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OPTICA REPORT '75

TOWARDS ECONOMIC EQUILIBRIUM AND MONETARY UNIFICATION IN EUROPE

This Report has been prepared by a group of independent experts set up by the Commission. Nevertheless, the opinions expressed therein are the responsibility of the group alone and not of the Commission or its staff.

Brussels, 16 January 1976

This Report has been prepared by a group of independent experts set up by the Commission. Starting from an analysis of the theories on OPTImum Currency Areas (OPTICA), the group's task was to contribute to the solution of the policy question of how to realize monetary unification in Europe whilst fostering economic equilibrium in member states.

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1. THE CONCEPT OF MONETARY UNION

1.1 The concept of monetary union in the economic literature

Since World War II, the concept of monetary union has been discussed in the literature in two main contexts. The first one - the principal writers are Meade and Scitovsky (1) - was concerned with the question whether monetary union facilitates the successful formation of an economic union. The second one - with Mundell, McKinnon and Kennen (2) as protagonists (2) - developed the closely connected concept of an optimum currency area as an allegedly more constructive way of conducting the old debate about fixed or flexible exchange rates. Confusion between these two approaches to monetary union has led to an inconclusive discussion both in theory and for economic policy.

The first approach starts from the given situation of a customs or economic union, which may empirically be far from optimal in terms of movement of production factors within the area; harmonization of fiscal and other policy instruments; etc. Given the empirical framework, the question then is whether monetary union helps in making development towards full economic union more viable.

The second approach, on the other hand, specifically attempts to identify the economic conditions of an area within which it may be optimal to have fixed exchange rates and flexible exchange rates with the rest of the world. The fundamental weakness, and even contradiction, in the theory of optimal currency areas is that it tries to apply optimality rules to actual situations that are typically suboptimal in terms of economic efficiency. Economic theory shows that, when at least one of the economic optimality rules is

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(1) J.E. Meade, "The balance of payments problems of a European Free Trade Area", Economic Journal, September 1957; T. Scitovsky, "The theory of the balance of payments and the problem of a common European currency", Kyklos, 1957.

(2) R.A. Mundell, "A theory of optimum currency areas", American Economic Review, september 1961; R.I. McKinnon, "Optimum currency areas", American Economic Review, September 1963; P.B. Kenen, "The theory of optimum currency areas : an eclectic view", in R.A. Mundell and A.K. Swoboda, (eds.), Monetary Problems of the International Economy, Chicago, 1969.

violated, it is no longer possible to say a priori whether the enforcement of first-best rules in the remaining parts of the economy will improve or impair the efficiency of the system (1). In particular, a monetary union, if it is to be defined as complete currency unification, does not necessarily improve the efficiency of an economic union. Moreover, we cannot say a priori that the area of a monetary union should coincide with that of the economic union. Monetary unification should contribute to economic union; therefore the characteristics of each specific stage of unification can only be determined by an evaluation of the costs and benefits of their contributions.

This conceptual inconsistency of the theory of optimum currency areas is, on the other hand, avoided by the first approach to the problem, where the question was indeed cast in terms of expediency (i.e., in terms of "second-best" theory), by asking whether, given attempts to develop a customs union into a full economic union, monetary unification is or is not an efficient way of implementing that process.

1.2 The concept of monetary union in this report

The second-best theoretical approach suggested above leads to a definition of monetary union which may seem somewhat vague but it is perhaps more relevant to actual empirical application. Monetary union, from this point of view, would be an institutional organization among countries aiming at economic union, such as to minimize the inefficiencies inherent in the use and control of money within the union. As a corollary, this definition implies that, within the union, exchange rates are fixed, or, if flexible, that their changes are aimed at maximizing efficiency in the process leading to full economic union.

Crucial to this way of defining monetary union is then the identification, and quantification, of :

(a) what inefficiencies may arise in the use and control of money;

(b) in what cases exchange rate changes are merely monetary phenomena, and in what cases they may themselves cause real effects.

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(1) For the application of this theoretical framework to the optimum currency area debate, see M. De Cecco, "La teoria delle aree monetarie ottime e l'unificazione monetaria europea", Note Economiche del Monte dei Paschi di Siena, 1971.

2. EFFICIENCY OF MONETARY AND EXCHANGE RATE POLICIES

As forcefully underlined by a group of economists in a recently published document (1), the functions of money as a unit of account, means of payment, and store of value are such that, when a single currency is adopted in a number of countries and indeed, in the limit by the whole world, major advantages accrue from greater economic efficiency. On this basis alone, monetary union should imply a single currency, or, at least, completely and irrevocably fixed exchange rates among currencies of the member countries, and membership should be universal. Money, however, is thought to be important not only for the demand that it satisfies as a unit of account, means of payment , and store of value, but also because its amount relative to other financial and real assets in the economy is a factor in determining decisions to spend, and so may influence the proportions of expenditure devoted to investment or consumption. Thus, controlling the supply of money (or the conditions of credit that result in the supply of money) is considered as an important aspect of economic policy.

The question for monetary union, from this second point of view, becomes whether economic efficiency in the process leading to economic union is maximized by unifying monetary policy at the monetary union level, either directly on the basis of a single currency, or indirectly through fixed exchange rates among the currencies of member countries.

Preliminary to this question, however, is the crucial question around which turns much of the debate in monetary theory and policy, namely to what extent monetary policy is capable of influencing the real economy. On the other hand, the answers to that question imply a view of the effectiveness of exchange rate changes, viz whether the effects may be considered at least to some extent more than purely nominal.

2.1 Effectiveness of monetary policy

On the effectiveness of monetary policy economists are divided, although there is a growing consensus that, in long-run situations, monetary policy is unable to affect the level of real activity, but only affects the rate of price inflation. There is much less agreement as to how much influence monetary policy has on the level of economic activity in the short run, and

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(1) Published in The Economist, November 1st, 1975, as "The All Saints' day manifesto for European monetary union".

on the length of this run. Besides, not all economists accept long-run situations as empirically relevant, since they maintain that the structure of an economy, and as a consequence even its political framework, may be modified by a series of short-run effects, and hence never experience the long-run situations that are envisaged in models of balanced economic growth. In their view, the long run must be brought within the scope of active economic policy by designing interventions directed at changing the structure of an economy.

On the other hand, all economists accept that, in at least one limited sense, monetary policy has real effects, viz on the distribution of income between the money-issuing authorities (the government) and money-users (the general public), since real resources (the so-called seigniorage) are extracted by the former from the latter through the issue of a non-interest bearing asset (money) whose marginal cost of production is lower than the marginal value of the real resources against which it is exchanged. When there is inflation, additional real resources are obtained from money-users in the form of an inflationary tax rate equal to the difference between the nominal rate of interest and the real rate of interest. Moreover, because most contracts involving goods, services, and financial assets, are in nominal terms, inflation can also have real effects on the distribution of income among individuals (debtors vs. creditors), and among functional or social classes (wage earners vs. profit earners and rentiers; workers vs. capitalists; young people vs. old people).

2.2 The effectiveness of exchange rate policy

The above view would suggest that the real costs to any national economy of harmonizing monetary policies within a fixed exchange rate system, or even of merging them into a common policy on the basis of a single currency, are (1) the short-run effects on the level of national economic activity, and (2) the redistributive effects achievable by allowing the national inflation rate to depart from the average level of inflation for the union. Considering the very sizeable benefits of a single currency referred to above, the introduction of such a currency would appear to add, on balance, to the welfare of the union.

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On this view one would have to attach very great weight to the political relevance of the short-run effects of monetary policy on the level of real activity and/or of choosing the national inflation rate to achieve a desired impact on the redistribution of income and wealth.

There are many economists, particularly among those associated with the formulation of demand management policies, who would be prepared on these grounds to argue that harmonization of monetary policies with fixed exchange rates within the union, or outright adoption of a common currency, would add to inefficiencies in an area in which rigidities of various kinds result in monetary and credit policy having important real effects on the level and structure of economic activity. Thus economists sharing this view would tend to propose more flexible exchange rates within the union in order to compensate for those rigidities, at least as long as they persist within and among the regions and countries belonging to the union, but only as long as the real benefits of using the exchange rate instrument are superior to those flowing from a single currency.

Further, the authorities often believe that monetary policy is a powerful instrument in influencing employment levels, and the existence of this belief, whether empirically valid or not, would imply that divergent monetary policies cannot be avoided and would, therefore, require changes in exchange rates.

Thus, the positions sketched above on the efficacy of monetary policy entail some view as to the effectiveness of changes in exchange rates. Changes in exchange rates, being changes in the price of one money in terms of another, will have real and monetary effects on the same grounds on which it is maintained that changes in the stock of money also have real or simply monetary effects.

The distinction between monetary and real effects of exchange rate changes is closely connected with a judgement as to the length of the short run. In order to clarify and make them empirically relevant, it may be useful to restate these concepts in another way.

Exchange rate changes may be considered to affect primarily the balance of payments (and particularly the current account), or primarily the domestic price level. To simplify matters, the first view maintains that exchange rate changes have in the main quantity effects (on imports and exports, and hence on production and expenditure), while the second view maintains that exchange rate changes mainly affect money prices, and have no lasting effects

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on real quantities. We may associate the first view with the Keynesian tradition, and the second view with the monetarist tradition.

It is not surprising that the first view, the Keynesian tradition, of the effects of exchange rate changes on the current account, and on income and employment, was initially developed under the purely Keynesian assumptions of fixed money wages and prices, even though full employment situations were incorporated into the so-called "elasticity approach" by the development of the "absorption approach". In any case, whatever the assumptions of the various models in this strand of thought, the analysis was always concerned with identifying the channels through which exchange rate changes could have real effects, i.e. effects on quantities (such as real income and trade flows) and on relative prices (such as the terms of trade) and not simply monetary or nominal effects. Attention was therefore paid to the role of exchange rate changes in the process of adjustment to a balance of payments disequilibrium, or, more broadly, to the use of exchange rate changes as instruments of economic policy that, together with other instruments (monetary and fiscal), could assure the maintenance of both internal (full employment) and external (balance of payments) equilibrium.

In the alternative view, which has been particularly emphasized since the late sixties in the form of the "monetarist approach" to the balance of payments, changes in exchange rates cannot be an autonomous cause of changes in relative prices, and hence of changes in real quantities.

Both views have, in any case, overcome the partial equilibrium analysis of the foreign exchange market and the balance of payments, and look upon them as depending on the overall equilibrium of the economy. Thus, both views consider the problem of equilibrium in the balance of payments as determined by the relationship between income and expenditure (the current account equilibrium) and by the desire to hold certain proportions of foreign assets in the overall financial portfolio of the economy (the capital account), with emphasis by the monetarists on the relation between supply and demand for money as the ultimate determinant of the overall balance of payments account. The essential difference then does not lie in these statements, but rather on accepting or not the view that changes in exchange rates can affect these relationships in a permanent way, i.e. can have real effects on the ratio of expenditure to income, on portfolio allocation, and on the demand for real cash balances.

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2.2.1 Monetary effects of exchange rate changes

Since the development of the theory of purchasing power parity, it has been understood that exchange rate changes have, at least as a tendency, the effect of aligning the price level of tradeable goods on the world level (when translated in terms of a common unit of account). This, in itself, is due to the arbitrage of goods in integrated markets, and does not change the relative prices of different goods and services. When only two aggregate sectors are considered, namely that producing exportable goods and that facing the competition of imports, exchange rate changes cannot affect, in this view, the equilibrium level of the terms of trade. If, for example, the domestic currency is devalued, thereby increasing the price of imports in domestic currency, this change is compensated by an equiproportional increase in the price of exports in terms of domestic currency.

If these were the only consequences of changes in exchange rates, the terms of trade would not change, and it would therefore not be very interesting to analyse the effects of exchange rate changes on the current account of the balance of payments. Putting it another way, since a devaluation would not have expenditure-switching effects (because the relative price of imports and exports had not changed), it could have an effect on the current account only if it had expenditure-reducing effects (through the attempt of the non-government sector to reconstitute the real value of their cash balances).

