be set at $bW_b Q$ where

$$Q = \frac{B}{bW_b} + \frac{C}{cW_c} + \text{etc}$$

and B, C, etc. were the amounts of the currencies of the member countries which were included in the CCU.

They would also agree on a central target rate for the exchange between the CCU and outside currencies which would presumably be represented by the Dollar. Such a rate could be expressed as one CCU = $aW_a Q$, since Q would measure the total amount of "effective labour" which one CCU would command in the Community while $1/aW_a$ would measure the amount of "effective labour" which one Dollar would command in country A.

Rule (5) These rates of exchange would all be announced and revised weekly in view of changes in the W's.

Rule (6) The Community would decide on zones or bands with upper and lower limits for these rates of exchange.

Rule (7) The Community would continuously review the monetary and interest rate policies of the members so as to achieve a structure of yields in the various member countries which satisfied two conditions; - first, that the rates of interest relative to each other were such as to keep the rate of exchange of each member's currency in terms of the CCU within the agreed zone or band; and, second, that the absolute level of the whole structure of Community rates was raised or lowered so as to keep the CCU/Dollar rate within the agreed zone or band.

Rule (8) If one member country had to incur an unduly large budget deficit as a result of fiscal policy designed to prevent a fall in its money GDP, then its shift parameter in the determination of its central target exchange rate on the CCU would be raised. If, on the other hand, all the members of the CCU were simultaneously experiencing unduly large budget deficits as a result of fiscal policies designed to maintain their money GDPs, then the shift parameter a in the CCU/Dollar rate would be lowered.

Rule (9) All actual interventions in the foreign exchange markets to offset perverse J-curve effects would be carried out by a joint Community pool of currencies or other forms of official finance.

To summarise, each member country would be free to devise its own fiscal and wage setting policies and institutions so as to maintain economic activity without runaway inflation, but there would be a very extensive pooling of sovereignty in the case of monetary policy, foreign exchange rates, and official intervention. Central target exchange rates would be agreed and continuously adjusted in a crawl to offset differences in rates of domestic inflation. National monetary policies would be jointly managed with the object of keeping these exchange rates within certain predetermined zones or bands. The real central target rates of exchange would be jointly adjusted so as to relieve members of any undesirably large budget deficits or surpluses which might result from their domestic use of fiscal policy for the maintenance of domestic equilibrium.

Finally, all official interventions in foreign exchange markets would be undertaken by a Community authority for the purpose of avoiding temporary perverse movements in the members' balances of international payments.

That is how I personally would like to see the EMS develop.

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