Since, at this level of analysis, the terms of trade do not change with changes in the exchange rate, the distinction between importable and exportable goods (or sectors) is not very interesting. It is more illuminating to aggregate importables and exportables into the tradeable (or exposed) goods sector, and distinguish instead a non-tradeable (or sheltered) goods sector. A change in the exchange rate would then clearly affect, at least initially, the relative price of tradeables/non-tradeables, since it equally increases (with a devaluation) both import and export prices when they are measured in terms of domestic currency. Thus, exchange rate changes seem to have a relative price effect, although not the traditional one on the terms of trade. Even this, however, is only temporary. In fact, unless a change in the exchange

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rate was to affect the real productive capacities of the economy, or the tastes of the country as regards the allocation of its expenditure between tradeables and non-tradeables, the economy must necessarily come back in due course to the initial real position, with the initial relative prices and the same current account.

The process of adjustment, in the monetarist view, goes through the deflationary effect on expenditure that is provoked by the increase in the prices of tradeable goods (expenditure-reducing effect). This induces a temporary surplus in the current account, which, in the absence of offsetting capital movements, and of sterilizing monetary policy, pumps money into the economy, thus reconstituting real balances and hence expenditure at the initial level and, also, in the process, raising the price level of non-tradeable goods so as to bring them back into line with the higher price level of tradeable goods.

In conclusion, according to the monetarist view, the relative price effects of exchange rate changes are only temporary. Moreover, they do not involve the terms of trade, but rather the relative price between tradeables and non-tradeables. More important, they trigger off expenditure-reducing (or expenditure-expanding) effects that are also only temporary, until the real value of assets are reconstituted, together with the real (relative) prices and real quantities of production and demand; after this, the balance of payments will be again at its initial level.

It may be interesting, and crucial for certain purposes, to know the length of time for these effects to take place. However, it is clear that, in this view, the real variables of the economy will not be affected in the long run by exchange rate changes.

Similar considerations to those developed above are used to maintain that the effects of exchange rate changes are only monetary in the long run even when capital movements are explicitely introduced into the picture, i.e. when the capital account is considered in addition to the current account of the balance of payments. However, in the short run, these capital flows can be responsible for the erratic fluctuation of the exchange rate around the purchasing power parity.

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As an explanation of the above phenomenon, it could be argued that there is a lack of speculation which, according to the traditional theory of flexible exchange rates, ought to stabilize the exchange rate around its equilibrium level, which is determined by the purchasing power parity. This dearth of speculation could be due to the increase in risks facing the banks which, for a long time, were regarded as the "natural" candidates for stabilizing speculative activity, and to the regulation of these operations by the central banks.(1).

However, a more general explanation could be given which takes into account not only the monetary nature of the exchange rate (in terms of purchasing power parity), but also its determination in the short and long run. According to the monetary approach the exchange rate is not analytically determined by the foreign exchange market or in other words by the transaction flows recorded on the capital and current account. It is determined by the equilibrium and disequilibrium on the various money markets (which are markets for stocks of money relative to other stocks of financial assets, and are therefore interdependent from the point of view of optimum portfolio management). In a fixed exchange rate regime, the variable to determine is the balance of payments; a balance of payments' disequilibrium is only possible in as much as there is disequilibrium in the market for money (the latter could be due to monetary or real factors). A deficit or surplus will persist until the market for money is in equilibrium. Under a flexible exchange rate system, the variable

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(1) Some attention has been devoted recently to the effects that excessive fluctuations in exchange rates may have had in generating false trading, i.e. in inducing exports and imports (with underlying allocation effects on demand and production) that are not really justified in terms of comparative advantage. It should be noted that, in so far as this argument is empirically correct, it does not depend on exchange rate flexibility but on excessive fluctuations and possible exchange rate instability. In the light of the above argument, the latter might be the consequence of wrong policies vis-à-vis speculation on the part of monetary authorities, and of not adequately "managed" floating rates, which prevents the development of more efficient exchange rate markets. It should also be underlined that the empirical observation of wide exchange rate fluctuations on which these reasonings are based relates generally to the dollar exchange rate vis-à-vis individual currencies. Effective exchange rates have generally been more stable. Moreover, even bilateral exchange rates between pairs of European Communities' currencies have generally been more stable than with respect to the U.S. dollar.

to determine becomes the exchange rate; according to the same principles of the monetary approach, the exchange rate will continue to vary, until there is equilibrium on the market for money.

In particular, the exchange rate is determined in the short run by expectations concerning the future return on different kinds of assets; included here are foreign financial assets on which a considerable part of the anticipated return is a function of the expected exchange rate. Even more, if expectations with respect to the exchange rate are based on previous changes in the exchange rate, then it could diverge over a long period of time from its long-term value.

Before concluding this section, a possible misunderstanding should be cleared away. The view that exchange rate changes have, by themselves, only monetary effects, does not mean that they cannot accompany real changes. For example, when the terms of trade must change for some real reason that has disturbed the initial equilibrium, and this cannot be done by the required upward and downward changes in money prices of the different commodities involved, a change in the general price level and consequently in the exchange rate is necessary to achieve the required adjustment. Thus the differential impact of the oil price increase on the terms of trade of individual industrialized countries has required additional adjustments of exchange rates between some of them.

The only sense in which, in this case, we may talk of a "real" effect of exchange rate changes is that these changes avoid the persistence of a real disequilibrium situation. But they are only the monetary form that the real adjustment takes, and only one of the possible forms. Both the disequilibrium and the adjustment involve real variables, and monetary variables (like the exchange rate) accompany this adjustment; they are not the cause of the real change, but the effect.

2.2.2 Real effects of exchange rate changes

In appreciating the possible real effects of exchange rate changes, the last paragraph of the preceding section is important. In fact, if we do not consider that real disequilibrium situations are self-liquidating but might be chronic, then changes in exchange rates acquire a status as

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the driving force through which real effects can be obtained. This view of exchange rate changes and their real effectiveness was indeed, as already recalled, the main argument that early Keynesians put forward in favour of flexible exchange rates or devaluations as means of improving employment.

Apart from persistent disequilibrium situations, we may now question whether, even in situations in which economies tend to find their real equilibrium, exchange rate changes can have real effects.

The analysis of the preceding section, although particularly addressed to the monetarist view and its implications, should already have cast some light on this question. In fact, even in that analysis, it is recognized that exchange rate changes do have effects on real variables (relative prices, quantities produced and demanded, real expenditure, real income), but that these are only temporary. Thus, the first question is: what is the length of the period during which exchange rates have some real effects (how short is the short run)? We might also raise the second question : is it acceptable to consider the long-run structure of the economy as unaffected by what happens in the short run ?

The length of the "short" run during which exchange rate changes do have real effects is connected with the existence of various rigidities and with money illusion. It should be clear that the term "illusion" does not necessarily imply an irrational behaviour on the part of economic agents, but the fact that for various institutional and social reasons economic contracts are fixed in money terms and are not readily adjusted when their real value changes with a change in the general price level. When the change in the price level is due to a change in exchange rates, we may talk of exchange rate illusion.

The theory of optimum currency areas added a new dimension to the classic debate on fixed vs. flexible exchange rates, by pointing out that the extent of exchange rate illusion depends crucially on the degree of openness of the economy. The more open an economy, in the sense that the larger is the weight (direct and indirect) of traded goods prices in the general price level, the less credible it is that money contracts (and

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money expenditure engagements, like government expenditure) are not adjusted for changes in the exchange rate and the concomitant changes in the prices of traded goods. Thus an element in reducing the money illusion is the existence of institutional provisions for indexing money contracts, and particularly wages and salaries. The closer the indexing reflects the actual rise in the cost of living, inclusive of the increase in traded goods prices, the lower is the degree of exchange rate illusion, and the shorter is the run during which exchange rate changes may have real effects. It was indeed with particular reference to this money illusion argument, as determined by the openness of an economy, that Mundell and McKinnon indicated a lower limit to the smallness of an optimum currency area.

Another point is that the frequent use of monetary stimuli followed by exchange rate depreciation and domestic inflation makes the short run always shorter, since money illusion is weakened, thus rendering these monetary instruments more and more ineffective.

2.2.2.1. Money illusion is also crucial in the type of analysis that characterizes recent structuralist models (1). In these models the economy is divided in two sectors : the exposed (to foreign competition) sector, and the sheltered sector. The division echoes the similar (and equally essential to their analysis) partition by the monetarists between the traded and non-traded goods sectors. Given the exchange rate, and the level of foreign prices, the prices of the goods produced by the exposed sector are determined. For a given wage rate in this sector and a given labour productivity, the profit rate is also determined. Since there is a homogeneous labour market in the country, the wage rate and the "normal" profit rate in the sheltered sector also determine the level of prices in the sheltered sector, for a given productivity of labour there. If the productivity of labour grows less in the sheltered than in the exposed sector, the inflation rate will be higher than in the exposed sector. Thus, in these models, the overall inflation rate in

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(1) The best known model of this type is the so-called Scandinavian model (see, among others, G. Edgren, K.O. Faxen, C.E. Odhner, Wage Formation and the Economy, Allen & Unwin, London 1973). A similar model has been used by various Italian economists (see, for example, M. d'Antonio, "Sviluppo diseguale ed inflazione nell'economia italiana, 1959-1969", Moneta e Credito, September 1973). While the Scandinavian authors have mainly analysed a pattern of trade union behaviour that would keep income distribution constant in the exposed sector in the long run, the Italian contributions have emphasized the consequences of trade union behaviour that unsettles the "normal" income distribution. Thus the analysis of exchange rate changes and money illusion is developed explicitely only in the Italian contributions, where they are seen as means of restoring a "normal" distribution of income, when this is being altered by excessive wage increases.

the country will be higher, the larger the sheltered sector and the lower the rate of growth of productivity in this sector relative to that of the exposed sector.

In the Scandinavian version, a differential rate of inflation in a country relative to the rest of the world is determined by inadequate productivity growth in the sheltered sector. In the Italian version, if wage increases in the export sector exceeds the sum of the rate of increase of world market prices and the rate of growth of the sector's labour productivity, the easiest way to avoid a fall in profit rates is to let the exchange rate depreciate.

In this framework monetary policy adapts to the need for keeping demand at the full employment level, and thus for validating inflation that may exceed the international rate. In addition, if the origin of the excessive inflation is either excessive wage increases or inadequate productivity growth in the exposed sector, adaptive monetary growth must be accompanied by devaluations in order to cope with the external constraint.

These ideas have been further developed by some Italian economists in their interpretation of the policies followed by the Bank of Italy in recent years (1). In their view, monetary and exchange rate policies appear to play less the alleged role of keeping the economy at a reasonable level of employment and low price inflation, than that of sustaining economic growth by allowing profit rates at a "normal" level in the face of excessive money wage increases relative to productivity growth. When wage increases endanger the level of profits required for sustained investment and overall economic growth, monetary policy comes in to allow, through price inflation, the mark-up required to maintain normal profits. Since this, on the other hand, makes the country feel the pinch of foreign competition, the external constraint on prices is avoided through abandonment of the fixed exchange rate policy.

The Italian authors recognize the limits of using exchange rate and monetary policies as substitutes for incomes policy. Incorporation of downward floating in the expectations of wage negotiators may induce an

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(1) See, in particular, A. Graziani and F. Meloni, "Inflazione e fluttuazione della lira", Note Economiche del Monte dei Paschi di Siena, 1973.

inflationary spiral that will in the end destroy the mechanism that the policy is trying to control. The monetary and fiscal authorities are then compelled to fall back on traditional deflationary policies. Moreover, even before this happens and while the disguised incomes policy is still at work, the knowledge that any money wage increase can be recuperated through price increases and offset in foreign markets through exchange depreciation, will reduce the incentive to resist wage increases on the part of employers and generally weaken their search for efficiency and technological improvements in order to remain truly competitive in foreign markets, thus negatively affecting the industrial structure of the country and its growth potential.

It is clear from the above that for an exchange rate policy to have effects on income distribution, and through them on investment and growth, it is essential that money illusion and other rigidities be present during a significant period of time (1). Again, in this model as in the theory of optimum currency areas, the length of the run is inversely related to the degree of openness of the economy. What is

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(1) In this "Italian" reasoning it is also argued that

(a) the level of investment depends directly on profits, both because these constitute the incentive to invest, and because corporate investment is largely financed through retained earnings;

(b) the exposed sector, and particularly the sector producing exportable goods, is considered the leading sector for the growth of the whole economy.

It should be clear that the distribution and growth theory behind the Italian version of the structuralist model is not marginalist and neoclassical, but of the Kaldor and Kalecki type. Moreover, industrial prices are supposed to be set on the basis of costs (essentially labour costs) with a mark-up for normal profits. They are largely independent from the relationship between demand and supply. On the other hand, the possibility of transferring on prices any increase in costs requires (as in the Scandinavian model) the assumption of an adaptive monetary policy.

perhaps most interesting in the Italian model is that the real effects obtained during the short-run/money illusion period involve not simply the allocation of demand and production between tradeables and non-tradeables (like in the monetarist model), but also the choice to invest or not, and thus may affect the structure of the economy and its long-run performance. In other words, in this view, the short-run effects are not reversible, and the long-run steady state situation (in which exchange rate changes should have no real effects according to the monetarists) may indeed be affected by what has happened in the short run.

2.2.2.2. A recent strand of thought (the "New Cambridge School") maintains that exchange rates should be used to keep full-employment demand (export-led growth), while the problem of equilibrating the current external account must be solved with a corresponding policy of equilibrium in the government sector's account (budgetary policy). This second prescription will be analysed later, but it is interesting to note at this point that the view of changes in exchange rates as being essential to maintain full employment level of demand and/or export-led growth is very similar to the view of exchange rates in the Scandinavian-Italian structuralist models. On the other hand, the New Cambridge School does not seem to fear that this role of exchange rate changes - which in order to work must still be based on money illusion - may be nullified in the long run by the incorporation of exchange rate changes into price expectations. Yet, a careful empirical study of the United Kingdom (1) has shown that "the output effect of the exchange rate change is effectively transitory, since the competitive advantage is subsequently wiped out by the adjustment of incomes to import prices restoring domestic costs to previous levels".

2.2.2.3. Thus all the schools of thought surveyed above agree that in long-run situations money illusion disappears and exchange rate changes therefore are not an instrument of economic policy with real effects on the economy. The essential difference among them on this issue is that while the monetarists believe that the short run is very short, the other schools do not share this view. Indeed the structuralists feel that the long-run situation is a

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(1) See R.J. Ball, T. Burns, J.S.E. Laury, "The role of exchange rate changes in balance of payments adjustment - The United Kingdom case", London Graduate School of Business Studies, D.P. 32, July 1975.

fiction, while all that exists is a series of short-run situations which have important permanent consequences for the structure and growth of an economy.

In so far as exchange rate changes are connected; either as a consequence or as a cause, with money inflation, they also have real distributional effects other than those emphasized in the money illusion and structuralist arguments analyzed above. In fact, non-interest bearing money has distributional effects between the money-issuing authorities and money holders even when inflation is perfectly anticipated - and indeed there is a seigniorage even when it is nil. Thus, in as far as changes in exchange rates allow more freedom to governments in choosing the preferred rate of inflation, they also allow them to collect the preferred rate of inflation tax. Moreover, besides having a permissive or passive role in this process, exchange rate changes have recently been ascribed an active force in the inflationary process, and therefore in its distributional consequences. The reasoning is, again, connected with money illusion and wage (downward) rigidities. In the international context, the inflationary effect of devaluations on the price level of devaluing countries should be symmetrically offset by the deflationary effect of revaluations on the price level of revaluing countries, thus making, on this account, for a zero effect on the world rate of inflation. However, it is maintained, this symmetry does not hold in the real world. Because of downward wage and price rigidities, prices rise in the devaluing countries but do not fall in the revaluing countries. When this process takes place in the context of an already existing world price inflation, a ratchet effect requires that the increase of wages and prices is not slowed down in the revaluing country by foreign competition. As a consequence, world price inflation is reinforced by the adoption of flexible exchange rates.

Apart from money illusion, seigniorage, and the inflationary tax (which are all distributional effects of money, and hence of exchange rate changes), exchange rate changes may have real effects because, in markets that are not perfect and in which information is not complete and certain, changes in an economic variable have real costs and thus uncontrolled exchange rate changes have negative effects.

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3. EXCHANGE RATE CHANGES AND OTHER POLICIES FOR EXTERNAL EQUILIBRIUM

3.1 Recent analysis under the heading of budgetary policy (1)

The different strands of thought surveyed above agree that, unless certain rigidities and money illusion survive in the long run, exchange rate changes cannot permanently affect the structure of the balance of payments, but only help in bringing it back to the position that is determined by real forces (including portfolio considerations) and their change. Thus, the current account is determined by the relationship between expenditure and income which, in its turn, depends on the working of the overall macro-economic system - while the proportion in which a current account deficit (surplus) will be financed (utilized) by capital movements or reserve flows will depend on portfolio considerations of the public and on the assets issued by the government (2).

In this general view, the problem of balance of payments disequilibria and their adjustment has a limited bearing on the discussion about the exchange rates regime that should be adopted by a monetary union. This does not mean that the adjustment problem is no longer a problem of interest in the discussion about monetary union, but only that it should be discussed more with reference to policies other than exchange rate policy, and particularly, as we shall see, with reference to government budgetary policy and to the policy of financing the government deficit. In this view "the exchange rate cannot be regarded, as it has been in the past, as an instrument of economic policy. On the contrary, it should be seen as a symptom of the behaviour of fiscal and monetary policy. (...) Floating the rate provides an extra degree of freedom to pursue a rate of inflation in the long run different from that of (other countries). But floating the rate would do nothing to avoid the necessity of adjusting fiscal and monetary policy primarily toward the balance of payments rather than the level of employment" (3).

3.1.1. In order to understand this position better, reference must be made to the "New Cambridge School" mentioned above. According to this School (4), the current account is essentially determined by the government budget.

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(1) A more detailed analysis is given in Annex B.
(2) Government here refers to the public sector.
(3) Ball, R.J., Burns, T., Laury, J.S.E., ibidem.
(4) See London Cambridge Economic Bulletin. Bulletins 82, 83, 84. Published by the London and Cambridge Economic Service, Dept. of Applied Economics, Sidgewick Avenue, Cambridge.

Their reasoning is based on two elements. First, the ex-post accounting identity or ex-ante equilibrium condition, whereby (considering three aggregate sectors in the economy: private, government, foreign) an excess of one sector's savings over investment (which is equal to a financial and/or monetary surplus) must be equal to the excess demand for commodities, i.e. the net financial and/or monetary deficit of the other two sectors together. From the assets point of view, the excess demand for financial assets by one sector must be accommodated by an excess supply of financial assets by the other two sectors. The second element in their reasoning is that the private sector has a rather stable financing surplus, i.e. a net demand for additional financial wealth in the form of assets issued by the government and/or the foreign sector. Thus disequilibria in the balance of payments on the current account must correspond (and be determined by) disequilibria in the government budget. In particular, a deficit in the current account (i.e. a surplus of the foreign sector) would be determined by an excessive deficit in the government budget. The prescription for improving the current account (if the deficit is not an equilibrium deficit) would then be to reduce the government deficit by a sufficiently restrictive budgetary policy.

3.1.2. At a more sophisticated level, the theory of international adjustment and equilibria in open economies has progressed substantially since the early sixties, when the "policy-mix" type of analysis was developed and made popular by the writings of Mundell. A line of thought that may be labelled the "portfolio approach" is mainly represented by economists of the neo-Keynesian tradition (1) and starts from a critique of the simple Keynesian models that was initially advanced by Mundell himself. It points out that they are essentially short-run models, in which stocks of assets are implicitly held constant even though flows of savings and investment are explicitly causing them to change.

Starting, like the New Cambridge School, from the ex-post identity:

(i) $$(S - I) - (G - T) - (X - M) = 0$$

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(1) McKinnon, R.I., and Oates, W.E., "The Implications of International Economic Integration for Monetary, Fiscal and Exchange Rate Policy", Princeton Studies in International Finance, N° 16, March 1966.
Branson, W., "Macro-Economic Equilibrium with Portfolio Balance in Open Economies", published as Seminar Paper 22, Institute for International Economic Studies, University of Stockholm, 1972.

where S = private sector savings
I = private sector investment
G = public sector expenditure
T = public sector taxes net of subsidies
X = exports
M = imports

they point out that in the long run (1) (at full employment) the private sector's desire to accumulate or decumulate net financial wealth, as expressed by S - I, is satisfied. Thus, the current account deficit (surplus) in the long run is determined by a government sector (2) deficit (surplus) in excess of the private sector surplus (deficit). In this, but not in the length of the run relevant for the analysis, they seem to agree with the New Cambridge School position. However, they go further (and deeper) with their theoretical analysis. They bring into the picture the government budget constraint, namely the fact that the government deficit has to be financed by new government bond issues (dB) (3), by the net creation of monetary base (dH), or by the disposal of foreign exchange reserves (dR):

(ii) $$G - T = dB + dH - dR$$

Now, depending on the fraction of the budget deficit that the government decides to finance with one or the other of these components, the current account deficit that corresponds to the government budget deficit (when the private sector does not want to accumulate net financial wealth, i.e. when S - I = 0)or that corresponds to the part of the government deficit which exceeds the private sector's desire to accumulate net financial wealth (when S - I is positive), will be financed by either a capital inflow (thus ending up with an overall balance of payments equilibrium) or with a reserve outflow (an overall balance of payments deficit). In fact, if the private sector does not wish to acquire all the bonds issued by the government to finance its deficit, these will have to be bought by the foreign sector (a capital inflow).

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(1) For clarification of the concept of the long run in this context see Annex B.
(2) In this simplified analysis comprising also the central bank.
For a more detailed analysis and criticism see Appendix B.
(3) Here B is the part of government bonds which is not absorbed by the central bank.

If, on the other hand, the government deficit is financed by a creation of base money - either directly via an advance of the central bank, or indirectly via a purchase of public bonds by the central bank - and if the private sector is not willing to hold all the balancesthus created on this new base, these balances will end up in the foreign exchange market, where, unless they are accepted as international reserves, they will be exchanged against reserves, thereby entailing a deficit in the overall balance.

Thus, the "portfolio approach" goes beyond the current account analysis of the New Cambridge School, and examines not simply the government budget as a possible determinant of a current account disequilibrium, but also the choice of how to finance the government deficit as determining the short-term structure of the balance of payments in its current, capital, and reserve account components.

In the long run, the structure of the balance of payments is determined by the desire of the private sector to hold various assets and currencies. In the shorter run, the "portfolio approach" puts emphasis on the overall budget policy of the government, in the sense that a fiscal-monetary policy(1) that is not in line with the private sector's desire to accumulate money or with the foreign sector's desire to accumulate the country's money as international reserves, must produce a loss in reserves. As this situation is not sustainable in the long run, the government must, in such a case, either reduce its deficit or increase the part of it which is financed by issuing bonds. This second choice, however, is also limited since, even if it is small, a country cannot float unlimited quantities of bonds on the international market. In the short run, moreover, if it is not very small, it must accept an increase in the rate of interest. However, such an increase is not necessarily an obstacle to growth, since it is not certain that the productivity of private investment is greater than that of public expenditure. In that sense the short-run effects on employment and growth of various fiscal policies are debatable.

It remains true that the "portfolio approach" and the New Cambridge School's approach give pre-eminence to the management of the government budget over monetary policy in the determination of macro-economic variables.

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(1) as opposed to a "pure" fiscal policy, defined as a policy where there is no monetary creation induced by a budget deficit.

3.2 Possible application to the problems of economic union

De-emphasizing the importance of the exchange rate for Economic and Monetary Union does not mean diminishing the importance of problems of balance of payments adjustment, and hence of the policies aimed at facilitating their solution. In a way, it is only the extreme monetarist position, essentially interested only in the long-run equilibrium, that really de-emphasizes the problem of external disequilibria. For, in this view, the balance of payments is essentially a monetary phenomenon, and, with fixed exchange rates, it is determined by the relationship between supply and demand for money, while with flexible exchange rates, supply and demand for money determine the exchange rate, and there is no balance of payments problem. Hence, monetary policy in one case is the instrument for controlling the level of reserves, and in the other case for controlling the price level and the exchange rate. With the portfolio approach (and its simplified new Cambridge version) the problem of external equilibrium is not de-emphasized, unless we are only interested in the extreme long run, i.e. when the markets for all stocks are in steady state equilibrium. In this view, the government budgetary policy becomes a determinant factor for ensuring a desired external current account. Moreover, the decision on how to finance the government deficit determines the structure of the capital and reserve accounts in the balance of payments. Thus "harmonization" of fiscal policies within the Economic and Monetary Union would be important not so much for the problem of keeping internal equilibrium in each and all the member countries of the Economic and Monetary Union, but rather for that of finding a consistent set of current accounts among them, and for the whole of the Economic and Monetary Union with the rest of the world. The emphasis is taken away from the need to harmonize monetary policies (that would have in any case to become unique in a completed Economic and Monetary Union) and shifted to that of harmonizing budgetary policies. The latter would be relevant less for their direct and indirect effect on aggregate demand and employment, than for their implications for net wealth creation. From this point of view, monetary policy is simply a particular way of giving form to the net financial wealth created by the government sector deficit, the other way being government debt policy. Thus, for a given current account implied by the government budget, a large amount of capital mobility among countries of the Economic and Monetary Union would allow any one of them to finance, internally within the Economic and Monetary Union, at least that part of its current account deficit that corresponded to new bond

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issues which were financing the government deficit. Alternatively, the use of the monetary bases of individual countries as foreign reserves by other countries within the Economic and Monetary Union would allow a country to finance an overall balance of payments deficit by issuing money without losing reserves. Corresponding considerations are valid for capital movements and reserve flows, when aggregating all countries of the Economic and Monetary Union and considering their overall current account position with the rest of the world.

4. PROPOSALS FOR ACHIEVING EUROPEAN MONETARY UNIFICATION

4.1. The case for European monetary unification

The previous chapters have shown that, leaving aside the redistributive effects of changes in the rate of inflation, changes in exchange rates have significant effects only when money rigidities and illusions persist and that any such rigidities and illusions are in fact of only limited duration. One of the main findings of this report is that, beyond the short run, initial adjustments in the exchange rate have primarily a nominal effect, i.e. on the general level of prices. The structure and growth of the economy in real terms are only temporarily affected. The important implication of this idea is that :

- a member country, after a short period of time, is able to forgo an independent monetary policy without any significant real costs;
- also, from the point of view of significant internal and external adjustments, no system of exchange rates can be considered incompatible a priori with the process of monetary unification. The choice of an exchange rate system depends on the progress made towards unification.

If, in an initial stage, inflation rates in the member countries continue to differ, exchange rate adjustments are indispensable. Fixed exchange rates could be maintained only where the rates of inflation were virtually identical in all the countries of the Community - otherwise balance of payments crises would be inevitable. Nevertheless, temporary and erratic exchange rate fluctuations around the purchasing power parity, triggered by capital movements, should be eliminated by central bank intervention on the exchanges so that exchange rate fluctuations reflect mainly the differential between rates of inflation.

Inflation rates in Europe could, it is true, be aligned on the rate obtaining in the country in which inflation is slowest if a system of fixed exchange rates is adopted and if the money illusion has been almost completely dispelled. However, if the money illusion exists, even for what may be very short periods when inflation is gathering momentum and for longer periods when inflation is slowing down, the economic and social costs of a rapid harmonization of inflation rates would be excessive.

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If, as a result of inflation rate disparities - justifiable in view of the above remarks - the authorities would be inclined to avoid for an interim period the introduction of totally fixed exchange rates. There is another consideration which would point to the rapid adoption of such a system, this being the welfare advantages for the Community accruing from the use of a single currency. This extreme can be compared with the opposite extreme, where each individual would issue his own "currency". The latter situation, a barter economy, would be particularly inefficient. The situation in which there is a single currency enhances welfare because the transaction costs involved in any buying and selling operation are kept to a minimum thanks to the use of a common unit of account and a common standard of value (maximization of information) and to the elimination of socially unproductive transactions between European currencies. Such a solution is not, however, a possibility in the immediate future since it would imply the premature phasing out of national currencies (single currency) or a politically and economically unacceptable alignment of inflation rates in the immediate future (fixed rates).

4.2. The objectives of European monetary unification

Each country in the Community can be said, or assumed, to have two "monetary" objectives. Firstly, the rate of inflation must be brought down. This task can only be achieved gradually so as to minimize recessionary effects, and this calls for a system of free exchange rates since the initial rate of inflation in each country is different and/or since the rate at which inflation slows down may also differ from country to country. Moreover, a system of fixed exchange rates is needed if advantage is to be taken of the fall in transaction costs. A system of fixed exchange rates could ultimately be crowned by a single European currency.

However, in the present situation, where each country professes its deep attachment to the European idea and at the same time still wishes to pursue national objectives, it would like to be in a position to exercise its national sovereignty whenever "exceptional" national circumstances require an adjustment to be made to the general level of its prices compared with the average level in the other member countries; the proposal that national currencies be retained is, therefore, more realistic. Here, the OPTICA group

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has preferred political realism to what may, from a strictly economic viewpoint, appear better solutions. It views European monetary union as an association to which each country belongs because it offers greater political and economic advantages but which should also have during a transitory period safeguard clauses (1) that can be invoked whenever there is an overriding national interest although, in economic terms, an overriding national interest may prove illusory; such safeguard clauses are feasible only if national currencies are retained with an important role, hence the idea of a European parallel currency which would make this possible.

4.3. Possible solutions involving a European parallel currency

The European parallel currency would circulate in each member country as legal tender in the same way as the national currency and individuals would decide how to divide their assets between the two currencies. There are numerous possible schemes for a European parallel currency which will be discussed below. In favouring some form of European parallel currency, the OPTICA group has been guided by the twin criteria of economic effectiveness and political acceptability. We believe that the political aspect, which is expressed in the form of a national and a European resolve, is extremely important.

By respecting this resolve, European monetary unification could even be attained more rapidly provided that safeguard clauses were retained in the European monetary system, which is possible when the existence, or at least the potential existence, of the national currency is guaranteed. In the final stage, the member countries could still decide whether or not they wished to introduce a single common currency.

4.3.1. The parallel currency with constant purchasing power

One possible form of parallel European currency was proposed in the Manifesto for European Monetary Union issued by nine European economists (The Economist of 1 November 1975).

From a purely economic viewpoint, the group considers the proposals set out in this Manifesto to be perfectly sound. From an economic and

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(1) Examples of safeguard clauses are given on page 26.

political viewpoint, we suggest less radical, "gradual" solutions. The Manifesto opts for a European parallel currency with constant purchasing power. It may be felt that this proposal could result in a premature abolition of the national currency, particularly in countries with the highest inflation rates if they could not manage to master inflation.

The introduction itself of this type of European parallel currency could indeed have a mitigating effect on inflation. If one accepts that certain economic agents play a particularly important part in generating inflation, in so far as their expectations are highly inflationary and any contracts they conclude in the absence of a European parallel currency would contain a clause whereby prices or incomes would be increased to compensate for expected inflation, the fact that these agents will then draw up contracts in terms of the European parallel currency of constant purchasing power will remove this major cause of inflation. In addition, any differences in inflation rates can be offset by differences in nominal interest rates paid on deposits denominated in national currencies, thereby restoring to these currencies some of their competitiveness vis-à-vis the European parallel currency.

Of course, if, in spite of the preceding remarks, the countries with the highest rates of inflation felt that their national monetary sovereignty was being gradually encroached upon their reaction might be to invoke one of the safeguard clauses yet to be laid down. If they did not resort to such clauses but introduced a stringent anti-inflation programme, the social costs of such a policy, in the form of higher temporary unemployment, would be excessive. Such safeguard clauses may result, for example, in commercial banks being refused permission to accept deposits denominated in the European parallel currency or in the imposition of exchange controls. In order to prevent the emergence of such measures, detrimental to the whole idea of European monetary unification, one would have to consider a parallel currency which, during a transition period, allowed the national currencies most threatened to survive.

The OPTICA group is fully aware that the solution proposed by the authors of the Manifesto would be more attractive economically and politically if inflation had assumed even more alarming proportions. It would, above all, lend itself to situations of quasi-hyperinflation, where mone-

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tary reform "on a European scale" would be called for in order to break inflationary expectations in such a way as to bring the rate of inflation in member countries down to a level approaching zero and at the same time convince them of the need for a single national and European currency.

4.3.2. The use of existing currencies as the European parallel currency

If the proposal set out in the Manifesto is, for the moment at least, put at one side for reasons of political realism, it would be possible to create the European parallel currency on the basis of one or more existing currencies in one of the following ways: one of the Community currencies to be chosen as the European parallel currency; all national currencies to circulate as potential parallel currencies; an external currency to be chosen, notably the dollar which is already used in the Euro-currency markets as a European parallel currency.

The acceptance of a national currency as the European currency would be facilitated if the currency of the country with the lowest rate of inflation,- probably the Deutsche Mark - was chosen. This solution has much to be said for it in economic terms in so far as the DM is a recognized currency in which those concerned in business and trade have confidence. This solution, which is, in any case, in the initial stages of implementation, also has some drawbacks: the psychological effect of one European country being seen to dominate the rest of Europe; the control exercised by one European country over the European money supply; the constraints felt by the country issuing the European parallel currency as regards the conduct of its own domestic monetary policy, in so far as this policy would be subject to pressures from the other member countries. It is likely that the same conflicts would emerge which characterised the years 1966-69 when the United States was unsuccessful in reconciling the constraints imposed by its domestic policy with those of an international monetary system based on the dollar standard. A further solution - inter-circulation - would be for all Community currencies to be declared potential candidates for the role of the European parallel currency, i.e. a solution whereby all the currencies could circulate as legal tender in all the countries. In the immediate future, the objections to the a priori choice of a national currency as the European

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parallel currency would not be valid and the choice of the "most stable" currency would ultimately lie with the market. Nevertheless, after a transition period during which several national currencies had been tried out as the European parallel currency and during which considerable costs had been incurred as a result of the fact that more than two currencies had been in circulation as legal means of payment, it would, in the end, be the most stable European currency, undoubtedly the DM - which would be chosen as the European parallel currency. However, the same objections as those in the previous paragraph concerning the choice of a national currency as the European parallel currency could be raised in connection with this currency.

A Euro-currency could also conceivably be chosen as the European parallel currency. This would involve "nationalizing" a private currency at present outside the control of the monetary authorities. In this way, not only would a European parallel currency be created, but it would also be possible to control the amount of this Euro-currency issued. More specifically, it would be possible from a certain date to have all the Euro-currency deposits of resident Europeans redenominated in terms of a parallel currency, one unit of this being established as equal to one dollar on the conversion date. However, the only way in which such a European parallel currency could be created would be for a Euro-currency to be converted, in a binding manner, into a new European monetary unit, and this would mean that the Euro-currency which had been the starting point for the system would disappear as such.

We feel that this would involve too much dirigisme in the choice of currencies to be held and used, particularly where Euro-dollars are converted for extra-Community transactions. Moreover, controls could be imposed on Euro-dollars at European level without making them into a European parallel currency. In addition, if a Euro-currency other than the Euro-dollar - once again the most likely choice is the DM - is chosen as the European parallel currency, the problems discussed earlier in connection with the choice of a national currency as the European parallel currency would again have to be raised.

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4.4. The European parallel currency proposed by the group

For all these reasons, the OPTICA group takes the view that it would on the whole be preferable to create a new currency to play the role of the parallel currency and to leave it to the market to determine its position vis-à-vis the national currencies, on the one hand, and the Euro-currencies, on the other.

At the outset, the European parallel currency would have to be issued against European national currencies on a voluntary basis. The nominal European money supply would not be affected by this arrangement and would still depend solely on the issuing policies of the national central banks in Europe. Such currency swaps could be carried out through a European institution such as the EMCF (or by each one of the central banks of the Community). National currencies acquired by this European institution would constitute claims on the central banks which would actually be repayable in assets held by these banks.

During an ensuing period, the member countries could decide to set up a European central bank which would issue the European parallel currency by means of the traditional monetary policy instruments (open market operations, for example). It would be necessary if this European central bank enjoyed a degree of independence at least similar to that of the Bundesbank. A rule relating to monetary stability would also have to be applied whilst ensuring, for example, that the rate of growth of the European money base did not exceed the rate of increase in the productive potential of the whole Community (see Chapter 4.5, p. 32).

The "monetary standing" of the European parallel currency would have to be the same as that of the currency of the country with the lowest inflation rate (which, more often than not, would probably be the DM); if initially national inflation rates differed excessively, the European parallel currency would be introduced only during the transition period in the most stable countries, for example those participating in the Community's exchange arrangements ("snake").

The OPTICA group considers that these proposals would satisfy the two objectives referred in Chapter 4.2.: (i) since the "monetary standing" of

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the proposed European parallel currency is approximately equal to that of the currency of the country with the lowest inflation rate, the risk that a national currency will be forced out of circulation is reduced; (ii) at the same time, the existence of the European parallel currency imposes some measure of discipline in the fight against inflation in the countries with the highest rates of inflation, and this is also in keeping with the aims we have mentioned.

Consequently, this European parallel currency is a compromise between two extreme solutions. The first of these solutions is the indexed money of the Manifesto, which we discussed in Chapter 4.3.1, the other being that of a currency entirely free from any indexation arrangements and defined solely as a composite basket of European national currencies in a fixed ratio, such as the European unit of account introduced in 1975. The choice to be made between this currency and the existing national currencies would depend on the relative exchange rate fluctuations between them (i.e. on the formula determining the composition of the "basket" and, in certain formulae, on the net effect of devaluations and revaluations), on the interest rate paid on the various currencies and on the common currency in Europe having the advantage of convenience in that the holding of this currency would avoid certain costs in intra-European transactions. The first two factors may lend weight to the argument in favour of the national currencies of countries with the lowest inflation rates, while the third factor, which works in favour of the European basket currency, would perhaps be of less importance, so that the European composite currency would probably not make much headway in the countries with the lowest rates of inflation.

The currency proposed by the OPTICA group constitutes a borderline case exemplifying the composite "basket currency" approach in so far as each currency would be eligible to take part, with a weighting of 1. In other words, at any given moment, the basket consists of only one European currency, namely the "best".

Partial indexation of the proposed European parallel currency, i.e. the rate at which it is exchanged for a national currency, offsets, in the first solution, the differential in the change in purchasing power, i.e. the difference in the rate of inflation between the currency in the country with the lowest inflation rate and the national currency in question.

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The differential is calculated from a given base date - the date when the agreement on parallel money becomes effective - in order to avoid statistical difficulties involved in the measurement of absolute purchasing powers.

Another partial indexation solution, not directly based on comparisons of national purchasing powers, involves introducing an exchange rate guarantee in terms of the currency which has appreciated most among the currencies taking part in the European system of controlled exchange rates ("snake"). The currency which appreciates most is not always the same national currency because, at different moments in time, any national currency may be in this position. Under this "indexation" solution, the European parallel currency could have a "real" value other than that deriving from the indexation mechanism based on the movement in prices in the different countries compared with that in the country with the lowest rate of inflation. Indeed such a discrepancy can appear when, at least in the short run, exchange rates do not reflect purchasing power parities. However, with controlled floating, the exchange rates of the different currencies concerned could be kept quite closely in line with their purchasing power parities. The advantage of the solution guaranteeing the exchange rate is that it is easier to put into practice and makes unnecessary the difficult discussions on the choice of price indices and the coordination of their publication.

The OPTICA group feels that the choice to be made between these two "indexation" systems cannot be made on the basis of pure theory: fuller empirical understanding of how exchange rates are determined in the short run in relation to purchasing power parities (see Chapter 5) and also a detailed discussion of the possible solutions to the problems involved in the use of price indexes (see Chapter 5 also) are required.

The introduction of a European parallel currency, and in particular that proposed by the OPTICA group, will have a considerable impact on monetary relations with third countries. The group feels that this matter is sufficiently important to warrant a further, more detailed study.

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4.5. Other proposals for the conduct of monetary policies

With a view to ensuring that the proposed European parallel currency is brought into circulation gradually and exists alongside the national currencies during an initial period and that the rates of inflation in the countries of Europe are aligned downwards, the OPTICA group also proposes that the introduction of the European parallel currency be accompanied by a reformulation of monetary policy in each member country. Rules on the rate of expansion of monetary aggregates should also be laid down in the various countries so as to make anti-inflation policies, which are often hampered by inflationary expectations (this being an aspect of the money illusion), more effective and also to ensure that the interim regime of non-fixed exchange rates operates more smoothly. They should be published annually and should be quite strictly adhered to. Monetary rules, such as those introduced in Germany at the end of 1974 and renewed at the end of 1975, act to correct the formation of inflationary expectations, thereby helping gradually to dampen down inflation without generating substantial social costs. They would, at the same time, make for improved forecasting, and thus greater stability, of exchange rates.

The ensuing phase in the construction of the European monetary system could be one in which relative price stability was achieved, inflation rates were brought into line and two currencies, the national currency and the European parallel currency continued to circulate in each country. It is then that the governments could decide, if they so wished, to achieve full European monetary unification, with the adoption of a single currency.

4.6. Proposals for the conduct of incomes, regional and structural policies

It has already been emphasized, in the discussion of the effects of exchange rate changes in Chapter 2, that monetary and exchange rate policies may, in some countries more than others, offer a covert means of carrying out an incomes policy. This should be avoided in a monetary union. The policy of income redistribution, both between the government and private economic agents and between income recipients, should be explicitly implemented by means of fiscal policy and, where necessary, negotiated incomes policies rather than implicitly through the inflation "tax" and exploitation of the money illusion as means of undermining the real significance of contracts denominated in money terms. Introduction of the parallel currency

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would remove most of these temptations since it would be possible to avoid an inflation "tax" by resorting to this less inflation-prone currency and more difficult to exploit the money illusion as contracts would be denominated in the parallel currency rather than in national currencies.

There remains the problem of regional and structural imbalances within the monetary union. As has already been explained, the problem is not made any easier or any more difficult by the exchange rate system. Solving the problem calls for specific taxation, transfer and structural policies within the union. Since this matter has already been discussed extensively in recent reports prepared at the request of the European Communities (1), there is no need to go into it again here. In keeping with the rest of this report, we would merely emphasize that the harmonization of budgetary or fiscal policies and public transfer policies within the union takes on a fresh and important dimension as a result of their implications for the structure of the balance of payments, as we saw in the discussion of the portfolio and New Cambridge School approaches.

(1) See "European Economic Integration and Monetary Unification", Commission of the European Communities, October 1973, and "Report of the Study Group 'Economic and Monetary Union 1980'", Commission of the European Communities, March 1975.

5. SUGGESTIONS FOR EMPIRICAL WORK

From all the analysis of the preceding chapters it is obvious that there is an urgent need for quantitative studies as a basis for evaluating the problem involved in moving towards Economic and Monetary Union. Indeed, the issues are predominantly empirical and no answers can be confidently given until the available evidence has been much more carefully screened. The purpose of the present chapter is to outline, in the light of the preceding analysis, areas where more empirical knowledge is required. Some of the suggestions which are presented here are further discussed in Annex C which comments on existing evidence and on relevant models.

5.1 On the effects of exchange rate changes

5.1.1 On monetary effects

A major element in the analysis of chapter 2 is that exchange rates in a group of integrated economies reflect differential inflation trends. This can be assessed by analyzing variants of the purchasing power parity theory. More specifically, trends in (1) consumer prices, (2) export prices of manufactures and (3) unit labour costs, all corrected for changes in effective (trade-weighted) exchange rates, should be reviewed carefully for the period since 1958. An analysis should also include a survey of member countries (i) effective exchange rates, (ii) their rate vis-à-vis the European unit of account, and (iii) their DM-rate.

The degree to which member countries are able to pursue partly independent policies with respect to interest rates and targets for their monetary base (or other aggregates) is an important indicator of integration. Annexe C contains specific suggestions on the interpretation of existing evidence on interest rate harmonization and on the feasibility of sterilization policies.

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5.1.2 On real effects

An initial step is to rank the economies of European Communities members of degree of overall openness, measured as the share of value - added in sectors exposed to international competition in total GNP, and to supplement this by indicators of the increasing role of intra-EC trade in total trade flows. A second step is to review to what extent the Scandinavian-Italian model of inflation in an open economy as outlined in chapter 2 is applicable to the experiences of EC-economies. An evaluation would be based partly on the conformity of export price and unit labour cost trends among members, partly on the role of wages in the exposed sectors in setting a pattern for wage increases in the rest of the economy. It would also be helpful for measuring openness as well as for evaluating short-run effects of changes in the exchange rate to construct deflators of value-added in the sheltered and exposed sectors. Crucial to the functioning of the Scandinavian-Italian model is also whether the distribution between wages and profits remains approximately stable and, if not, whether shifts have had demonstrable effects on the growth of the private capital stock and of output.

A second and closely related area for empirical work is the measurement of money and exchange rate illusion. How quickly do wages and prices - through indexing and/or negotiations - adjust to changes in exchange rates ? What is the response of nominal interest rates to observed changes in inflation and exchange rates ? Is the government deficit sensitive to a change in the exchange rate ?

In assessing the scope for external adjustment through exchange rate variation the length of time during which a change in the exchange rate affects the current account is crucial. Empirical work is becoming available on the two countries that have changed their rates the most (Italy and the United Kingdom), but it would be desirable to supplement it by a study of one or two of the stronger currencies that have tended to appreciate. The issue of symmetry in reaction patterns also needs to be studied with respect to price effects of exchange rate changes. Is there a net inflation bias (ratchet effect) when intra-European exchange rates change, inflation in devaluing countries accelerating by more than it decelerates in revaluing countries ?

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5.2 Fiscal policy and external adjustment

The strategic role assigned in the "new Cambridge school" to the Government deficit in shaping the current account calls for the construction of complete and integrated flow-of-funds accounts for the household, corporate, Government, banking and foreign sectors, see Annexe B. This task is obviously well beyond the capability of the OPTICA group, but a simpler approach focussing on the behaviour of the net financial surplus of the private sector (S-I) would be useful. This would clarify whether the notion of a stable or at least predictable S-I can be justified. Recent experiences suggest that it is not. Work is already under way at the official level to study the behaviour of G-T in member economies and its consistency with an acceptable constellation of current account imbalances inside the Community and for the overall current balance of the Community. This group might help to sharpen the analytical approach adopted on the basis of existing data.

5.3 The parallel currency approach to European Monetary Unification

A primary task is to analyze trends in the European money stock and in its separate national currencies and Eurocurrency components. Particular emphasis should be given to the growth of Euromarket activity in EC-currencies and its interaction with national monetary measures and pressures in exchange markets.

A further area of study are the "national propensities to inflate" during periods of fixed and flexible exchange rates and illustrative calculations of the gain (or conversely, loss of seigniorage to the issuer) that would have accrued to holders of various forms of a parallel money relative to holders of national monies. Such calculations would give some indications of the likely speed of penetration of the various forms of parallel money and of their further effects.

SUMMARY AND CONCLUSIONS

Introductory remarks

This report is divided into five chapters. Chapters 1-3 survey recent theoretical developments on the role of monetary and budgetary policies in open economies, with emphasis on their implications for monetary union. This survey sets the stage for specific policy proposals, which are presented in chapter 4. Finally, chapter 5 brings together a series of proposals for further research, especially of an empirical nature, which seem necessary in order to complete, verify and quantify many arguments that - due to the limits of the first stage of the study - could only be presented on a theoretical or deductive level of analysis. Three annexes accompany this report. Two of them (Annex A and B) present a somewhat deeper analysis of theoretical points discussed in the report, while Annex C elaborates on the proposals for empirical research suggested in chapter 5. This summary presents the main conclusions of the report in the following order :

- Exchange rates and monetary policies for internal equilibrium
- Exchange rates and other policies for external equilibrium
- Implications for monetary unification
- Role of a parallel currency

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Exchange rates and monetary policies for internal equilibrium

The main effect of changes in the exchange rate is permissive in the sense that they allow each country to choose its own monetary policy and inflation rate. Inflation itself has in the short run - through the reallocation of resources and the redistribution of incomes - effects on the level of a real activity, because of various rigidities in the terms of contracts and in anticipations, in short money illusion. If reallocation and redistribution are important objectives, monetary policies followed by a change in the country's exchange rate can be less painful than income and budgetary policies, which explains why they are often preferred by governments. For certain economists, these short-run effects influence, possibly in a perverse sense, the economic structure and growth of an economy in the long run, an idea others do not share. Nevertheless, all members of the group agree that the frequent use of monetary stimuli followed by exchange rate depreciation and domestic inflation makes the short run always shorter since money illusion is weakened, thus rendering these monetary instruments more and more ineffective.

Apart from these permissive effects, exchange rate changes can also have, at least in the short run, an active role in producing real effects, especially through changes in relative prices between tradeables and non-tradeables. On the long-run effects, the same divided positions as above coexist between those economists for whom the long run is a succession of short runs which influence the structure and growth of an economy whilst others deny such effects.

Exchange rate and other policies for external equilibrium

The position of the group is that exchange rate changes, in the long run, have a nominal effect on external equilibrium, in the sense that they allow the terms of trade to return to their initial level in the presence of differential inflation rates. They cannot shift the terms of trade far from their equilibrium level. Since a good internationally traded has a world price, variations in its price, adjusted for changes in the exchange rate, tend to be similar in every country, at least in the long run. So a country cannot, unless it has sufficient weight in world trade to influence the world prices of its internationally traded commodities, obtain a better competitive position by using the exchange rate.

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Even if a country is unable to improve its trade balance by reducing the prices of its products on the world market, it is possible that its exports can increase or its imports diminish through an absorption or real balance effect, via a reduction in its total demand for goods. In terms of monetarist theory the improvement in the trade balance comes about because economic agents need to obtain money in order to reconstitute the real value of their cash balances, reduced in value by the increase in prices following the devaluation. But the surplus is only temporary and normally disappears when the real cash balances have been restored to their former level. In other theories (if the relevant propensities and elasticities have appropriate values) the surplus can persist if there has been a permanent shift in relative prices.

So, if exchange rates policies can only be used for external equilibrium under certain conditions then, for some economists, budgetary policies (the size of the public sector deficit and the methods chosen for financing it) must have powerful effects on it. They argue that, in the long run, the structure of the balance of payments is determined by the desire of the private sector and the foreign sector to hold various assets and currencies. So the question arises whether overall budgetary policy can be a key-variable in the determination of the balance of payments, and especially of the current account, for the short run. This view, which has been stressed by the "New Cambridge School" and the "portfolio approach" is criticized as an oversimplification because it rests on the assumption that budgetary policies have no effect on national interest rates, or, if they do have such effects, that savings and investment are not affected by changes in interest rates.

Implications for Monetary Unification

If the exchange rate is mainly a nominal variable, factors which appear to give support to the use of exchange rate changes should be considered for the most part as illusory. Stated in another way, this argument should lead to the use of a stable monetary policy and to the setting up of a European monetary union with fixed exchange rates. Indeed, if money creation is unable to have effects on employment other than in the short term, the "loss of sovereignty" due to monetary unification would be acceptable for a member country, unless the "Community" rate of inflation is greater

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than that which the country would have "in isolation". In other words, the problem of the exchange regime affects, on the whole, merely the nominal values of the economic union and this in such a way that the arguments for and against a monetary union are, in a nutshell, reduced to the question of the arguments for and against a common rate of inflation. At the very most, one could further emphasize the gains flowing from a fixed exchange rate system due to the greater liquidity of the means of payment and, inversely, the loss consequent to this same fixity by those countries which want to use the exchange rate instrument to attain certain objectives in the field of distribution policy. Nevertheless, the feasibility of attaining such objectives is open to doubt and, anyway, they could be achieved by the use of other instruments.

In the present state of European unification, it seems that the speedy introduction of a single currency in Europe is inappropriate, because of the adjustment costs implied by harmonizing inflation rates too rapidly downwards and of the political determination of national authorities to maintain the possibility of having an independent monetary policy. However, for the OPTICA group, monetary union is not defined by fixed exchange rates or a single currency.

Indeed, in the first chapter of the report, the group presents an alternative definition of a monetary union. This may, at first reading, seem to be a definition that constitutes a compromise between the fixed exchange rate philosophy that characterized the Werner Report, and the flexible exchange rate philosophy of those that criticized that report. However, this report's definition is not meant to be such a theoretical compromise, nor to present an ex-post rationalization of historical developments concerning European monetary unification. In the view of the OPTICA group, the exchange rate regime, on which European monetary unification should be based, is not to be seen as an unalterable element of the union from the beginning, but rather as an instrument which will allow progress towards final monetary union to be made in an efficient and politically feasible way. Consequently, the exchange rate regime should itself be flexible and evolve with the process of monetary unification to attain fixity in a final state.

However, because of the various problems arising from unrestrained flexibility, the group proposes to reduce the role of national currencies in international transactions through the introduction of a European parallel currency. The availability of such a currency would further limit the

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effectiveness of intra-European exchange rate changes and make the occurrence of such changes less frequent.

On budgetary grounds, the main lesson (even if indirect) of the "New Cambridge School" and of the "portfolio approach" is that even if the budgetary structure and the ways of financing budgetary deficits within the Community are not consistent with the desires of the public and private sectors of each country to hold the money or bonds of each other, they will still influence national interest rates (in real terms) and/or national money creation. Changes in these variables will then have effects on the structure of intra-European balances of payments, on resource allocation within the Community, on rates of growth in the short (and eventually in the long) run and so on.

Role of a parallel currency

The preliminary proposals of the OPTICA group for future steps towards European monetary unification are the following ones in terms of its targets and the means to achieve them :

- The targets of the monetary unification must from now on be twofold. One target is the progressive harmonization and reduction of national inflation rates. The other target is the realization of the benefits (in terms of lower transaction and information costs) of a fixed exchange rate system or, in its extreme formulation, of a single European currency.
- The means to achieve these targets can be grouped into a number of policy packages, each consisting of certain policy measures. The criteria for choosing which package would be the best have been selected by the group on the grounds of economic efficiency and political feasibility. As regards economic efficiency the(next) best step would be a fully-indexed European parallel currency; but the OPTICA group has also taken into account the political feasibility of such a proposal because the governments concerned have European and national aims : thus, if national aims - which may,even for some time, remain the dominant force - are not taken into account, any proposal for European monetary unification would meet strong political opposition.

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- The specific characteristic of the group's proposal is that it does not envisage the realization of the two targets in successive stages (first harmonization and reduction of inflation rates by allowing for floating exchange rates; and then afterwards the introduction of a fixed exchange rate system with the possibility of introducing a single currency). Both targets should be realized simultaneously in a number of successive steps.

- The principal vehicle for the simultaneous and evolutive realization of these two targets would be the creation of a European parallel currency. The main characteristic of this new second legal currency for each country should be a degree of attractiveness which is close to the money of the European country with the lowest inflation rate; and in case of too high a divergence in national inflation rates, the European parallel currency should only circulate within those countries which have approximately the same inflation rate (for instance among the "snake" countries). These proposals will maintain national monetary sovereignty for some time at least, even though it will be limited by greater discipline on the prices front.

- As a policy measure supplementary to the creation of a European parallel currency, the OPTICA group proposes that each national monetary policy should be conducted according to a monetary rule whereby each government fixes and announces its annual rate of money expansion. Such a rule would help to correct erroneous inflationary anticipations and, consequently, reduce substantially the possible unemployment cost of a policy directed at reducing inflation on the one hand and avoiding excessive short-term fluctuations in the exchange rate on the other hand.

ANNEX A

THE MONETARY APPROACH TO THE BALANCE OF PAYMENTS

This Annex shows how and why exchange rate variations substantially affect the balance of payments in the short run. It also describes the adjustment mechanism which leads to long-term equilibrium, with exchange rate variations having a purely nominal effect only.

This analysis is based on one of the most recent approaches to the balance-of-payments theory, namely the "monetary approach", which differs from the "traditional" approaches, namely the elasticity approach and the absorption approach.

The major hypotheses in this new approach are the following. Firstly, it is assumed that markets in goods and services are quite highly integrated at the international level with the result that there is a tendency for prices within each homogeneous category of internationally tradeable goods to become equal via an arbitrage mechanism. Secondly, the economies concerned are characterized by a situation of full employment rather than one of under-employment; this latter assumption makes for a line of argument more in keeping with the quantity theory than Keynesian theory which would be better suited to situations of under-employment.

The monetary approach has three features. Firstly, the balance of payments is viewed as a monetary phenomenon in the sense that only the total balance on official settlements - equal to a given change in reserves and thus in the monetary base - is taken into consideration. Attention is then focused on the demand for money. Provided that a stable money function exists, any discrepancy which arises between actual cash balances (the existing money supply) and the desired level of cash balances (the demand for money in stock terms) necessarily has an immediate impact on the market in the currency and on all the other markets in the economy. Finally, this imbalance on the market in the currency will be eliminated only after a series of periods because the actual stock of cash cannot be adjusted to the desired level immediately.

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Given the two major hypotheses and the three features of the monetary approach mentioned above, it is now possible to analyse the effects of an exchange rate change on the balance of payments and on economic activity. Take, for example, a devaluation. Other things being equal, this raises the general level of prices in the devaluing country. This increase in prices is due to one of the above hypotheses, namely that concerning the arbitrage mechanism which operates between internationally tradeable goods.

Since prices have risen, the demand for money also increases and, given a constant money supply, the desired level of cash holdings is higher than their actual level (excess demand for money in stock terms). To accumulate the desired level of cash, individuals will have to reduce their spending (and, if need be, their holdings of securities too) (1), thus creating excess supply on both the national and world markets in goods.

At given prices (determined by the world market), the excess supply of goods is exported, producing a trade surplus and, consequently, a balance-of-payments surplus, all things being equal. This surplus is reflected in an inflow of reserves which widens the monetary base and increases the money supply, thereby reducing the excess demand for money. Since, as a result of the changing pattern of preferences, actual stocks (money supply) are adjusted to the desired level (demand for money) during a series of periods, there will be an excess demand for money until the adjustment process has been completed (although demand will contract steadily), thus resulting in a continuing excess supply of products and, consequently, a balance-of-payments surplus (2). Once the aggregate value of these inflows of reserves matches the initial increase in the demand for money, equilibrium will be restored on the market and thus in the balance of payments too. This will mark the beginning of the long run in the sense that the devaluation will not have had any significant impact (although, as a result, the devaluing country may have built up a larger stock of reserves in money and real terms).

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(1) This possibility is disregarded in the following two paragraphs.

(2) The excess demand for money is a stock demand, while the excess supply of goods is a flow demand.

The reasoning is slightly more complicated when one considers the effects the process will have on the other countries. The excess supply of goods in the devaluing country must be matched by an excess demand for goods in the rest of the world. This excess demand is caused by a fall in prices. We had initially assumed that prices would rise by the amount of the devaluation in the country in question. However, prices will rise less in so far as the excess supply of goods leads to a fall in prices on the world market and, in the national currency, in the rest of the world too, where the demand for money will then be seen to contract. An excess demand for goods, essential if the balance of payments with the rest of the world is to show a deficit, will correspond to the excess supply of money.

The scope of this adjustment mechanism could be widened further if account was also taken of capital movements and the existence of non-tradeable goods. The first factor implies that the temporary imbalance on the market for the currency also produces an imbalance on the securities market (in terms of the effective and desired stock of securities), thus giving rise to an imbalance on capital account (for given interest rates). The second factor may permit a temporary change in the relative prices of tradeable and non-tradeable goods.

Both factors further complicate the situation in the short run, in that they require consideration to be given to other significant effects. Nevertheless, according to the monetary approach, the initial stock of securities (in real terms) and also the initial relative prices of tradeable and non-tradeable goods will, in the long run, be restored.

ANNEX B

BUDGETARY POLICY AND THE ADJUSTMENT PROCESS

The role of budgetary or fiscal policy in the adjustment process has been examined earlier (pp. 17-20), particularly with reference to a number of recent theories ("New Cambridge School", "portfolio approach"). The aim of this Annex is to examine in greater detail these theories of the role played by budgetary policy in short-term economic policy and, consequently, in coordinating the economic policies of the member countries of the European Community. It will also mention a number of criticisms which may be levelled against these theories.

To summarize the positions in question, it could be said that the "budgetary theories" (for reasons of simplicity, this is how we will refer to the theories mentioned above) suggest the following type of "optimum assignment of instruments to objectives" ("policy mix") : budgetary policy must be used to maintain external equilibrium (trade balance or balance on current account) and the exchange rate must be set so as to maintain internal equilibrium (employment). In contrast, the optimum policy mix proposed in other "monetarist" or "Keynesian" approaches might be summarized as follows : use of monetary policy to attain the domestic objective (inflation), use of the exchange rate to attain the external objective (overall balance-of-payments equilibrium) and perhaps, for some, use of budgetary policy to attain the employment objective.

It is important to assess the exact significance of the "budgetary theories" for, if their conclusions are well-founded, they would have fundamental implications for the countries of the European Community : for instance, to the extent that exchange rates affect the level of employment, any decision to dispense with the exchange rate instrument would not have the same implications in all the countries. What is more, if it is true that the current account is determined by the budgetary balance, perhaps the most urgent task facing, the countries of the European Community is the coordination of their budgetary policies so as to avoid any current account incompatibility.

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1. The budget and macro-economic equilibrium

The "budgetary theory" of adjustment is based on the consideration that macro-economic variables are, in certain respects interdependent, as was mentioned in the report (pp. 18-19). The table below provides a more comprehensive picture of this interdependence, the sectors being listed horizontally and the "goods" vertically (1).

Each box in the table represents the excess demand of one sector in a given market.

	Sectors				
	Private	Commercial banks	Government	Central bank	External
Products and services	$I - S$	0	$G - T$	0	$X - M$
Deposit money	ΔM_p^d	$-\Delta M_c^s$	0	0	0
Central bank money	0	ΔH_c^d	0	$-\Delta H$	0
Foreign exchange	0	0	0	ΔR	ΔR_e
Securities	$B_p^d - B_p^s$	ΔB_c^d	$-\Delta B_g^s$	ΔB_b^d	ΔB_e

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(1) The table contains a number of simplifications in order to highlight the essence of the theory - for example, zeros have been inserted in a number of places : thus, it is assumed that the commercial banks and the central bank do not purchase goods, that the government does not wish to accumulate money, that the external sector does not wish to accumulate the national currency, that there are no banknotes (all central bank money being made up of the reserves held by the commercial banks), and that private individuals, the commercial banks and the government do not hold any foreign currency. The theory would not, of course, be fundamentally affected if these simplifying assumptions were dropped. The symbols represent the following variables :

- I : investment
- S : saving
- G : public expenditure
- T : public revenue
- X : exports
- M : imports
- ΔM_p^d : change in the private sector's money supply
- ΔM_c^s : change in the money supply made available by the commercial banks
- H : quantity of central bank money (monetary base)
- R : foreign exchange
- B : securities (public or private)

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(see page 47a for the continuation of this footnote)

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(continuation of the footnote on page 47)

The indices refer to the following :

d : demand
s : supply
p : private sector
c : commercial bank sector
e : "external" sector
b : central bank
g : government

Thus ΔB_b^d stands for the accumulation of public or private securities by the central bank, B_g^s the supply of public securities, and B_p^s the supply of private securities; it is assumed that public and private securities are fully interchangeable.

The demand items are marked with a "+" sign, the supply items with a "-" sign. Clearly, a variable representing a stock change will be positive if the stock increases and negative if it falls.

The aggregate of the boxes in any one column represents the budget constraint of one sector and, since the aggregate of the excess demands of an agent or a group of agents is bound to be zero, it constitutes an identity. In other words, if the behaviour functions, showing how each variable is determined, are analysed, the behaviour patterns will be seen to be necessarily interdependent for a given economic agent or for a given group of agents.

The last column represents the balance of payments of the country in question, including the change in international reserves; it also sums to zero.

The same is not true of variables in the same horizontal line since, clearly, no budget constraint links the ex-ante demands for or supplies in a given market emanating from different agents. The ex-post values recorded for any product are, of course, such that the aggregate of the supplies is equal to the aggregate of the demands, but there is no way of telling whether these values correspond to the equilibrium values or to the values desired by the various demanders and suppliers at ruling prices. But the important thing is to know whether a market is in equilibrium, i.e. whether the desired overall demand for a product is equal to the desired overall supply of that same product. Accordingly, the aggregate of the values in a given horizontal line is zero only if the market in question is in equilibrium, i.e. if the variables which determine the supplies of and demands for that product have values such that these supplies and demands balance out. For instance, the first horizontal line shows that the product markets concerned are in equilibrium if the aggregate of the difference between the desired level of saving and the desired level of investment, the budgetary balance and the trade balance is zero. However, a theory can be discussed on sound bases only after the behaviour functions of the different agents involved have been identified.

The table shows, for example, that the central bank issues money in exchange for foreign currency (foreign money) or securities (public or private) and that the budget deficit is financed by issuing securities acquired by the private sector, the commercial banks, the central bank or the external

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sector, etc. However, by itself, it does not represent any economic analysis and, consequently, any theory or any prescription of policy measures based on this table alone (or on similar, more simplified tables), without the assumptions made as regards the behaviour of the different sectors being specified, is, on the face of it, somewhat suspect. However, any analysis which did not take into account the constraints highlighted in such a table would also be suspect.

Consequently, it would be highly desirable that any economic policy being formulated or any economic forecast being drawn up should be defined within a framework of this kind, in order to ensure that the constraints of the system were respected.

The model set out in the report (pp. 18-19) in the form of equations (i) and (ii) is a simplification of this table, the central bank and the government being considered as one and the same sector.

2. Critique of the "budgetary theories" of adjustment

As is stated in the main body of the report (pp. 17-20), the New Cambridge School focuses its attention solely on the first horizontal line in the above table, whereas the "portfolio approach" is more sophisticated and takes into account the public sector budget constraint (the columns "Government" and "Central bank" in the table). However, the same basic criticism can be levelled at both approaches, namely that they implicitly assume that the other variables (for example, those which appear in the columns "Private", "Commercial banks" and "External" (1))are not affected by changes in the variables analysed, i.e. those which appear in the first horizontal line and any which appear in the columns representing the public sector budget constraint.

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(1) As regards the "external" sector, this assumption can be deemed valid in the case of a small economy trading with the rest of the world. However, it can certainly be challenged if one is to analyse the relations of one of the countries of the European Community, particularly one of the "larger" countries, with the rest of the European Community as a closed area or if one is to study the European Community's relations with the rest of the world.

From the relations existing between the variables in the table the following equation can be formulated, the government account and the central bank account being coupled together :

$$G - T = \Delta H - \Delta R + (\Delta B_g^s - \Delta B_b^d)$$

indicating that the public deficit corresponds to monetary base creation, losses of foreign exchange reserves and/or purchases of public securities by the private sector, the commercial banks or the external sector.

Further, using the commercial banks' constraint an the equilibrium condition on the securities market, we can write :

$$G - T = \Delta M_c^s - \Delta R + (B_p^d - B_p^s) + \Delta B_e$$

indicating that the public deficit corresponds to money created by the commercial banks, a contraction in foreign exchange reserves and/or purchases of public securities by the private sector and the external sector.

These various equations merely indicate the possible ways of financing a public deficit and, consequently, a trade deficit (where I - S is given), but they do not describe the extent to which any one variable is affected.

Thus, in so far as some of the public securities newly issued to finance the budget deficit are purchased by the private sector, it is important to know why and how this is possible (e.g. by altering the interest rate) and whether or not this affects saving and investment, with the result that the change in the trade balance would not be exactly equal to the change in the budgetary out-turn.

If these problems are to be resolved, it is clear that a distinction must be made between the long run and the short run and, if possible, that the duration of each be measured empirically.

As usual, the long run does not pose too many problems : there exists an equilibrium portfolio, implying a specific value for the flows. Thus, in an economy without growth, neither a public deficit nor a trade deficit are feasible in the long run, as they would both entail a steady accumulation

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of securities by the country's private sector or by the external sector. An inflationary situation provides an exception : for instance, the value of assets which are held by individuals and represent claims on the government cannot be maintained if the government is not forever issuing new securities; similarly, the real value of monetary claims held by the external sector vis-à-vis a country issuing a reserve currency cannot be maintained without that country having continually to sell currency to the other countries, i.e. without it running a balance-of-payments deficit (1).

In a growing economy, however, it would be wrong to think that the public deficit, for example, could not be maintained, even if there was no inflation : if economic agents, whether resident or external, still wish to hold a variety of securities, the public sector can continue to sell securities to the national private sector and to the external sector; similarly, a country can normally continue to sell securities and/or currency (e.g. the United States, which produces and sells dollars). The budget or trade deficits or surpluses then reflect an equilibrium, and any attempt to correct them would not only fail but would also generate disequilibria.

Assuming the soundness of the "budgetary theories" (this will be discussed later), there would still remain a problem of economic policy coordination : the equilibrium situation signifies that the government is not seeking to run a budget surplus or deficit larger or smaller than that which corresponds to the needs of the national private sector and the external sector. Otherwise, the balance-of-payments structure would very probably be affected in an undesirable manner (as a result of which trade may exactly balance).

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(1) This reasoning is correct only if the interest rate paid on claims is not sufficient to maintain the real value of assets. However, if it is assumed that the interest rate is indexed to the rate of inflation (and that an interest rate matching the inflation rate is paid on monetary balances), a country does not have to make a real transfer in order to restore the real value of its monetary and financial assets; from this point of view, however, the statistics may be misleading, since the payment of the interest rate to compensate for the inflation rate appears in the current account, and the flow of claims which enables the real value of assets to be maintained and which is financed by the payment of the interest is shown as a capital or monetary flow; in other words, depending on the form the transfer takes, the balance on current account and/or the overall balance of payments may differ. Similar reasoning could be applied to the budget.

This is how the problem of coordinating the budgetary policies of the countries of the European Community can be viewed. To resolve the problem, we must know, in particular, the reasons why the different countries accumulate securities and currencies. In this connection, it can also be emphasized that, generally speaking, budgetary policy is framed according to essential short-term requirements, whereas only long-term objectives should be considered : the major role of budgetary policy, i.e. the determination of the net budget position, is to transfer purchasing power from one generation to another and from one country to another.

If the long-term view is adopted, therefore, the conclusions reached are similar to those arrived at with the "budgetary theories". At the same time, it may be emphasized that these conclusions resemble those reached in the study of monetary policy : in the long run, monetary or budgetary policy is "ineffective", in the sense that the real cash value of balances, public indebtedness, etc. is determined by economic agents, whether national or external.

In the short run, however, budgetary policy, like monetary policy, may be termed "effective". And yet, in the same way as one cannot infer from the fact that the exchange rate and the money supply are purely "nominal" variables that they cannot usefully be employed for short-term economic policy purposes, one cannot infer from the notion that the budget deficit and the trade deficit are linked in the long run that it is budgetary policy which, at any time, determines the trade balance.

Incidentally, the New Cambridge School approach contains an ambiguity which should be cleared up. According to this approach, the trade balance is determined by the budgetary balance and the exchange rate must be used to influence the level of economic activity. If the latter assertion could be explained by the fact that a devaluation would produce a positive variation in the trade balance, it would be inconsistent with the proposition that the trade deficit depends solely on the budgetary deficit. Perhaps it could then be assumed that a devaluation results in an increase in the general level of prices. However, it could be deduced that this had a positive effect on employment only if a relationship of the "Phillips' curve" type was

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assumed to exist in the economy. But it seems that no empirical relationship has been discovered between the level of activity and the exchange rate. It would, however, still be possible to argue that, if the public deficit determines the trade balance, the exchange rate, for its part, determines the rate of inflation (1). Some of the authors of the Cambridge School approach take the view, however, that the inflation is not sufficient to offset the productivity gain which exporters derive from a devaluation, so that the effect on growth is positive.

The fundamental objection that it disregards several possible effects of a variation in the public deficit on the macro-economic variables, such as those given in the table above, can be made concerning the relationship between the trade balance and the short-term public deficit. Thus, the assumption that (I - S) remains constant is of crucial importance in the "budgetary theories". It can, however, be questioned.

- First, at the empirical level, the assumption is questionable, since it is difficult to find a stable investment function, i.e. one which can satisfactorily explain the behaviour of investment. Even if the saving function is comparatively more stable, it is probably not stable enough to provide an irrefutable basis for the "budgetary theories". By way of comparison, it may be recalled that the short-term stability of the money demand function, on which the monetarist approaches are based, is relatively greater than that of the investment function.

- Nevertheless, even if stable investment and saving functions can be found, the "budgetary theories" could still be criticised on the grounds that a number of the factors explaining investment and saving behaviour may very well themselves depend on budgetary policy. No doubt, this is particularly true in the case of the interest rate.

The budgetary theories probably start from the assumption that, at the outset, the private sector and the commercial banks are in stock equilibrium and that these sectors do not, therefore, wish to accumulate addi-

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(1) For empirical verification of this point, see the study by Ball et al.

tional claims or money. Consequently, it is obvious that a public deficit can be financed only from external sources either because the external sector buys the national currency or foreign exchange or because it buys public securities. But if the external sector is to buy securities without the national interest rate rising and thus without affecting the level of national investment, one of the following assumptions must be satisfied :

i) The external sector is not in stock equilibrium and is, therefore, willing to accumulate securities. However, once stock equilibrium is attained, the country will not be able to sell securities without the interest rate rising. National investment will fall and part of the public deficit will be financed by national saving. The trade balance will not then be equal to the budget position.

ii) The external sector is infinitely larger than the country in question : in this case, the interest rate is determined by the external sector and an arbitrage mechanism ensures that the interest rate in the country cannot be higher than the world interest rate, where exchange rates are fixed. Nevertheless, this assumption is questionable, for two reasons :

- empirically, it does not correspond to the situation of the European Community either because the European Community is an area which is not infinitely smaller than the rest of the world or because the size of the countries of the European Community, particularly the larger countries, is not insignificant compared with the European Community as a whole. Any increase in the budgetary deficit of a country in the European Community, for example, may cause the interest rate to rise in all the countries of the Community, indicating that this deficit is financed by all these countries (if it is assumed that the European Community is isolated from the rest of the world by a system of flexible exchange rates). However, it is also to be noted that interest rate changes are precisely the mechanism whereby the budget deficits in the different countries are rendered compatible, thus dispensing with the need to "coordinate" budgetary policies. At most, it can be said that the interest rate in the European Community depends, amongst other variables, on the aggregate of the budgetary positions of the

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countries in the Community. The higher the figure, the greater the share of saving used to finance public activity. The countries of the European Community may have reason to seek, therefore, a " European Community budget deficit" which may be of some size . However, the objective is one of factor allocation and not of a policy aimed at stabilization.

If the assumption that the dimension of the European Community is infinitely smaller than the external sector is felt to be justifiable, it is still going toofar to argue that a country can indefinitely finance its budget deficit by selling securities to the external sector : the increase in the country's indebtedness increases the financing risk for external investors - in other words, all securities are not perfectly interchangeable since the financial standing which the various borrowers may enjoy cannot be the same in each case. There is, therefore, bound to come a time when the government can no longer finance its deficit without raising the interest rate, thereby affecting national investment and national saving and hence the trade balance.

- Lastly, <u>if exchange rates are not fixed</u>, it is clear that interest rates may differ between countries. There is then considerable likelihood that the public deficit will affect not only the trade balance but also internal investment and saving.

To sum up, the "budgetary theories" have the following implication : the smaller a country is compared with the rest of the world and the more mobile securities are at international level, the less effect the issue of additional securities by the government will have on the national (and international) interest rate. In a small country, the bulk of new security issues will be acquired by the external sector, and the real domestic effect of budgetary policy will be insignificant. It is clear, however, that these conclusions are not directly derived from the basic equations in the "budgetary theories" or from the above table (p. 47) but from specific economic hypotheses.

ANNEX C

INDICATORS OF TRADE AND FINANCIAL INTEGRATION*)

1. Indicators of trade integration

The process of integration in commodity markets in Europe is relatively well surveyed in the existing literature, though because of time lags in publication it is not easy to find results which include the most recent years. A major source is Balassa, ed. (1975) which contains in Part 1 a study of trade creation and diversion and of tendencies in intra-European specialization in trade and production up to around 1970. These results supply a number of indicators of the effects of integration in the form of changes in price and income elasticities of import demand between a pre-EC base period and a span of recent years. The evidence is not unanimous; for example, income elasticities suggest a considerable increase in interdependence (trade creation), while price elasticities calculated for bilateral intra-EC import demand appear to have diminished in the decade starting 1958 (1). Is is not clear whether these specific studies with an emphasis on the working of the price mechanism and considerable disaggregation are being updated by their authors or by others. In any case they may be too complicated and demanding in terms of data for OPTICA to take up.

What may be sufficient for the purpose and more realistic in terms of the effort required would be to survey, on the basis of a more aggregated model such as the OECD/IMF world trade model or the external linkage relations in Project LINK, the salient characteristics of European Community member economies' import volume demand and export price equations. By means of equations such as those presented in Samuelson (1973) it is possible to evaluate the openness of economies by (i) the sensitivity of imports to shifts in domestic demand and (ii) the degree of control of individual exporting countries over their export prices. In the case of the latter criterion there appears to be a clear ranking of countries by size; the larger the country, the greater the impact of domestic cost developments on its export prices. This throws light on the applicability of the Scandinavian-

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(1) See Balassa (1975), Ch. 3 and pp. 50-55.

*) References to the authors mentioned may be found at the end of the annex.

Italian model of inflation according to which world market price trends together with productivity trends in the sheltered sector determine national inflation rates under fixed exchange rates; the world trade model suggests important modifications to this view even for small economies.

The Commission has in the past commissioned several projects designed to quantify the mechanisms of intra-EC income fluctuations; the most recent are the COMET and EURO-models, which focus on foreign trade multipliers more than on the price mechanism. Some of the simulations reported by Barten and d'Alcantara (1974) would constitute useful survey material in an assessment of the openness of member economies.

2. Indicators of financial integration

Several potential indicators of financial openness of individual economies are available and have been used in empirical work. They include, in particular, the extent to which domestic interest rates have conformed to comparable rates elsewhere; or, as a more refined variant, the extent to which a forward exchange premium or discount has tended to eliminate the uncovered differential between strategic short-term rates at home and abroad, see notably Argy and Hodjera (1973). Other potential indicators focus on the elasticity of the demand functions for various categories of financial assets with respect to changes in relative interest rates; these indicators should, in principle, yield a ranking of countries by degree of openness corresponding to that obtained with the first set, since both assess the degree of substitution between domestic and foreign financial assets. Examples of this approach may be found i.a. in the work of Branson and Hill (1971) on capital flows, i.e. excess demand or supply of domestic securities, or of Hamburger (1974) on the demand for money function in selected economies.

The most promising conceptual framework for developing indicators of financial integration seems to be that set up by Kouri and Porter in a series of studies (1972, 1974, 1975). Their basic position is that short-term capital flows may be viewed as arising from imbalances between the domestic demand for monetary base and the supply available through domestic

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monetary actions by the authorities and through a surplus on current external account. An indicator of openness (or financial integration) is provided by the degree to which changes in these supply factors are offset through capital in - or outflows. The inspiration from the monetary approach to the balance of payments is clear: in open economies attempts to stimulate domestic activity by pushing money supply ahead of demand leak out as capital outflows. The mechanism may involve some changes in relative interest rates or it may be a more direct spill-over, as Kouri and Porter suggest (1). A similar approach has been adopted by Helliwell and Lester (1975) for Canada.

On the whole these empirical studies appear to have yielded plausible and fairly robust results both in absolute and relative terms. Germany comes out as the most financially integrated economy with a direct offset of up to 80 per cent within short periods of time. The offset for the three other countries investigated by Kouri and Porter - Australia, Italy and the Netherlands - is somewhat lower, typically about half that found for Germany. The period of estimation is throughout from the early 1960's to 1970-71, i.e. the period of fixed exchange rates.

Recent work by de Grauwe (1975) has extended a simplified version of the Kouri-Porter model to a group of European countries. The main weakness of the model is its failure to illustrate the interdependence of national monetary actions in a group of financially integrated economies such as those of the European Communities; the rest of the world behaves passively by absorbing or supplying financial assets in a completely elastic way. This is inappropriate in the analysis of European monetary integration relevant from the viewpoint of OPTICA. Here the focus must be on the interdependence between the component parts of the Communities (and other countries closely linked to the European Communities) with a view to delimiting the area within which the pursuance of nationally set monetary targets may endanger the stability of the area as a whole.

De Grauwe's work takes an important step in this direction by formulating a model linking the monetary basis of seven European countries: Belgium, France, Germany, Italy, Netherlands, Switzerland and the United Kingdom. In a fixed exchange rate regime changes in the international reserves of one country depend on the domestic money creation in the country

(1) Kouri and Porter put the main emphasis on the direct substitution between domestic and foreign sources of monetary base, but they also find significant effects of changes in interest rate differentials. Since such changes are systematically related to domestic monetary actions, the full offset to such actions is larger than the directly estimated offset coefficients suggest.

itself, in the other six and (ideally) in the outside world. No national interest rates or incomes are explicitly included in the model. The demand for money is implicitly regarded as stable, so that all monetary disturbances arise on the supply side. This simple model is then estimated on quarterly changes in 1959 through 1970 in the (adjusted) monetary base. However, due to multicollinearity between domestic money creation in the seven economies, only the impact from the present and the previous quarter's domestic money creation in the particular economy is estimated; the impact from domestic measures in any of the other six economies is assumed to constitute a proportion of that other country's reserve change corresponding to the share in the seven-country GNP of the economy studied. As de Grauwe himself points out, this is a crude assumption which reduces the reliability of the results; for example, the share of Switzerland in total GNP no doubt understates its financial role in shaping Italian or German capital flows.

Despite these shortcomings the approach of de Grauwe with its emphasis on intra-European interdependence and the dependence of the area upon what happens in the United States and the Euro-currency markets seems the most promising point of departure for empirical work during a possible second phase in the work of OPTICA. The preliminary results for 1959-70 accord broadly with a priori notions about the ranking of European economies by degree of openness; in the smaller economies the offset to domestic monetary base creation through reserve flows is nearly 100 per cent after two quarters, even higher in Switzerland. The financial openness of Germany is found to be a bit less pronounced than in the results of Kouri and Porter.

The results on offset are only one part of de Grauwe's analysis: he proceeds from them to a study of how various simple procedures on sterilization of reserve flows in the seven economies may lead to explosive swings in reserves. Systematic use of full or near-full sterilization by two or more countries does, indeed, lead to such swings, thereby forcing either an abandonment of sterilization or structural changes, e.g. in the form of controls on capital flows. The analysis is rich in implications for the design of monetary policy in a system of fixed exchange rates in that it points to limits - in the form of maximum permissible sterilization - to national monetary independence inside a financially integrated area. As

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such it is of great interest in the evaluation of the feasibility of European monetary unification in the limited sense of narrow bands around cross parities between participating currencies.

The aim of any empirical work undertaken by OPTICA in this area should be, by the simplest methods available, (1) to refine and to update through 1975 these results for the seven countries studied by de Grauwe, (2) to extend them to other countries relevant from the viewpoint of European Communities' monetary co-operation and (3) to draw implications for the design of national monetary policy for countries inside and outside the snake. Such an analysis would be a useful contribution to the ongoing attempts by the Commission and national officials to assess national monetary actions. The approach is well-founded theoretically and topical; it may be recalled, in particular, that the largest member economy, Germany, is currently pursuing a monetary policy conceived in terms of a target growth rate for central bank money (monetary base). This suggests that it would be of the greatest interest for the Communities to develop methods for assessing in a rough way the likely consequences of alternative policy targets in Germany.

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